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Social Impact of the Crisis and Building Resilience
Main Report

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FISCAL YEAR

January 1 – December 31

WEIGHTS AND MEASURES

Metric System

ACRONYMS AND ABBREVIATIONS

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<th>Acronym</th>
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<tr>
<td>ALMP</td>
<td>Active Labor Market Policies</td>
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<td>CROSTAT</td>
<td>Central Bureau of Statistics</td>
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<td>ECA</td>
<td>Europe and Central Asia</td>
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<td>EU</td>
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<td>GDP</td>
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<td>HBS</td>
<td>Household Budget Survey</td>
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<td>International Labor</td>
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<td>NGOs</td>
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<td>OECD</td>
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<td>PPP</td>
<td>Purchasing Power Parity</td>
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<td>UNDP</td>
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Executive Summary

1. This report analyzes the impact of the global economic crisis on the labor market and poverty in Croatia, and discusses the effectiveness of social safety net policies in response to the crisis. It also presents options to enhance the cost-effectiveness of social policy in Croatia in response to an economic downturn. It argues that the impact of the crisis on employment and poverty was substantial, but the policy response was limited. There is substantial room to enhance the efficiency of the social protection system in Croatia within the existing resource envelope, and build resilience against potential future economic shocks.

2. Demand shocks and cyclical downturns are likely to occur again in the future in Croatia, as in every market economy. The analysis of the effectiveness of social policies in Croatia is thus meant to be general and not limited to the current crisis. The turnaround of the Croatian economy is already in sight and thus the policy focus is likely to shift from crisis-related to structural policies. However, it is important to ensure that employment and social safety net policies are designed so as to be able to tackle the rapid increase in unemployment and vulnerability to poverty resulting from the likely future demand shocks.

3. The impact of the global economic crisis on the labor market in Croatia has been substantial. Although the initial reaction of employment to the fall in output was modest, the pace of job destruction has accelerated over time. In March 2010 employment in the formal sector was about 6 percent lower than before the crisis.\(^1\) Thus the fall in formal employment paralleled that of GDP (about 6 percent). However, total employment (including informal employment) fell less, by about 2.4 percent. Thus, the informal sector cushioned the adverse employment impact of the crisis. The response of total employment to the fall in GDP in Croatia during the crisis was similar to that in other countries in the region.\(^2\) The considerable fall in formal employment suggests that the crisis might have triggered intensive enterprise restructuring, which was delayed in Croatia due to, among other things, strict employment protection legislation.

4. The increase in employment in response to the incipient economic growth is likely to be delayed. Firms will likely meet the growing product demand by increasing productivity rather than by hiring new workers. If so, then employment will start to grow, and unemployment to fall, only after a time lag.

5. The accelerated pace of job destruction has led to the increase in unemployment. The number of registered unemployed is currently (as of January 2010) about one third higher than before the crisis and over 20 percent higher than a year earlier. The crisis has reversed the substantial reduction in unemployment that occurred in 2007 and in the first half of 2008, and moved the Croatian labor market back to the high unemployment state.

6. The increase in unemployment in Croatia, although substantial, was still less than in most EU countries. The ILO/LFS unemployment rate increased in Croatia by 2.3 percentage points in 2009, based on unemployment data we are assuming that the crisis started in the last quarter of 2008.

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\(^1\) The elasticity of employment with respect to GDP for 20 countries in the ECA region during the crisis was about 0.4-0.5.
compared with the average of 4.1 percentage points for the EU. However, currently the unemployment rate in Croatia is slightly higher than the EU average (10.6 percent and 10.2 percent, respectively).

7. In addition to an increase in unemployment, the fall in labor demand has also led to a fall in the labor force participation rate. Some workers facing the poor employment prospects become discouraged and withdraw from the labor force. The decrease in labor force participation has not been dramatic, nonetheless significant (1.6 percentage points). Although the increase in unemployment rate and the fall in the labor force participation rate during the crisis were relatively modest, the combined effect is considerable. The employment/working age population ratio dropped by 2.3 percent in one year from already a very low pre-crisis level of 57.8 (one of the lowest in Europe). Thus the crisis further aggravated already substantial structural labor market problems in Croatia.

8. An important factor that limited the employment impact of the crisis has been wage moderation. Real wages remained virtually stagnant once the economy slowed down and recently (since September 2009) started to fall. At the end of 2010, the average real wage is nearly 3 percent lower than it was a year earlier. The reduction of wage pressure helped to cut labor costs and thus to limit the layoffs. Wage flexibility has thus emerged as an important crisis impact mitigation mechanism, which is a notable new phenomenon because until recently wage pressures pervaded the Croatian economy and were contributing to high unemployment.

9. In contrast, few employers reacted to the fall in product demand by cutting working time. The number of hours worked has remained roughly constant since the crisis has begun, although recent data (October 2009) show some reduction in working time (4 percent). Nonetheless, working time reduction does not seem to be an important adjustment mechanism in Croatia.

10. In response to the fall in product demand employers have also reduced hiring. The number of job vacancies plunged by around one-third during the crisis. This implies a dramatic worsening of job prospects for the unemployed, as measured by the unemployment/vacancies (U/V) ratio. During the crisis the U/V ratio doubled in Croatia as a result of both a sharp increase in unemployment and an equally sharp fall in the number of job vacancies. Currently there are 22 newly registered unemployed per every 10 newly registered vacancies, whereas before the crisis there the ratio was only 11. This implies that there are no job vacancies for the majority (55 percent) of the newly registered unemployed.

11. Some of the Croatia’s regions have been hit much harder by the crisis than others. While in some regions unemployment increased by only around 10 percent in last year, in other it increased by over 35 percent. Regions where unemployment was initially low have been hit harder by the crisis than regions where unemployment was high. After all, there is a strong negative correlation between the pre-crisis unemployment and unemployment growth across regions. The impact of the crisis in low unemployment regions has been thus significantly stronger than in high unemployment regions. As a consequence, the variation in the unemployment rate across regions is presently much smaller than before the crisis. Thus the crisis has acted as a labor market equalizer.

12. The way regional labor market reacted to the crisis reflected differences in regional industrial structures. Industries that were most affected by the crisis include manufacturing, trade, tourism and construction. Accordingly, regions where these industries play a dominant part suffered the most from the crisis. The differences in regional industrial structure also explain why unemployment has increased more in initially low-unemployment regions. In Croatia, regions where
unemployment was low before the crisis were either regions with a large share of manufacturing and trade industries, or regions relying on tourism. Given that the crisis affected mainly the industrial sector, labor market conditions in industrialized regions deteriorated more than in less industrialized, agricultural regions, where unemployment was initially higher.

13. **The industrial profile of the crisis translates into the socio-economic profile of affected workers.** Compared to the unemployment profile before the crisis, a newly unemployed person is more likely to be prime-age skilled blue-collar male worker. Women, youth and white-collar workers are less affected by the crisis. However, the differences in socio-economic profile between those who became unemployed before the crisis and those who became unemployed following the crisis are not that much pronounced. Still they have significant poverty implications. This is because the crisis disproportionately hit *primary earners* (prime-age men), who are likely to be household heads. In contrast, before the crisis it was predominantly secondary earners (youth, women) who bore the brunt of labor market adjustment. Unemployment of a primary earner is more likely to push a household into poverty than that of a secondary earner.

**The fall in employment has led to an increase in poverty**

14. **Poverty was low in Croatia before the crisis thanks to strong economic growth coupled with job creation, and high spending on social safety nets.** Poverty was associated with long-term unemployment and inactivity, which were concentrated among low skilled workers. The crisis has had a substantial impact on both the poverty rate and the profile of poverty. The fall in employment coupled with the fall in real wages caused the reduction in incomes, and consequently pushed many of the unemployed workers into poverty. The “new poor” tend to be different from the “old poor”: they are better educated, younger and economically active.

15. **The simulations indicate that the fall in labor demand engendered by the crisis and the associated increase in unemployment have had a significant impact on poverty in Croatia.**
Assuming baseline poverty rate of 10 percent, simulation results suggest that the poverty headcount rate increased by about 3.5 percentage points. If so, then the crisis has undone gains in social welfare achieved during the last few years of economic growth.

16. **Before the crisis absolute poverty was low in Croatia by regional standards.** It was also shallow. There were pockets of deep poverty but extreme poverty was rare. Relative poverty was also low thanks to relatively low income and consumption inequality. Thus the increase in the poverty rate in the wake of the crisis occurred from a low base, and accordingly the increase in the absolute number of the poor was modest. Poverty was concentrated among older and less educated persons who were economically inactive or unemployed and who lived in rural areas. The crisis changed this profile.

17. **The lower middle-income class was hit hardest by the consumption decline, although the differences between income groups are relatively small.** The very poorest population observed a milder consumption drop than the average population due to the fact that (i) they were not hit by the employment decline; (ii) a policy of waivers and exemptions for lower income households were

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3 Throughout the text we refer to the *simulated* poverty impact rather than *actual* impact. Accordingly, persons who are referred to as the “new poor” should strictly speaking be referred to as “potentially poor” or “at risk of poverty”.

4 Because of the assumptions underlying the simulations this is probably an upper-bound estimate of the poverty effect of the crisis. However, even if the poverty effect was overestimated, the key point remains valid that the crisis has led a significant increase in the poverty rate in Croatia.
in place; and (iii) social transfers increased in 2009 (pensions, social assistance benefits). The largest drop in consumption was observed by the second quintile, followed by the third quintile, indicating thereby that lower middle-income class suffered the most during the crisis.

18. The increase in poverty during the crisis is largely due to the fall in consumption and to a lesser extent due to an increase in inequality. Inequality increased during the crisis, thus contributing to the increase in poverty, but this effect played a minor part.

19. Poverty was predicted to increase somewhat faster in richer urban areas than in poorer rural areas. As a result, the share of urban population in the poorest quintile increased. However, given that the bulk of the poor live in rural areas in Croatia, in absolute terms the increase in poverty in rural areas was considerably larger than in urban areas. This pattern of poverty increase reflects the fact that employment declined most in more developed, industrial and urban regions of Croatia, while less developed rural regions were less affected by the crisis.

20. Persons at risk of poverty predominantly are those who lost their jobs in the wake of the crisis. Accordingly, they tend to be economically active (looking for new jobs), better educated and younger than the “old poor”. Their poverty is more likely to be transitory, closely associated with the temporary worsening of labor market conditions. The “new poor” have a good chance to escape poverty once job prospects improve. This is less likely in the case of the “old poor” whose poverty is usually of long-term nature and associated with economic inactivity, poor skills and old-age.

21. The crisis has negatively affected children. The incidence of poverty among children is expected to increase more than for the general population. The most vulnerable are the multiple-children families.

Minimal policy adjustment in response to the crisis

22. Faced with a severe economic downturn social policy faces three challenges. First, it needs to provide income support to individuals who lost their jobs and families who fell into poverty. Second, it needs to prevent short-term unemployment turn into long-term unemployment and, accordingly, transient poverty into chronic poverty. Finally, given limited resources, it needs to balance the needs of the short-term unemployed and the new poor with those of the long-term unemployed and the chronic poor. Social protection policy in Croatia was adjusted only marginally to these challenges. Income support was provided in the form of unemployment benefit; however many of the newly unemployed were not covered by the system. Active labor market programs, which are meant to help workers escape unemployment, are run on a very limited scale and were not expanded during the crisis. Thus the social protection system remained focused on assisting the old poor, although not in the most efficient way. There is substantial room to improve the efficiency of the system and to build resilience of the social protection system against potential future adverse demand shocks.

23. The policy response to the crisis has been limited in Croatia. The only social protection program whose coverage has significantly increased during the crisis is unemployment benefit, acting as an automatic stabilizer. Expenditures on unemployment benefit increased from 0.24 percent of GDP in 2007-2008 to 0.37 percent in 2009 and 0.43 percent in 2010 (planned). These expenditures partially compensate for income loss due to unemployment, and as such maintain consumption demand and consequently dampen fluctuations in real GDP.

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5 Expenditures on unemployment benefit increased from 0.24 percent of GDP in 2007-2008 to 0.37 percent in 2009 and 0.43 percent in 2010 (planned). These expenditures partially compensate for income loss due to unemployment, and as such maintain consumption demand and consequently dampen fluctuations in real GDP.
further downsized during the crisis due to the fiscal constraints. The only active labor market program that was significantly expanded during the crisis is public works, but still it covered only a small fraction of the unemployed. The number of recipients of the means tested social assistance program (known as social welfare support) has so far increased marginally. After all, the coverage of the program is currently lower than before the crisis. However, the coverage of the social welfare support program is likely to increase after some time-lag, once the recipients of unemployment benefit exhaust their eligibility (15 months maximum duration).  

24. In the mid-2009 the government introduced a new program of short-time work subsidy intended to encourage working hours’ adjustment and discourage lay-offs. However, the program has had virtually no impact on employment because of an extremely low take-up rate by employers. The low take-up rate reflected both weak incentives and strict eligibility conditions. These in turn were the result of the government facing a trade-off between strengthening incentives for employers to enroll into the program, and shrinking budgetary resources.

25. Although unemployment benefit is the main program in Croatia to provide support to workers affected by the crisis, its coverage is relatively low. The benefit is received by less than 30 percent of all unemployed. Even more importantly, the program covers only a fraction of workers affected by the crisis; that is the newly unemployed workers. In fact, close to 60 percent of the short-term unemployed do not receive unemployment benefit. The coverage gap is thus substantial. It reflects the fact that many workers, such as new labor market entrants or informal sector workers – do not meet the eligibility criteria for unemployment benefit. On the positive side, unemployment benefit is received mostly by the poor. This is not obvious a priori since unemployment benefit is insurance-based rather than means-tested. At the same time unemployment benefit is generous enough to lift the majority of the recipients out of poverty.

26. The overall spending on social protection is high in Croatia by regional standards. However, there is large room to improve the efficiency of spending. In fact, resources allocated to social assistance would be sufficient to eliminate poverty in Croatia, were they spent efficiently. The high cost of social assistance in Croatia is due to heavy reliance on categorical benefits, as opposed to needs-based ones. Means-tested programs play a marginal part: they accounted for only 7 percent of total social assistance spending in 2009 and covered 2 percent of the population. As a result most programs are not well targeted at the poor and the “elite capture” is considerable.

Crisis – an opportunity for reforms

27. The effectiveness of the social protection system in Croatia could be significantly enhanced within the existing resources envelope. This would require streamlining and consolidating numerous social protection programs, and altering the program mix by reallocating resources away from poorly targeted and ineffective programs towards the ones that are well targeted and have a significant impact on poverty. But this would also require strengthening institutional capacity to design, implement, and evaluate social protection policies. Below we present possible short- and medium-term reform options regarding labor market and social assistance policies.

28. As regards employment policies, specific short-term reform options include:

- Scaling up effective labor market programs. Currently the size of labor market programs is too small in Croatia to have an impact on labor market conditions. Accordingly, the

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6 The duration of unemployment benefit receipt is unlimited for persons whose length of service exceeds 30 years for women and 35 years for men.
programs would need to be substantially expanded in order to effectively mitigate the employment effects of economic downturns. However, only those programs should be expanded which are cost-effective, and are found to have a significant net impact on labor force status of the participants.

- **Adjusting program mix to the changing labor market conditions.** During the economic downturn the government could consider scaling up programs that compensate for weak labor demand. This may be accompanied by temporarily scaling down programs meant to address structural unemployment in order make labor market expenditures fiscally sustainable.

- **Adjusting regional allocation of ALMPs funds.** The government may consider developing an algorithm for adjusting the regional allocation of ALMPS funds to the changing labor market conditions. Regions where unemployment increased more would receive a higher share of funds than regions where it increased less. However, for this approach to work effectively, an increase in funding would need to be coupled with an investment in the region’s capacity to absorb the increased funds.

29. **Labor market programs that could be scaled-up during the crisis are those which provide income support to the unemployed and those which compensate for the weak labor demand.** Options that fall into the first category include temporary relaxation of eligibility conditions for unemployment benefit, and the provision of income support conditional on either performing some work or on enrollment in training. Options falling into the second category include short-time work subsidy, apprenticeships (hiring subsidies) for new labor market entrants, and public works. However, these programs are effective only if well-designed and therefore program evaluation needs to be done at an early stage of implementation, and its results need to feed back into program design.

30. **As regards social assistance, the short-term reform options (some of which are already being considered by the Government - Box 1) include:**

- **Improving the spending mix to protect the poorest during the downturn.** This would entail increasing expenditures on programs that are targeted at the poor, in particular on the welfare support allowance. To increase the allocation for poverty-focused programs within the existing resource envelope, expenditures on categorical benefits and on non-contributory social protection programs could be redirected to the means-tested welfare support allowance program.

- **Reducing the number of categorical benefits.** Measures to streamline and simplify benefits are important for increasing the efficiency and quality of the social assistance programs. Some initial steps in this direction were already taken in 2009 and some of untargeted categorical programs have been discontinued, however there is a need to step up these efforts.

- **Improving targeting.** The good practice of using means-testing for providing the welfare support allowance could be used as a basis for targeting other benefits, including family, health and war veteran benefits. This could reduce the error of inclusion resulting from the underreporting of household income. Means-testing procedures could be extended to the above mentioned benefits using the newly introduced Personal Identification Number.
• **Simplifying the design and administration of benefits.** The most desirable option would be to establish a single, unified welfare benefit administered by one central agency/ministry which has a common network of offices across the country, close to clients. The initial steps were undertaken to establish a ‘one-stop shop’ within the Centers for Social Welfare which would require scaling-up and acceleration of efforts. It is also important for improved monitoring and evaluation of the results of the social welfare programs.

31. **In the medium-term the reform priorities include:**

• **Developing activation policies to reintegrate the long-term unemployed welfare recipients into the labor market.** Activation consists on making benefit receipt conditional either on active job search, or on participation in active labor market programs (e.g. training). The approach is based on the principle that the rights of the unemployed are coupled with obligations (to actively seek employment and to accept all suitable work). Often these obligations take the form of a contract between the unemployed individual and the employment or social welfare agencies. Benefit recipients who fail to meet their obligations are sanctioned by benefit withdrawal. Activation interventions are tailored to the needs of different categories of clients. This involves “profiling” of the unemployed; that is dividing them into different categories based on the distance from the labor market and the amount of help needed. Different programs are offered to different categories.

• **Improving the cost-effectiveness of pro-birth policies.** A number of potential measures, proved effective in other countries with the similar level of development, can be considered. As the risk of poverty is positively correlated with the number of children, the targeting of the child allowance program can further be improved, if the allowance would be reallocated towards families with more children. Such measure will not only support the equity objective pursued by the Government, but will strengthen the pro-birth focus of the allowance, given that such monetary incentives tend to be effective in protecting the living standard of low-income households.

• **Addressing institutional fragmentation of the social safety net system at central and local levels.** Currently, Croatia operates a complex system for policy development, implementation, monitoring and evaluation, which acts as a bottleneck to a cost-effective social protection and social assistance system. The number of programs on offer, the number of institutions involved, and the lack of harmonization on eligibility criteria lead to a costly system to administer, confusion, and errors of exclusion and inclusion which negatively impacts value for money. The Government may consider consolidating administration to the extent possible by merging relevant functions under fewer ministries, and/or single offices at the local levels with a view to easing access to social assistance programs, integrating social policy with efforts to address low labor force participation and ensuring more coherent planning.

• **Upgrading the social assistance information system.** The planned Management Information System in the social sector needs to include linkages to the other government information systems that are already available or are in the planning phase. In addition, clear mechanism of information exchange should be established between the social assistance offices and employment offices in order to strengthen the anti-poverty impact of social spending. Such information sharing would reduce the errors of exclusion and inclusion, but would also reduce the administrative cost of social protection.
Box 1: Government Economic Recovery Program

In April 2010, the Government of Croatia adopted the Economic Recovery Program along with the detailed action plan for its implementation. The priorities presented in the program include:

- Focus employment programs on the provision of technical/vocational training to the unemployed;
- Limit the duration of unemployment benefit, including for persons with over 30 years of service (who are currently eligible for benefit of unlimited duration);
- Introduce apprenticeships to provide school leavers with work experience and ease the school-to-work transition;
- Strengthen the capacity of the Croatian Employment Bureau to provide employment services, and enhance its cooperation with the Centers for Social Welfare, and with the Vocational Education and Adult Education Agencies;
- Consolidate all labor market programs under one central agency (Croatian Employment Bureau);
- Extend the duration of unemployment benefit for persons at risk of long-term unemployment;
- Overhaul the social protection system to improve its efficiency (including the introduction of common definitions, common means-testing procedures, unified eligibility criteria and rules for determining benefit amount);
- Improve the administrative efficiency of the social protection system;
- Establish a catalogue of rights and eligibility conditions for social protection benefits and services;
- Develop an IT-integrated social protection system at all levels of government.

Source: Government of the Republic of Croatia
Social Impact of the Crisis and Building Resilience

Introduction

1. An economic crisis quickly turns into a social crisis: workers lose jobs and earnings, and their families fall into poverty. This report looks at the social impact of the current global economic crisis in Croatia, in particular on labor market and poverty. It first examines the labor market effects of the crisis and then it analyses the consequences of labor market developments for poverty. It also discusses the policy response to the crisis, and considers options for revising labor market and social assistance policies in Croatia so as enhance their effectiveness in addressing the adverse social effects of cyclical downturns. The ultimate objective of the report is thus to contribute to the development of effective, evidence-based social protection policies in Croatia.

2. The report finds that the impact of the crisis on employment has been substantial in Croatia. Unemployment has increased sharply, although less than in most EU countries. The decline in employment was coupled by a fall in real wages. The crisis hit hardest prime age skilled blue-collar workers in industrialized regions of the country. These negative labor market developments translated into the growing poverty, especially among working households. Simulation results suggest that the crisis has undone welfare gains achieved in Croatia in the last few years. Poverty is estimated to increase by around 35 percent but from the comparatively low basis before the crisis. The policy response to the crisis was limited. Unemployment benefit was the first, and in fact the only, line of defense. However, many of the new jobless are not eligible to unemployment benefit. Active labor market programs play a very limited role in Croatia and, due to the fiscal constraints, were further downsized during the crisis. But the increase in the number of social assistance clients has been very modest so far, partly due to a low eligibility threshold. The report argues that within the existing resource envelope the efficiency of the social safety net in Croatia could be significantly enhanced by reallocating resources and improving the program mix, and by streamlining and consolidating the programs, including better targeting.

3. The report is divided into five sections. Section I provides a backdrop for further analysis by presenting recent macroeconomic developments. Section II looks at the labor market effects of the crisis. Section III examines the impact of the crisis on poverty. Section IV assesses the effectiveness of employment and social safety net programs in Croatia. The final section suggests options to enhance the effectiveness of employment and social safety net policies in responding to economic fluctuations.
I. Macroeconomic Background

4. This section presents key macroeconomic developments in Croatia that have influenced labor market conditions, and which conditioned social policy choices. The main ones were the fall in GDP of almost 6 percent in 2009, and mounting fiscal pressures. The fall in GDP led to the fall in labor demand and triggered lay-offs, which in turn caused unemployment growth. Fiscal pressures, in turn, limited the scope for expanding social protection programs in response to the crisis.

Economic environment swiftly turned negative

5. **Croatia enjoyed strong economic growth for almost a decade.** Growth, which averaged over 4 percent, was driven primarily by domestic demand. The non-tradable sector, such as retail and construction as well as tourism, was benefiting the most from the rapid rise in domestic and foreign demand over that period. This high growth performance led to a rapid convergence with the EU in per capita income terms so that Croatia reached 63 percent of the EU27 GDP per capita (in PPS terms) by 2008.

6. **Thanks to strong economic growth labor market conditions improved significantly by 2008.** Average annual employment growth was 2.2 percent, led by services and manufacturing sectors. Consequently, unemployment declined by 40 percent with the unemployment rate cut by one-fourth\(^7\). In fact, by end-2008, a key policy dialogue was focused on addressing skills shortages and increasing comparatively low labor force participation that became an obstacle for further growth. Skills mismatches, as indicated by the abnormal share of long-term unemployment, were the main cause of still stubbornly high unemployment. As the labor supply became scarce, in an environment of booming demand for labor, pressure on real wage growth was strong (World Bank, 2009). Personal income grew fast as a result of the employment and wage growth, which brought about a substantial reduction in poverty in Croatia during the recent few years.

7. **The surge in private investment and consumption, fuelled at large by abundant capital inflows, raised concerns over the sustainability of the growth pattern.** Although exports growth was significant lately, import growth (led by capital goods and oil) was much stronger, which, coupled with the terms of trade deterioration, led to the widening of the current account deficit so that by 2008, at over 9 percent of GDP, doubled compared to 2004. Since only half of the current account deficit was financed through non-debt creating inflows, external debt to GDP ratio rose to 83 percent in 2008. In addition, with around 90 percent of total corporate debt and about 70 percent of household debt in foreign currency or foreign-currency denominated, the country’s vulnerability to credit and currency risks remained high.

8. **The global financial turmoil hit Croatian economy at the end of 2008.** After slowing down to 0.2 percent in the last quarter of 2008, the economic activity declined by 5.8 percent in 2009 -- the biggest decline since the country’s independence. The decline was broad based, reflecting a fall in personal consumption and gross domestic investment as well as decline in exports in the context of deteriorating external environment.

9. **Fiscal position subsequently came under serious stress.** The revenue shortfall and the spending pressure from automatic stabilizers necessitated several revisions of the 2009 budget. The spending cuts were almost equally distributed across spending categories, except for agricultural subsidies. The largest reduction affected: (i) public sector salaries (the rolling back of the earlier

\(^7\) To 13.2 percent following the national definition, or 8.4 percent as per the ILO methodology.
granted increase to public administration); (ii) categorical social benefits (like increase in health co-payments and premiums, abolition of free-of-charge textbooks, transportation and dormitories, pension indexation freeze, reduction in replacement rate for unemployment benefits); and (iii) infrastructure investments.

10. Responding to additional pressures to protect public finances and inability to reach social consensus on further spending rationalization, led the government to introduce new and increase existing taxes. Despite pro-cyclical impact of these measures through a direct contraction of consumption as well as investments, the fiscal situation required rapid moves. Overall, through a combination of expenditure reduction (amounting to 2.1 percent of GDP), and revenue increase (amounting to 0.4 percent GDP), the consolidated general government deficit was kept at around 4 percent.

11. The economic contraction led to a rapid worsening of labor market conditions. Employment has fallen and unemployment has increased. The resulting fall in labor incomes quickly translated itself into the rising poverty. At the same time, due to the budgetary strain, the fiscal space to increase expenditures on social protection has been extremely limited. The rest of this report analyses labor market and poverty developments triggered by the economic crisis in more detail.

II. Labor Market Impact of the Crisis

12. The labor market is a primary transmission channel from the aggregate demand shock to poverty. This section looks at different forms of labor market adjustment to the current economic crisis in Croatia. It traces the evolution of key labor market variables and examines the industrial and regional patterns of the crisis. It also identifies the socio-economic profile of workers affected by the crisis.

13. The labor market impact of the global economic crisis has been substantial in Croatia, although not as dramatic as in some other countries in the region. Employment plunged and unemployment increased, albeit less than in most EU countries. In addition, the labor force participation rate fell, as some workers came to believe that there are no jobs around and ceased looking for jobs (the so called discouraged worker effect). Simultaneously, the fall in labor demand was reflected in the slowdown in real wage growth. In contrast to some other countries in the region, working hours’ adjustment has played a limited role, although according to anecdotal evidence many employers were using (un)paid mandatory leave. As elsewhere, the crisis has affected mainly the manufacturing, trade and construction sectors. As a result, it was prime age skilled blue collar male workers who were hit the most by the crisis. This profile is likely to amplify the poverty impact of the rising unemployment, because job losses are concentrated among the primary earners. There is a strong variation in the crisis’ impact across regions, reflecting the differences in industrial structure. While the overall labor market effect of the crisis may seem modest, in some regions it has been quite dramatic.

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8 These include the special ‘solidarity tax’ of 2 to 4% of net income above the HRK 3,000 threshold. The tax applies until the end of 2010. At the same time, the indexation of pensions was suspended during 2010, which is estimated to bring 0.2 percent of GDP in savings on pension payments.
The crisis triggered layoffs and has led to an increase in unemployment.

14. **The employment effect of the crisis has been large.** It consisted of a large fall of formal employment, and in some, but less than proportional, increase in informal employment.\(^9\) Total employment declined, but much less than formal employment. The informal sector cushioned the demand shock that hit the formal sector. The impact of the crisis on the formal sector was initially modest but then accelerated over time (Figure 1). Currently (March 2010) formal employment is over 6 percent lower than a year earlier, which corresponds to the fall in GDP that occurred during the same period.\(^{10}\) Thus the elasticity of employment with respect to GDP was high in the formal sector (about 1.0). However, the elasticity of total employment (about 0.4) was significantly lower, as total employment declined by “only” 2.4 percent during the crisis. This is within the regional range, although somewhat less than the regional average elasticity of 0.5.

15. **The high elasticity of formal employment to output is surprising given high firing costs in Croatia.** Employment protection legislation is strict in Croatia and thus one would expect that it damps employment adjustment to the demand shock (Rutkowski 2003, Tyrowicz 2010, World Bank 2009). When firing workers is costly, firms tend to resort to adjustment of labor input on the intensive margin (e.g. by reducing the number of hours worked), rather than on the extensive margin (by reducing employment). Apparently, this has not been the case. Adjustment on the extensive margin was substantial while that on the intensive margin was limited. One possible explanation is that the crisis weakened the bargaining power of trade unions, and accordingly their ability to enforce employment protection regulations. Another complementary possibility is that employers adjusted employment among contingent workers, that is those on fixed-term and temporary contracts, which became increasingly popular in Croatia in recent years (World Bank 2009).\(^{11}\) That would mean that employment reductions occurred mainly in the secondary labor market (as it has happened in Spain where the introduction of fixed-term contracts gave rise to labor market duality).

16. **The large magnitude of employment adjustment in the formal sector suggests that firms might have used crisis as an opportunity for restructuring.** Enterprise restructuring and associated job reallocation has been delayed in Croatia due to the stringent employment protection regulations (World Bank 2009). Unrestructured firms suffered from overmanning that is employment levels above those justified by production needs. This was contributing to relatively low labor productivity and high unit labor costs in Croatia (World Bank 2003, 2009). The crisis brought about “creative destruction” as a result of which Croatian firms may emerge more productive and more competitive.

\(^9\) Data on **formal** employment come from the employer based monthly Employment Survey. The survey does not cover micro firms (employing up to 10 workers). Data on **total** employment come from the household based quarterly Labor Force Survey.

\(^{10}\) Formal employment in March 2009 was at roughly the same level as a year earlier, and started to decline only since April 2009.

\(^{11}\) This is consistent with the evidence of the “last in, first out” pattern of employment reduction presented in a later part of the report.
17. **The accelerated enterprise restructuring in the wake of the crisis may cause a delayed response of employment to output growth.** Firms will be likely to meet the growing product demand by increasing productivity rather than by hiring new workers. If so, then employment will start to grow and unemployment to fall after a substantial time lag. Such a delayed response of employment to output growth following a recession is typical (OECD 2009). However, if Croatian firms indeed used the crisis as an opportunity to eliminate labor hoarding, then the return to the pre-crisis employment level may take longer. And the delayed employment response may be amplified by the strict employment protections regulations, which tend to hinder job creation during an economic upturn. Hence, the incipient economic recovery in Croatia may bring about only modest employment growth, and accordingly unemployment will begin to fall only after a substantial time-lag.

Figure 1: Labor demand plunged during the crisis

![Graph](image URL)

Source: Central Bureau of Statistics, Croatian Employment Service; Bank staff calculations.

18. **Few employers reacted to the fall in product demand by cutting working time.** The number of hours worked has remained roughly constant since the crisis has begun, although recent data (October 2009) show some reduction in working time (4 percent). In addition, according to anecdotal evidence some employers used unpaid mandatory leave as a way of adjusting labor input. Nonetheless, working time reduction does not seem to be an important adjustment mechanism in Croatia. If so this suggests that short-time working subsidy – a newly introduced measure meant to support employment in firms affected by the crisis -- may not be an effective tool for averting layoffs. On the other hand, however, employers may become more willing to resort to working time reduction if they have financial incentives to do so. The short-time working subsidy program is discussed in more detail in Section IV.

19. **An important factor that limited the employment impact of the crisis was wage moderation.** Real wages remained virtually stagnant once the economy slowed down and recently (since September 2009) started to fall. At end-2009, the average real wage is nearly 3 percent lower than it was a year earlier. The reduction of wage pressure helped to cut labor costs and thus to limit the layoffs. Wage flexibility has thus emerged as an important crisis impact mitigation mechanism, which is a notable new phenomenon because until recently wage pressures pervaded the Croatian economy and were contributing to high unemployment (World Bank 2008).

20. **The fall in labor demand manifested itself also in a pronounced increase in unemployment.** This increase results from an inflow of both laid-off workers and new labor market

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12 See Matkovic and Arandarenko (2010) for a more detailed analysis of wage and employment adjustments.
entrants (mainly school leavers) who during the crisis face meager employment chances. The number of the registered unemployed is currently (December 2009) about one third higher than before the crisis and over 20 percent higher than a year earlier (Figure 2). However, it should be noted that presently registered unemployment is at a similar level as it was in the late 2006/early 2007. So, the crisis reversed the substantial reduction in unemployment that occurred in 2007 and the first half of 2008 and moved the Croatian labor market back to a high unemployment state.

Figure 2: A pronounced increase in unemployment in the wake of the crisis

Panel A. Panel B.

![Unemployment](image)

Source: Croatian Employment Service (HZZ), Bank staff calculations.

21. **The unemployment rate has increased in Croatia less than in the EU, but is above the EU level.** Currently, the unemployment rate in Croatia is 10.6 percent (as of December 2009) and is 2.3 percentage points higher than before the crisis (December 2008). By comparison, the average unemployment rate in the EU at 10.2 percent is slightly lower than in Croatia, but increased by 4.1 percentage points, that is substantially more. So with regard to unemployment Croatia managed to withstand the economic crisis better than in most EU countries.

22. **In addition to an increase in unemployment, the fall in labor demand has also led to a fall in the labor force participation rate.** Some workers facing the poor employment prospects become discouraged and withdraw from the labor force. The decrease in force participation has not been dramatic, nonetheless significant. Presently the rate is about 1.6 percentage points lower than it was before the crisis. Although the increase in unemployment rate and the fall in the labor force participation rate during the crisis were relatively modest, the combined effect is considerable. The employment/working age population ratio dropped by 2.3 percent in one year from already a very low pre-crisis level of 57.8 (one of the lowest in Europe). Thus the crisis further aggravated already substantial structural labor market problems in Croatia. Labor is underutilized which translates into lower output and the living standards. Raising the low employment/population ratio is one of key challenges facing Croatia post-crisis.

23. **The increase in unemployment primarily reflects intensified inflows into unemployment and less so reduced outflows from unemployment to jobs.** Monthly inflows into unemployment during the present crisis period are 30 to 40 percent higher than they were before the crisis.

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13 Youth (15-24) accounted for about one-third of all newly registered unemployed in 2009.
14 We are assuming that the crisis hit the Croatian economy between the last quarter of 2008 and the first quarter of 2009.
15 EU harmonized unemployment rate based on the ILO definition and estimated using LFS data.
16 Unweighted average unemployment rate for 24 EU countries (excluding Cyprus, Luxembourg and Malta).
Outflows from unemployment to jobs fell 20 to 30 percent immediately after the outbreak of the crisis, but recently show some incipient signs of a rebound. The surge in inflows into the unemployment register implies a change in the durational structure of unemployment in Croatia: an increase in the proportion of short-term unemployed and a decrease in the proportion of long-term unemployed. While the short-term unemployed tend to be “regular” workers who lost their jobs because of the crisis, the long-term unemployed tend to be “disadvantaged” workers who are jobless due to the poor skills and morale, limited work experience, etc. The needs of these two groups are likely to be different, and thus given limited resources a balance needs to be struck between the services provided to each group (OECD 2009).

**Fewer job opportunities**

24. **In response to the fall in product demand employers have also reduced hiring.** The number of job vacancies plunged by around about one-third during the crisis (Figure 1, Panel B). This implies a dramatic worsening of job prospects for the unemployed. Job prospects are measured by the unemployment/vacancies (U/V) ratio, that is the number of job seekers per one job vacancy. Naturally, the higher the ratio, the lower is the probability of finding a job. During the crisis the U/V ratio doubled in Croatia as a result of both a sharp increase in unemployment and an equally sharp fall in the number of job vacancies. Currently there are 22 newly registered unemployed per every 10 newly registered vacancies, whereas before the crisis there the ratio was only 11. This implies that there are no job vacancies for the majority (55 percent) of the newly registered unemployed. Presently job chances for most of the unemployed are thus meager.

25. **The sharp increase in the unemployment/vacancies ratio during the crisis has important policy implications.** It indicates that unemployment is primarily due to demand deficiency rather than to structural factors (such as the skills or spatial mismatch). This issue is addressed in more detail in Section IV below. At the same time, the increase in the U/V ratio negatively affects the effectiveness of employment services, such as job search assistance and job brokerage. Matching more unemployed with fewer jobs is getting increasingly difficult and costly, while the effect is bound to be limited. The returns to job matching services are thus sharply diminishing when the U/V ratio goes up. Under such conditions the main policy challenge is to enhance job opportunities by supporting job creation.

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17 We consider the period January – September 2008 as characteristic for the pre-crisis labor market conditions, and the period January – September 2009 as characteristics for the crisis labor market conditions.
The employment effects of the crisis vary strongly across regions

26. Some of the Croatia’s regions have been hit much harder by the crisis than others. While in some regions unemployment increased by only around 10 percent in last year, in other it increased by over 35 percent (Figure 3, Panel A). However, the crisis’ impact on unemployment did not go hand in hand with that on job vacancies. Surprisingly, there is virtually no correlation across regions between the change in unemployment and the change in the number of reported vacancies. There are counties which experienced a strong increase in unemployment, but a modest fall in the number of vacancies. And conversely, there are counties, where a modest increase in unemployment was coupled with a sharp fall in the number of vacancies. Consequently, the increase in unemployment is only one part of the story. The other part is the change in the unemployment/vacancy ratio. Figure 3, Panel B shows that counties where labor market conditions deteriorated the most (as measured by the U/V ratio) are not necessarily the regions where unemployment increased the strongest. But again, there is substantial variation in the change in the U/V ratio across regions. In some regions there were more than 3 newly unemployed persons per every reported vacancy, whereas in other regions the ratio is less than two. Thus, in some counties labor market conditions deteriorated much more than in others.

27. When analyzing the impact of the crisis on regional labor market conditions one should look at both the increase in unemployment and the U/V ratio. The increase in the unemployment rate is indicative of the pressures on services provided by regional Employment Centers. The change in the U/V ratio is indicative of job prospects in the region. However, the regional allocation of resources for ALMPs should be driven by changes in unemployment (see Section IV below).

Figure 3: Labor market impact of the crisis varies strongly across regions
Panel A
28. **Regions where unemployment was initially low have been hit harder by the crisis than regions where unemployment was high.** After all, there is a strong negative correlation between the pre-crisis unemployment and unemployment growth across regions (Figure 4). The impact of the crisis in low unemployment regions has been thus significantly stronger than in high unemployment regions. On average, in regions where the pre-crisis unemployment rate was around 20 percent unemployment grew about 25 percent, while in regions where pre-crisis unemployment rate was around 10 percent unemployment grew about 35 percent, that is 10 percentage points more than in high unemployment regions. This strong negative correlation implies that as a result of the crisis regions converged in terms of the unemployment rate. Presently, the variation in the unemployment rate across regions is much smaller than before the crisis. Thus the crisis has acted as a labor market equalizer.

**Figure 4: Low unemployment regions suffered from the crisis more than high unemployment regions.**
The way regional labor market reacted to the crisis reflects regional industrial structures. Figure 5 shows that industries that were most affected by the crisis include manufacturing, trade, tourism and construction. Accordingly, regions where these industries play a dominant part suffered most from the crisis. The differences in regional industrial structure also explain why unemployment has increased more in initially low-unemployment regions. In Croatia, regions where unemployment was low before the crisis were either regions with a large share of manufacturing and trade industries, or regions relying on tourism. Given that the crisis affected mainly the industrial sector, labor market conditions in industrialized regions deteriorated more than in less industrialized, agricultural regions, where unemployment was initially higher.

Figure 5: Manufacturing, trade and tourism sectors were most affected by the crisis

Unemployment hit primary earners aggravating its poverty impact

The industrial profile of the crisis translates into the socio-economic profile of affected workers. Compared to the unemployment profile before the crisis, a newly unemployed person is more likely to be a prime-age skilled blue-collar male worker. Women, youth and white-collar workers are less affected by the crisis. However, the differences in socio-economic profile between those who became unemployed before the crisis and those who became unemployed following the crisis are not that much pronounced. For example, men currently account for 48 percent of newly registered unemployed, which is 6 percentages more than before the crisis. The share of youth fell from 30 to 27 percent. And the share of skilled blue-collar workers in the inflow to the unemployment register increased by some 5 percentage points. These differences, although not dramatic, are nonetheless likely to have significant poverty implications. This is because the crisis disproportionately hit primary earners (prime-age men) who are likely to be household heads. In contrast, before the crisis it was predominantly secondary earners (youth, women) who bore the brunt of labor market adjustment. The point is that unemployment of a primary earner is more likely to push a household into poverty than that of a secondary earner.

The increase in unemployment is bound to translate into higher poverty. There is a strong relationship between one’s labor force status and his/her income status in Croatia. An unemployed

18 Matkovic and Arandarenko (2010) provide a more detailed analysis of the industrial pattern of the crisis.
19 See Matkovic and Arandarenko (2010) for a more detailed analysis of the socio-demographic profile of workers affected by the crisis.
person is about three times more likely to be poor as an employed person (Figure 6, panel A). At the same time, the risk of poverty declines with an increase in the number of the employed household members (Figure 6, panel B).

**Figure 6: Poverty and unemployment are closely linked in Croatia**

Panel A. Unemployment elevates one’s risk of poverty  
Panel B. Employment is critical for avoiding poverty

Note: Poverty = bottom quintile (20%) of per capita consumption distribution.  
Source: Household Budget Survey 2008; Bank staff calculations.

32. The strong link between labor market outcomes and poverty implies that during the crisis additional anti-poverty measures should be targeted at the newly unemployed. On the one hand, they should aim at providing temporary income support and improving employment chances and on the other at preventing the risk of long-term unemployment and the associated erosion of skills and morale. The main policy challenge is to prevent the transformation of job loss into labor market marginalization that so often leads to persistent poverty. The policy response to the growing unemployment is analyzed in Section IV.

III. Poverty Impact

33. The large fall in labor demand engendered by the crisis and the associated increase in unemployment have led to an increase in poverty. This section shows the results of the simulations of the poverty impact of the labor market developments outlined above. It finds that the potential impact of the crisis on poverty has been substantial. After all, the crisis seems to have undone gains in social welfare achieved during the last few years of economic growth.

34. By the mid-2009 the crisis hit majority of families in Croatia. An Omnibus survey implemented in July 2009 collected information on the share of population affected by the crisis and its main transmission channels in reducing household welfare. By that time, 50 percent of the surveyed population reported that the crisis affected them, with one-third being strongly or very strongly affected. The key transmission channels of the crisis included the reduction in real wages, wage arrears, job losses or, in the case of self-employed and business owners, reduced demand for their products and services (Figure 7). Most of the respondents began feeling the impact of the crisis

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20 Poverty is defined here as the bottom quintile (20 percent) of per capita consumption distribution.  
21 Throughout the text we refer to the simulated poverty impact rather than actual impact.  
22 GfK Croatia for UNDP, Survey “Consumption and the impact of the crisis”, July 2009. The survey sample was 1,000 households.
in the first half of 2009 (80 percent as opposed to 20 percent reported being affected by the crisis in the second half of 2008). The main coping strategies included delaying purchases of goods and drawing down savings (Figure 8).

**Figure 7: Crisis Transmission on Living Standard**

**Figure 8: Croatia: Coping Strategies**

Source: GfK, staff calculation

**Poverty was low prior to the crisis outbreak**

35. **Absolute poverty, derived from a cost-of-basic-needs method, was relatively low in Croatia prior to the crisis.** In 2004, around 11 percent of the population was found to be poor, and another 10 percent was at risk of poverty in the sense that their average consumption level was less than 25 percent above the poverty line (World Bank, 2006). About 1 percent of the population faced severe deprivation by having resources lower than the food poverty line. The reassessed absolute poverty rate falls to only 6.1 percent in 2008 (assuming unchanged inequality) or to 8 percent (assuming an increase in inequality of about 10 percent). Recovering the poverty trends over the 2004-2008 period was found impossible due to the inconsistency of HBS data over time.

36. **Absolute and relative poverty was also low in Croatia by regional standards.** The incidence of absolute poverty, using the PPP $5 a day poverty line, at 2 percent is the lowest among ECA countries for which data is available. The incidence of relative poverty (percentage of population below 60 percent of median income), at 18 percent, is close to the EU15 average (Box 2).

37. **Households saw their economic well-being improve in the years preceding the crisis.** A subjective assessment of the living standards in the HBS suggests that around 10 percent of the population in 2008 lived in households that faced great difficulties in financing their consumption as oppose to over 13 percent surveyed in 2002 (Table 1). Additional 21 percent of the population reported to live with difficulty. Overall, around half of the population reported difficulties in matching their needs with the earned income. The subjective poverty is strongly correlated with the relative position in the consumption distribution. Of the poorest 10 percent of population in the consumption distribution, 90 percent reported to live with difficulties, while one-third with great difficulties.

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23 The reassessment of Household Budget Survey (HBS) data was necessary in order to ensure consistency and comparability of poverty data over time. See Annex 1 for the discussion of HBS data quality.
Box 2: Poverty is low in Croatia by regional standards

Croatia is among ECA countries with the lowest incidence of absolute poverty. Using the poverty line of PPP $5 a day, the poverty headcount ratio is about 2 percent, which is considerably less that in other ECA countries for which data is available. For example, in the neighboring Hungary, which has a similar level of GDP per capita, the poverty headcount ratio at 7 percent is over three times as high.

<table>
<thead>
<tr>
<th>Panel A Absolute poverty</th>
<th>Panel B Relative poverty</th>
</tr>
</thead>
</table>
| **Percentage of population living on less than PPP $5 a day**  
Croatia against selected ECA countries  
2008 | **Percentage of population living below 60 percent median income**  
Croatia against middle-income EU countries  
2008 |

![Graph showing poverty rates](image)

Source: World Bank, Eurostat; Bank staff calculations

Relative poverty, which reflects income inequality, is in Croatia at a level similar to the EU15 average. In Croatia, 18 percent of the population has equivalent income less than 60 percent of the median income, while the EU15 average is 16 percent. However, in terms of relative poverty Croatia fares somewhat worse than in terms of absolute poverty. In Hungary, for example, the incidence of relative poverty, at 14 percent, is notably less than in Croatia. In contrast, in Romania the incidence of relative poverty at 23 percent is much higher than in Croatia. All, both absolute and relative poverty, are low in Croatia by regional standards.

Source: Bank staff analysis.

### Table 1. Subjective Poverty in 2002-2008

<table>
<thead>
<tr>
<th>With its disposable monthly income, the household lives (percentage of households, %):</th>
<th>2002</th>
<th>2004</th>
<th>2008</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>All households</td>
<td>Poor (bottom 10%)</td>
<td>Non-poor</td>
</tr>
<tr>
<td>With great difficulties</td>
<td>13.4</td>
<td>10.0</td>
<td>9.6</td>
</tr>
<tr>
<td>With difficulties</td>
<td>25.6</td>
<td>22.7</td>
<td>20.9</td>
</tr>
<tr>
<td>With some difficulties</td>
<td>29.5</td>
<td>28.6</td>
<td>24.4</td>
</tr>
<tr>
<td>Fairly well</td>
<td>21.8</td>
<td>17.5</td>
<td>15.0</td>
</tr>
<tr>
<td>Well</td>
<td>8.0</td>
<td>19.1</td>
<td>27.5</td>
</tr>
<tr>
<td>Very well</td>
<td>1.7</td>
<td>2.1</td>
<td>2.5</td>
</tr>
</tbody>
</table>

*Source: Estimates based on the 2008 HBS.*

38. **Poverty in Croatia was relatively shallow before the crisis.** The poverty gap of 2.2 percent for the lower poverty threshold in 2008 means relatively shallow poverty (Table 2). The squared...
poverty gap of 0.8 percent indicates that certain pockets of deep poverty exist, although extreme poverty is relatively rare.\textsuperscript{25}

**Table 2: Poverty in Croatia in 2008**

<table>
<thead>
<tr>
<th></th>
<th>Lower poverty line</th>
<th>Upper poverty line</th>
</tr>
</thead>
<tbody>
<tr>
<td>Poverty rate (headcount)</td>
<td>10%</td>
<td>20%</td>
</tr>
<tr>
<td>Poverty gap</td>
<td>2.2%</td>
<td>4.7%</td>
</tr>
<tr>
<td>Squared poverty gap</td>
<td>0.8%</td>
<td>1.7%</td>
</tr>
</tbody>
</table>

Note: The lower poverty line by construction categorizes as poor the poorest 10% of the population, while the upper poverty line categorizes as poor the poorest 20% in consumption distribution. 

Source: Estimates based on the 2008 HBS.

39. **Consumption inequality is modest in Croatia.** Expectedly, income inequality is somewhat higher (Table 3). The bottom decile used about 4 percent of total equivalent consumption, while the top decile used about 21 percent. As to incomes, the bottom decile commanded less resources and the top decile more resources. This means that while the rich save part of their incomes, the poor actually use their saving to finance the current consumption. The Gini coefficient also indicates that income inequality is higher than consumption inequality. The international comparison suggests that inequality in both income and consumption remains modest. Although there are no substantive differences in inequality between urban and rural part of the country, around half of the country’s population live in urban areas, but they command more than 60 percent of total income and consumption.

**Table 3: Consumption and Income Inequality**

<table>
<thead>
<tr>
<th></th>
<th>Consumption</th>
<th>Income</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Total</td>
<td>Urban</td>
</tr>
<tr>
<td>Consumption/income share of the bottom decile (%)</td>
<td>4.2</td>
<td>4.5</td>
</tr>
<tr>
<td>Consumption/income share of the top decile (%)</td>
<td>20.6</td>
<td>20.4</td>
</tr>
<tr>
<td>Decile share ratio (top/bottom)</td>
<td>5.0</td>
<td>4.5</td>
</tr>
<tr>
<td>Gini coefficient</td>
<td>0.236</td>
<td>0.220</td>
</tr>
<tr>
<td>Consumption/income share (%)</td>
<td>100.0</td>
<td>60.7</td>
</tr>
<tr>
<td>Population structure</td>
<td>100.0</td>
<td>52.9</td>
</tr>
</tbody>
</table>

Source: Estimates based on the 2008 HBS.

**Poverty is associated with low educational attainment and joblessness**

40. **Poverty in Croatia is closely related to the family’s socio-economic profile.** The family size as well as the age, employment status and the education attainment of a household head all were found to be important poverty correlates. Gender of the household head, which was an important poverty determinant in 1990’s or even in 2004, lost significance in the 2008 survey. This is related to the improved trend of female employment/participation rate as well as their higher educational attainment over the last decade. Equally important, the overall education attainment structure of the population is improving with almost doubled share of post-secondary education-headed

\textsuperscript{25} The squared poverty gap is a measure of severity of poverty, which takes into account distance from the poverty line, but in squared terms, meaning that higher weights in calculations are given to those further away from the poverty line.
households (over 15 percent of population) with below secondary education-headed households declining to 30 percent.

41. **Households whose head is employed face the lowest poverty risk.** Such households constituted almost a half of the overall population, but only a quarter of the poorest decile (Table 4). Employment in the public sector largely protects against the poverty, with the poverty rate being only 4.8 percent in 2008 for such households. Similarly, but to a lesser extent, employment of the household head in the private sector is associated with the poverty risk at 7.8 percent, well below the national average. Households headed by a pensioner constitute about one third of the Croatian population, but over 42 percent of the poor. The poverty risk of households headed by a retired person was close to the national average in 2008.

42. **Unemployment or inactivity of the household head significantly raises the risk of poverty.** The highest poverty risk was faced by households headed by an inactive person without pension or by an unemployed person. In the former case, more than a third of such households belong to the poorest decile of the population, while in the latter case one-fifth. Fortunately, there were not many of such households in 2008 - they accounted for around 7 percent of population altogether.

<table>
<thead>
<tr>
<th>Table 4: Poverty Incidence by Household Head’s Status of Employment</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Lower poverty line</strong></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>Employed</td>
</tr>
<tr>
<td>Self-Employed</td>
</tr>
<tr>
<td>Farmers</td>
</tr>
<tr>
<td>Unemployed</td>
</tr>
<tr>
<td>Retired</td>
</tr>
<tr>
<td>Other Inactive</td>
</tr>
<tr>
<td>Total</td>
</tr>
</tbody>
</table>

\(a)\) Excluding farmers.

*Source: Estimates based on the 2008 HBS.*

43. **Households whose heads are well educated are seldom poor.** Only around 8 percent of all poor lived in households whose heads had a general secondary or tertiary education degree (Table 5). Households whose head had primary school education or less were at least two times more likely to be poor than the average household; they constituted less than 30 percent of Croatia’s population, but more than two-thirds of the poor.
Table 5: Poverty Incidence by Household Head’s Educational Attainment

<table>
<thead>
<tr>
<th></th>
<th>Lower poverty line</th>
<th>Upper poverty line</th>
<th>Distribution of Population</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Poverty Rate</td>
<td>Distribution of the Poor</td>
<td>Poverty Rate</td>
</tr>
<tr>
<td>Unfinished Primary</td>
<td>30.3</td>
<td>30.3</td>
<td>46.1</td>
</tr>
<tr>
<td>Primary Education</td>
<td>20.7</td>
<td>38.4</td>
<td>38.9</td>
</tr>
<tr>
<td>Vocational Secondary</td>
<td>7.0</td>
<td>23.1</td>
<td>17.7</td>
</tr>
<tr>
<td>General Secondary</td>
<td>2.6</td>
<td>6.0</td>
<td>8.0</td>
</tr>
<tr>
<td>Post-Secondary</td>
<td>1.4</td>
<td>2.1</td>
<td>3.3</td>
</tr>
<tr>
<td>Total</td>
<td>10.0</td>
<td>100.0</td>
<td>20.0</td>
</tr>
</tbody>
</table>

Source: Estimates based on the 2008 HBS.

**Poverty incidence is the highest among older persons living in rural areas**

44. Elderly faced an elevated risk of poverty. Particularly if they were not receiving pension benefits, or were living in rural areas. There was a relatively small group of elderly (65 years and more) that did not receive pension—slightly more than two percent of total population—that had a risk of poverty about three times the average. They accounted for almost 8 percent of the poorest decile (Figure 9). Every second elderly without pension and living in rural areas was found to be poor. Other age groups faced the poverty risk that was below the national average; however, if the household was situated in the rural area, poverty risk would rise above the national average for all age cohorts.

45. Gender of the household head had little impact on the poverty risk. The poverty rates for female-headed households (11 percent) were somewhat higher than for male (9.7 percent), although much less than in previous assessments. A quarter of population lived in households whose head was woman, and they constituted for slightly higher proportion of the poor (around 27 percent). However, it was a male elderly without the pension that was at the highest risk of poverty of all groups (Figure 10).
46. **The poor in Croatia tend to live alone or in large families.** The household size appears to have an U-shaped relation with the risk of poverty (Figure 11). Those living in one- and two-member households faced the poverty risk comparable to those living in households with six, seven or more members, which was doubled compared to households with three to five members. Fortunately, almost half of population lived in three- and four-member families, while large households with six plus and one-two members comprised around 12 and 28 percent of the population, respectively. Among the poorest decile there were above 40 percent individuals from such small households, and additional 20 percent living in large households.

47. **The bulk of the poor in Croatia live in rural areas.** Importantly, rural population is large in Croatia: it accounts for almost half of the total population. In 2008, more than three-fourths of the poorest decile as well as of the poorest quintile lived in rural areas (Figure 12 and Figure 13). As for the regional poverty, Central and East Croatia was found to have the highest concentration of the poor and vulnerable, accounting for around 30 percent of the country’s total population, but about 60 percent of the poor. In fact, almost half of the poorest population was from the rural part of the Central and East Croatia. The poverty risk in Central and East Croatia in 2008 was 2.6 times the national average. In contrast, poverty in urban areas of North West Croatia and Adriatic Region, which account for above 40 percent of the country’s population, was disproportionately low.

48. **Large differences in poverty incidence by region are due to variation in the human capital as well as in employment opportunities.** The population of Central and East Croatia, compared to other regions, had on average lower educational attainment (Figure 12). This region also faced lower employment rate, and a higher share of agricultural employment in relation to other areas (Figure
These findings concur with the earlier assessment based on the 2004 data, with little improvement over time, which points to the structural nature of this region’s high poverty rate.

**Children from multiple-child families face an elevated risk of poverty**

49. **Children are as likely to be poor as the adult population in Croatia.** Using the lower poverty threshold, around 9.8 percent of children aged 0-14 years were found to live in poor household, or around 9.6 percent of children aged 0-17 years. On the positive note, depth and severity of poverty, as measured by the poverty gap (1.9 percent) and the squared poverty gap (0.6), are lower for children than for the general population (2.2 and 0.8 percent, respectively), meaning that in the ideal scenario the eradication of child poverty would require fewer resources.

50. **But multiple children households face a substantially raised risk of poverty.** Households with three and more young children are around two times more likely to be poor than households with no children. Although such households represented a small group of population (1.2 percent) and a relatively minor group among the poor (2.4 percent using the lower threshold), such households were ‘incubators’ of child poverty as this vulnerability gets extrapolated for multiple-children households at ages 0-17 years. One third of the poor children came from households with three or more children under the age of 18. Households with one or two children were less likely to be poor than the national average.

**Table 6: Poverty Incidence by Household Composition**

<table>
<thead>
<tr>
<th>Number of Children</th>
<th>Lower Threshold</th>
<th>Upper Threshold</th>
<th>Distribution of Population</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Headcount Rate</td>
<td>Headcount Rate</td>
<td>Distribution of the Poor</td>
</tr>
<tr>
<td>No children</td>
<td>10.4</td>
<td>20.2</td>
<td>79.3</td>
</tr>
<tr>
<td>1</td>
<td>8.8</td>
<td>16.6</td>
<td>11.5</td>
</tr>
<tr>
<td>2</td>
<td>5.3</td>
<td>20.2</td>
<td>5.7</td>
</tr>
<tr>
<td>3 or more children</td>
<td>20.7</td>
<td>47.2</td>
<td>1.2</td>
</tr>
<tr>
<td>No children</td>
<td>11.3</td>
<td>20.6</td>
<td>51.8</td>
</tr>
<tr>
<td>1</td>
<td>5.1</td>
<td>15.5</td>
<td>20.4</td>
</tr>
<tr>
<td>2</td>
<td>8.6</td>
<td>18.7</td>
<td>19.0</td>
</tr>
<tr>
<td>3 or more children</td>
<td>16.2</td>
<td>29.5</td>
<td>8.8</td>
</tr>
<tr>
<td>Total</td>
<td>10.0</td>
<td>20.0</td>
<td>100.0</td>
</tr>
</tbody>
</table>

*Source: Estimates based on the 2008 HBS.*

51. **Labor market marginalization and low education of the household head are more likely to trap children into the poverty.** Table 7 shows that employment rate in poor households with children is lower and unemployment rate higher than in non-poor households with children. Among those in employment, poor households face lower share of wage employment and higher share of farmers -- a combination that usually leads to lower income prospects. Education of a household
head is considerably lower in poor households with children than in comparable non-poor households.

Table 7: Characteristics of Households with Children 0-17

<table>
<thead>
<tr>
<th></th>
<th>Employment Rate (15-64)</th>
<th>Share of Farmers in Employment (15-64)</th>
<th>Share of Wage Employment in Total Employment</th>
<th>Unemployment rate (15-64)</th>
<th>Average Years of Schooling of Household Head</th>
</tr>
</thead>
<tbody>
<tr>
<td>Non-poor households with children</td>
<td>66.9%</td>
<td>10.1%</td>
<td>79.3%</td>
<td>9.8%</td>
<td>11.1</td>
</tr>
<tr>
<td>Poor households with children</td>
<td>47.3%</td>
<td>27.5%</td>
<td>67.9%</td>
<td>30.1%</td>
<td>8.8</td>
</tr>
</tbody>
</table>

Notes: The lower poverty threshold is used to define poor children (aged 0-17).
Source: Estimates based on the 2008 HBS.

Main correlates of poverty in Croatia: results of a multivariate analysis

52. **Multivariate regression analysis** allows determining the independent effect of different variables on poverty. In contrast, the descriptive analysis presented above shows only bivariate correlations between variables, which may reflect the influence of other, omitted factors. For example, the correlation between the poverty incidence and the labor force status may be to some extent accounted for by a different variable, namely the differences in educational attainment between the employed and the unemployed. The multivariate regression analysis poverty validated the earlier findings:

- **Labor force status** of a household head has a significant impact on the household’s consumption level and, accordingly poverty status. Households, whose heads are employed, are much less likely to be poor than households whose heads are unemployed or out of the labor force;

- **Educational attainment** of the household’s head has a strong positive effect on the consumption level and poverty status;

- The **age** of household head has no impact on the household’s consumption once other variables are controlled for;

- **Location** is important: all else being equal, consumption in Central and East Croatia is significantly lower than in the two remaining regions;

- **Household size** matters for the consumption level;

- A higher share of **elderly** in the household is statistically significant for rural areas;

- In rural areas **female headed households** can expect to have equivalent consumption on average some 4-5 percent lower than male headed households, other things being equal;
• Other characteristics of the household composition (such as the share of children, share of adults) are not statistically significant in explaining variation in equivalent consumption.

**Box 3: Human Development Impact of the Crisis**

The assessment of the human development impact of the global crisis in Europe and CIS region was undertaken in 2009 by the UNDP. The likely impact of changes in income (per capita PPP GDP) on key Human Development indicators was examined for 29 countries, based on the IMF GDP growth projections for 2009.

The results suggest that the adverse impact of the global economic crisis on poverty, unemployment, public health, mortality, suicide and homicide rates is likely to be considerable, long-lasting, and will disproportionately affect the poorest. For instance, one percent drop in the income growth is associated with a drop in life expectancy of about two weeks. The results also suggest that long-term impact on income poverty could be significant—poverty can increase significantly from pre-crisis level and the cumulative impact of the crisis will be substantial and prolonged. The results imply that prompt policy response is needed to prevent the deterioration of human development outcomes. The UNDP’s analysis also points out that the impact of crisis is likely to be smaller in countries where governments have consistently invested in human development.

The UNDP’s analysis indicates that in the Western Balkans unemployment, poverty and suicide rates are more sensitive to income changes, while infant mortality, under 5 child mortality, and morbidities are less sensitive than in other countries in the region. However, the negative effects can be mitigated by policy measures, as the study revealed significant differences among countries in terms of the human development response to income shocks, reflecting differences in the efficiency of the social safety nets.

The UNDP report argues that the provision of social services, including social safety nets, is often far from efficient in the Western Balkans. Improving their efficiency would require carefully crafted reforms of the social safety nets and social services. While the crisis may well necessitate prompt action, the response should be formulated with longer-term considerations in mind.

*Source: The Human Development Impact of the Global Crisis in Central, Eastern and Southern Europe and the CIS, 2009, UNDP, Bratislava Regional Centre*

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**Crisis has undone poverty gains achieved in the preceding years**

53. The simulations indicate that the 2009 recession annulled the recent welfare improvements in Croatia in just one year. Because of data deficiencies, it is difficult to be precise about the extent to which poverty had increased in the wake of the crisis. However, simulations of short-term changes in poverty between 2008 and 2009 suggest a rise in consumption-based poverty by 3.5 percentage points, under the baseline scenario of 7.1 percent consumption shock, and the 10 percent baseline poverty rate (Table 8). The simulation shows that the share of households living on less than the adopted poverty line of HRK 2,063 (USD 380) per adult equivalent per month went up from 10 percent in 2008 to 13.5 percent in 2009. Annex 3 presents assumptions underlying the simulation of the crisis’ impact on poverty.

54. A more conservative scenario predicts somewhat smaller, but still significant, increase in poverty. Assuming negative income shock of 3.6 percent, the incidence of poverty increased from 10 percent in 2008 to 12.2 percent in 2009. This scenario also assumes a 100-percent pass-through of income shocks to consumption, but takes into account only a 3.6-percent decline in household income based on lead indicators on employment, wages, taxes and benefits for 2009. Even with this more conservative scenario the implications for different population cohorts remain the same.
Table 8: Poverty Simulations for 2009

<table>
<thead>
<tr>
<th></th>
<th>Lower poverty line</th>
<th>Upper poverty line</th>
</tr>
</thead>
<tbody>
<tr>
<td>2008</td>
<td>10.0</td>
<td>20.0</td>
</tr>
<tr>
<td>2009 – Consumption shock</td>
<td>13.5</td>
<td>25.1</td>
</tr>
<tr>
<td>Baseline (-7.1%)</td>
<td>14.0</td>
<td>26.9</td>
</tr>
<tr>
<td>Low case (-9.0%)</td>
<td>12.9</td>
<td>23.7</td>
</tr>
<tr>
<td>High case (-5.5%)</td>
<td>12.2</td>
<td>22.2</td>
</tr>
<tr>
<td>2009 - Income shock (-3.6%)</td>
<td>12.2</td>
<td>22.2</td>
</tr>
</tbody>
</table>

Source: Staff estimates based on the 2008 HBS

55. The Table 8 shows different consumption/income scenarios with the same conclusion: the welfare impact of the recent crisis has been significant. It is also evident that the labor market was the main transmission channel from the crisis to households’ welfare in 2009. Almost the entire rise in poverty headcount was due to job losses and real wage reductions that depressed household incomes and consumption.

56. Contrary to general beliefs, a number of policy changes introduced in mid-2009, aimed at protecting public finance and thus maintaining macro stability, had very limited impact on the poor. The introduction of the solidarity tax; the rise in supplemental health insurance premium; or the elimination of subsidies for textbooks, had significant overall distributional impact. However, their impact had been to a large extent mitigated by a policy of waivers or exemptions for lower income households. Due to design features, the poor born only a very small proportion of the total policy impact in 2009 -- 0.8 percent of the solidarity tax; 2.4 percent of the health copayments; and 1.4 percent of the cost of the elimination of the free-of-charge textbooks. This was substantially less than their share in total population (13.5 percent). The impact of new policies remained largely with the upper quintiles.

57. Similarly, simulation results indicate that the suspension of the pension indexation in 2010 affected the incidence of poverty among the pensioners only marginally. Under the assumption of an increase in the 2010 cost of living by 2.5 percent, the poverty headcount among pensioners will go up from an estimated 14.6 percent in 2009 to 14.8 percent in 2010 (assuming that all other policies remain unchanged). This small increase in pensioner poverty should be contrasted with their ‘protected’ incomes during 2009, where pensions were regularly indexed and grew in real terms by 2.2 percent. As a result, the increase in pensioner poverty in 2009 was the lowest among different socio-economic groups – 1.8 percentage points.

58. The lower middle-income class was hit hardest by the consumption decline, although the differences between income groups are relatively small. A growth-incidence curve (Figure 14) shows a difference between actual consumption in 2008 and a projected consumption in 2009 for different percentiles of consumption distribution. The very poorest population (the poorest 2-3 percent) observed a milder consumption drop than the average population due to the fact that: (i) they were not hit by the employment decline; (ii) a policy of waivers and exemptions for lower income households were in place; and (iii) social transfers increased in 2009 (pensions, social assistance benefits). However, simulation also shows that first two quintiles would face a decrease of their consumption by almost 8 percent, while the upper quintile (the richest 20 percent of the population) could face consumption decline of around 7 percent. However, the largest drop in
consumption was observed by the second quintile, followed by the third quintile, indicating thereby that lower middle-income class lost the most in the crisis.

59. The surge in poverty in 2009 reflected a large inflow of “new poor”, which was not coupled by an outflow from poverty of those who were poor prior to the crisis. The new poor have experienced a sudden and sizable welfare loss in the wake of the crisis: on average a 14 percent drop in consumption. In contrast, the “old poor” had seen their consumption decline much less: by “only” 6 percent.

60. Much of the rise in poverty was driven by the fall in consumption, while only a minor part is due to an increase in inequality. Table 9 shows that increase in poverty rate by 3.5 percentage points in the baseline scenario can be explained by (i) the growth effect which caused an increase in headcount poverty rate by 3.1 percentage points; and (ii) the redistribution effect, i.e. higher inequality in the distribution, which accounted for an increase in poverty rate of around 0.7 percentage points.

Table 9: Growth and Redistribution Decomposition of Poverty Changes

<table>
<thead>
<tr>
<th>Poverty rate (%)</th>
<th>Change in poverty rate (in p.p.)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2008</td>
</tr>
<tr>
<td>Total</td>
<td>10.0</td>
</tr>
<tr>
<td>Urban</td>
<td>4.5</td>
</tr>
<tr>
<td>Rural</td>
<td>16.2</td>
</tr>
</tbody>
</table>

Source: Staff estimates based on the 2008 HBS

61. According to simulation results, poverty increased somewhat faster in urban areas than in rural areas. As a result, the share of urban population in the poorest quintile increased. However, given that the bulk of the poor live in rural areas in Croatia, in absolute terms the increase in poverty...
in rural areas was considerably larger than in urban areas. Specifically, using the lower poverty threshold and baseline growth scenario for 2009, the headcount poverty rate was estimated to increase from 4.5 to 6.1 percent in urban areas, and from 16.2 to 21.7 percent in rural areas. On average, the rural population reduced its consumption more than urban population. For the poorest population, however, rural localities provided slightly better cushion than urban areas.

62. **Poverty is predicted to increase more in richer regions.** This is due to the fact that employment declined most in more developed, industrial and urban regions of Croatia, while less developed rural regions were less affected by the crisis (see Section II above). The proportion of the poor living in the more developed North West Croatia and Adriatic Region increased in 2009, while the proportion of the poor living in the less developed Central and East Croatia declined, although moderately. However in absolute terms, the increase in the incidence of poverty in Central and East Croatia was large because this is the region where poverty is concentrated.

The “new poor” are economically active, better educated and younger than the “old poor”

63. **The “new poor” are predominantly persons who lost their jobs in the wake of the crisis.** Accordingly, they tend to be economically active (looking for new jobs), better educated and younger than the “old poor”. Their poverty is more likely to be transitory, closely associated with the temporary worsening of labor market conditions. Once job opportunities improve the new poor have a good chance to escape poverty. This is less likely in the case of the “old poor” whose poverty is usually of long-term nature and associated with economic inactivity, poor skills and old-age.

64. **The existing social protection system was effective in preventing the rise in poverty among the economically inactive population.** Households headed by an inactive person had significantly reduced their share among the poor. In 2008, around 42 percent of the poor lived in households headed by a retiree, while in 2009 this percentage was about 38 percent. Inactive persons have not been affected by the labor market contraction in 2009, and their incomes increased (pension, social assistance benefit) in 2009, explaining their lower exposure to the current crisis.

65. **Households headed by the economically active workers, either employed or unemployed were more likely to be affected by the crisis than those headed by retired workers.** Specifically, it is estimated that the poverty rate among households headed by a retired workers increased by 1.7 percentage points, compared with 2.3 percentage points in the case of households headed by an employed person, and as much as 6.5 percentage points in the case of households headed by an unemployed person (Table 10). However, the increase in the poverty incidence is estimated to be particularly large among farmers (7.1 percentage points). Again, this reflects the nature of the current global crisis, which quickly turned into the jobs crisis in Croatia as well as in other countries. This finding corroborates well with the analysis of the labor market impact of the crisis (see Section II), whereby newly unemployed persons are most likely to be prime-age skilled blue-collar male worker.

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26 The term “new poor” is used as a shortcut to denote persons who according to simulation results were likely to become poor in the wake of the crisis.
Table 10: Simulated Poverty Incidence by Individual’s Labor Market Status (15+)

<table>
<thead>
<tr>
<th></th>
<th>2008</th>
<th>2009 (Simulated)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Poverty Headcount Rate (%)</td>
<td>Distribution of the Poor (%)</td>
</tr>
<tr>
<td>Employed</td>
<td>4.2</td>
<td>13.7</td>
</tr>
<tr>
<td>Self-Employed (w/o Farmers)</td>
<td>4.4</td>
<td>1.8</td>
</tr>
<tr>
<td>Self-employed Farmers</td>
<td>19.6</td>
<td>10.7</td>
</tr>
<tr>
<td>Unemployed</td>
<td>16.4</td>
<td>9.8</td>
</tr>
<tr>
<td>Retired</td>
<td>12.9</td>
<td>27.1</td>
</tr>
<tr>
<td>Other Inactive</td>
<td>13.8</td>
<td>21.7</td>
</tr>
</tbody>
</table>

Source: Staff estimates based on the 2008 HBS

66. Poverty is predicted to increase among the better educated persons, in contrast to the so-far prevailing pattern of poverty being concentrated among the less educated. This is consistent with the educational structure of job destruction described in Section II. The number of the poor with general secondary education increased, according to the simulations, by almost 80 percent (Figure 15). An increase of around 50 percent is expected for the poor with post-secondary education. Such an unbalanced increase in poverty by education changed the composition of the poor by somewhat lowering the fraction of the poor with unfinished primary education or completed primary education.

Figure 15: Simulated Increase in the Number of Poor Individuals in 2009 by Education Level (15+)

67. Prime-age workers were more likely to be affected by the crisis than the older individuals. This again reflects the fact that main source of the increase in poverty during the current crisis lies in the labor market. Persons over the working age (65+) were least affected by the economic decline, although poverty among this group has increased, too. A below-average increase in poverty incidence is expected also for elderly without pension and those between 50 and 64 years, resulting in their lower share among the poor (Table 11). In contrasts, the youth and the prime-age individuals have been hit by the crisis more strongly, which has been the case in most of the EU countries. Also, the elimination of free textbooks, relatively higher health copayment premium for those in employment compared to pensioners combined with the crisis tax affected prime-age persons and their families more than older population groups.
Table 11: Last in, First out: Profile of the Poor by Age

<table>
<thead>
<tr>
<th>Age Category</th>
<th>2008 Poverty Headcount Rate (%)</th>
<th>2008 Distribution of the Poor (%)</th>
<th>2009 (Simulated) Poverty Headcount Rate (%)</th>
<th>2009 (Simulated) Distribution of the Poor (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age ≤ 15 years</td>
<td>9.8</td>
<td>16.1</td>
<td>14.1</td>
<td>17.1</td>
</tr>
<tr>
<td>Age 16-30 years</td>
<td>7.1</td>
<td>14.4</td>
<td>11.1</td>
<td>16.7</td>
</tr>
<tr>
<td>Age 31-49 years</td>
<td>7.7</td>
<td>20.4</td>
<td>11.0</td>
<td>21.7</td>
</tr>
<tr>
<td>Age 50-64 years</td>
<td>8.6</td>
<td>17.0</td>
<td>11.4</td>
<td>16.7</td>
</tr>
<tr>
<td>Age &gt;65 years and receives pension</td>
<td>16.3</td>
<td>24.3</td>
<td>18.9</td>
<td>21.0</td>
</tr>
<tr>
<td>Age &gt;65 years and without pension</td>
<td>33.1</td>
<td>7.8</td>
<td>39.6</td>
<td>6.9</td>
</tr>
<tr>
<td>Total</td>
<td>10.0</td>
<td>100.0</td>
<td>13.5</td>
<td>100.0</td>
</tr>
</tbody>
</table>

Source: Staff estimates based on the 2008 HBS

Child poverty is set to rise

68. The crisis has negatively affected children: poverty incidence among children is expected to increase more than for the general population. Figure 16 depicts that in 2008 poverty rate among children aged 0-15 was slightly lower than the average for the population (9.8 percent vs. 10.0 percent for the population as whole), while in 2009 the poverty risk for children is above the average (14.1 percent vs. 13.5 percent). This holds as well for children up to 18 years old. This is related to the increased poverty risk of their parents losing jobs, but also due to increased cost of education.

69. The largest increase in vulnerability has occurred among households with two or more children. The poverty risk surged for households with two small children -- from around one half of the national average in 2008 (5.3 percent) to well above the national average in 2009 (15.8 percent) (Figure 17). Also, households with 3 and more children of 0-6 years old have seen a significant rise in the poverty rate (from 20.7 to 29.2 percent) confirming material difficulties faced by multi-children households. This is not the case for households with older children, as their poverty rate would remain close to the average for general population.
IV. Mitigating the Crisis Impact through Effective Employment and Social Protection Policies

70. This section presents social protection programs that are in place in Croatia, discusses their strengths and weaknesses, and suggests possible reform options. It finds that although spending on social protection is high in Croatia by regional standards, the effectiveness of spending in terms of its poverty impact is limited. There is ample room for improving the system’s efficiency both as regards its regular poverty alleviation function, and its ability to mitigate the effects of aggregate demand shocks that may hit the Croatian economy also in the future. The section argues that substantial gains in the system’s effectiveness can be achieved by reallocating resources within the existing budget envelope, and accordingly by changing the program mix by expanding programs that are well-targeted and effective and downsizing or closing programs that have little impact on poverty alleviation.

71. The section starts with the assessment of the social protection programs, and then proceeds with discussing the opportunities for reform. The assessment of social programs is divided into two parts. First, we focus on labor market programs, for the labor market has been the primary transmission channel from the crisis to poverty. As shown above, the “new poor” are predominantly persons who lost their jobs due to the aggregate demand shock associated with the crisis. Helping workers affected by the crisis, either by providing income support (unemployment benefit) or by enrolling them in programs meant to improve their employment chances is the most immediate and direct policy response to mitigate the crisis’ social impact. Second, we examine social assistance programs, which are meant to provide income support for low-income households and for disadvantaged population groups, whose earning capacity is limited. These programs play an important role in mitigating the social effects of the crisis, since many job losers become the clients of social assistance once their eligibility for unemployment benefits is exhausted. The social assistance system thus needs to be flexible enough to cater for the needs of the “new” as well as the “old” poor.
Labor market programs: helping the unemployed

72. The governments operate two types of programs to help workers affected by unemployment. First, income support programs, such as unemployment benefit, which are referred to as passive programs. Second, so called active labor market programs (ALMPs), such as public works, marginal employment subsidies, or training, which are intended to reintegrate the unemployed into the labor market.

73. In Croatia, the main labor market program is unemployment benefit, whereas active labor market programs play a negligible role. Expenditures on active programs accounted for only 12 percent of the total budget of the Croatian Employment Service in 2009, with the balance spent largely on passive (income support) programs. In the preceding years, the share of active programs was also low, ranging from 10 to 14 percent. This is in sharp contrast to EU countries where expenditures on active programs in most cases represent at least one-third of total labor market expenditure.27

Unemployment benefit helps the unemployed to escape poverty but its coverage is limited

74. There has been a surge in the number of unemployment benefit claims in the wake of the crisis. The number of unemployment benefit recipients is currently 55 percent higher than before the crisis. But the benefit coverage rate increased by only 4 percentage points28. The increase in the number of unemployment benefit recipients reflects the fact that many of the newly unemployed are job losers covered by unemployment insurance. In contrast, most of persons registered as the unemployed before the crisis either exhausted their eligibility to unemployment benefit or were not eligible because they lacked the required contribution record (e.g. new labor market entrants).

75. Unemployment benefit is the main program in Croatia to provide support to workers affected by the crisis. However, the benefit coverage rate at 28 percent, although higher than before the crisis, is still relatively low. The program covers only a fraction of workers affected by the crisis, and many newly unemployed workers lack any support other than job search assistance provided by employment centers. In fact, as many as 57 percent of the short-term unemployed do not receive unemployment benefit.29 The coverage gap is thus substantial. It reflects the fact that many workers, such as new labor market entrants or informal sector workers – do not meet the eligibility criteria for unemployment benefit. And they are pretty much left to their own devices. The accelerated inflows into unemployment imply a sharp increase in the caseload for employment officers and less time per client. Moreover, matching works with jobs becomes increasingly difficult and less effective when the unemployment/vacancies ration goes up (see below).

76. Unemployment benefit is mostly received by the poor. This is not obvious a priori since unemployment benefit is insurance-based rather than means-tested. Nonetheless, persons in the bottom quintile (20 percent) of pre-transfer consumption distribution received 41 percent of the

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27 The share of active labor market programs in total labor market expenditures tends to increase during the economic upturn and decrease during the downturn. In contrast, expenditures on unemployment benefit are countercyclical: they increase during the downturn and decrease during the upturn. Unemployment benefit thus plays a role of an automatic stabilizer (see footnote 5, which shows the countercyclical function of expenditures on unemployment benefit in Croatia).

28 The benefit coverage ratio shows the share of unemployment benefit recipients in total unemployment.

29 About one-third of all newly registered unemployed is youth (15-24) who as a rule is not eligible to unemployment benefit.
total spending on unemployment benefit. At the same time unemployment benefit is generous enough to lift many recipients out of poverty. When persons are ranked by their post transfer consumption, only 16 percent of those in the bottom quintile are the recipients of unemployment benefit (Figure 18, Panel A). Hence, unemployment benefit is an effective anti-poverty policy program. This reflects the fact that the poor are much more likely to be unemployed than the non-poor (Figure 18, Panel B). One in four persons in the bottom consumption quintile is unemployed. And the relationship is steep: the probability of unemployment falls sharply as one moves up the consumption ladder.

**Figure 18: Unemployment benefit is mostly received by the poor and lifts them out of poverty**

Panel A: Incidence of unemployment benefit by consumption quintile 2008
Panel B: Unemployment rate by consumption quintile 2008

Source: Household Budget Survey, Bank staff calculations

**Few unemployed benefit from active labor market programs**

Active labor market programs are run on a small scale in Croatia and have not been expanded in the wake of the crisis. Faced with the growing labor market tensions engendered by the crisis, the Government has not expanded active labor market programs, which have been used on small scale in Croatia. In fact, because of the fiscal strain, expenditures on ALMPs were reduced and most programs were suspended in the mid 2009. (The list of active labor market programs that are being implemented in Croatia is presented in Box 4). Instead the government introduced a new program of short-time work subsidy. The program was intended to support labor demand in firms affected by the crisis and discourage lay-offs. However, the take-up rate for the program has turned out to be extremely low due to limited incentives provided to employers and strict eligibility conditions. Hence, the actual impact of the additional anti-crisis program was close to nil.

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30 Obviously causality runs in both directions here. Poverty worsens employment chances and simultaneously unemployment leads to poverty. This issue is explored further in the latter part of the section.

31 See Kuddo (2009) for a description of additional labor market measures adopted in response to the crisis in ECA.

32 Four firms applied of them only two were found eligible to participate in the program. Altogether the subsidy was paid for 27 workers (data as of February 2010).
Box 4: Main Active Labor Market Programs in Croatia

**Hiring subsidy**

*Program main features:* Wage subsidy paid to employers who hire the unemployed referred to by the Employment Office.

*Objective:* to encourage the hiring of disadvantaged workers by lowering their cost to the employer.

*Target groups:*
- youth (under 29 year of age) without prior work experience;
- long-term unemployed (over 12 months);
- older workers (50 plus years of age);
- other disadvantaged workers (e.g. war veterans, drug addicts)

*Subsidy amount:* pegged to the minimum wage. The exact amount of the subsidy depends on the educational attainment of the worker (increases with educational level) and the size of the employer (decreases with the size of the firms). The subsidy varies from 30 percent of the minimum wage for a large employer and a worker with primary education to 170 percent for a small employer and a worker with university education (there is some variation in the subsidy amount across programs).

*Program duration:* a maximum of 12 months (8 months for individuals with a university degree).

**Training for a known employer**

*Program main features:* subsidy paid to the employer who provides training to the firm’s workforce.

*Objective:* skill upgrading of the workforce.

*Target group:* employed workers.

*Subsidy amount:* (a) training in general skills: reimbursement of 70% of the eligible training costs for SMEs (60% for large employers), (b) training in firm specific skills: reimbursement of 35% of the eligible training costs for SMEs (25% for large employers).

*Program duration:* 6 months (average).

**Training for an unknown employer**

*Program main features:*

*Objective:* improvement of the job prospects of the unemployed through skill upgrading.

*Eligibility:* long-term unemployed.

*Benefit amount:* training allowance of about 35 percent of the minimum wage paid to training participants plus reimbursement of the travel costs.

*Program duration:* 6 months (average).

**Public works**

*Program main features:* Reimbursement of employment costs to the municipal authorities who provide public utility jobs to the unemployed.

*Objective:* the provision of temporary earning opportunities for the unemployed through direct job creation in the public sector.

*Eligibility:* long-term unemployed.

*Program benefit:* wage accounting for 75% of the minimum wage (100% for persons unemployed for over 38 months), plus the reimbursement of travel costs; additional discretionary allowances may be paid by local governments.

*Program duration:* from 6 to 8 months.

**Support for business start-ups**

*Objective:* to support self-employment.

*Eligibility:* unemployed eligible for unemployment benefit.

*Benefit amount:* lump-sum payment of the due unemployment benefit.

78. The total spending on labor market programs, both passive and active, is very low in Croatia by the European standards. Croatia spends on all labor market programs roughly 0.4 percent of GDP, which is substantially less than EU countries at a similar income level, such as Hungary, Poland or Slovakia, which spend on labor market programs from 0.6 to 1.2 percent of GDP (Figure 19).
Figure 19: Croatia spends on labor market programs substantially less than EU countries including the New Member States (EU10); accordingly program coverage is low

Panel A

Expenditures on labour market programs as % of GDP  
2007

Panel B

Participants in Labor Market Programs as % of labor force  
2007

Source: OECD, Bank staff calculations.

79. **Low expenditures on ALMPs imply that few unemployed benefit from them and thus they have little impact on unemployment.** In the years preceding the crisis the coverage rate for active programs was slightly over 3 percent, and it fell to 2.5 percent in 2009.33 These figures clearly indicate that ALMPs in Croatia are narrowly targeted at selected worker groups, and have been not used as a larger scale program to reduce unemployment. And specifically, they were not used to promote employment during the current crisis. The proportion of the unemployed enrolled in active labor market programs is simply too small to have any detectable impact on unemployment.

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33 The program coverage rate is the percentage of the unemployed who participated in any active labor market program, such as training, subsidized employment or public works. It should be noted that training is provided also to the employed workers in Croatia, so the estimate of the coverage rate for the unemployed is biased upwards.
Program mix has changed in the wake of the crisis but there is scope for efficiency gains

80. Training and public works are the two main active programs that are implemented during the crisis. In fact, only these two programs were expanded in 2009, while all remaining programs were reduced in size (total enrollment in ALMPs fell by 26 percent in 2009 relative to 2007). Enrollment in training (for the unemployed) increased 2 percent and that in public works more than tripled relative to the pre-crisis levels. This marks a substantial shift in the program mix (Figure 20).

At present, training for the unemployed accounts for 48 percent of total program enrollment and public works for 31 percent (as of 2009). Hiring subsidies, which played a dominant part before the crisis, currently play a minor role. Training was the major program also before crisis but in response to the crisis its relative importance was further increased. However, there was some shift from the so called “training for a known employer”, which as a matter of practice is provided largely to the already employed workers, towards “training for an unknown employer”, which is provided to the unemployed.

Figure 20: Relative importance of training and public works programs increased during the crisis

Source: Croatian Employment Service (HZZ), Bank staff calculations.

81. The expansion of the public works program in 2009 was a rational response to the diminishing job prospects. Public works are a typical program meant to compensate for weak labor demand by means of direct job creation in the public sector. At the same time public works are relatively cheap. For example, in the case of public works the cost per participant is about three times lower than in the case of hiring subsidies. That means that there is substantial scope to increase program coverage by reallocating resources from the hiring subsidies program towards the public works program. One should bear in mind that public works provide temporary employment and are primarily meant as an income-support program. By and of itself they hardly improve future employment prospects of the participants. Nonetheless public works and related programs (such as workfare or work experience programs) can be used as a way to provide temporary income support to those unemployed who are not eligible to unemployment benefit (new labor market entrants, informal sector workers, etc.). The wage rate under public works program is set at a low level: 75 percent of the minimum wage (30 percent of the average wage).[^34] This is consistent with the

[^34]: The base wage of 2,400 Kuna can be topped up by local authorities.
principle that the wage rate under public works program is set below the market level so as to encourage self-selection of those unemployed who are most in need of earning opportunities.

82. **While desirable, the expansion of the public works program was limited by three factors.** First, by the fiscal constraint. Expenditures of public works were increased within a reduced budget envelope in 2009, thus at the cost of other programs. 35 Second, by the limited scope of potential employers. *De facto*, public works are organized exclusively by units administered by the local government. Other potential employers, such as NGOs, are in practice excluded. 36 Furthermore, public units administered by the central government, such as schools and hospitals, cannot provide employment under the public works program. 37 Third, the limited interest and capacity of local governments to organize and implement public works. At the same time the job creation effect of public works is limited due to a substantial displacement effect because local governments often use program funds to subsidize activities they would have performed anyway (e.g. municipal services, services for the elderly). 38

83. **The effectiveness of expanding training programs during economic contraction is debatable.** The “train first” approach to rising unemployment approach has been recently advocated by the OECD and the ILO. 39 Admittedly investment in skills is rational from the individual perspective and may improve his/her future employment prospects. However, during the crisis, when job opportunities are few training does little to improve the current employment chances of the large number of the newly unemployed. In other words, training does not address the underlying cause of unemployment during the downturn, which is weak labor demand and thus does not mitigate the adverse employment effects of the crisis. Still it may be justified to use participation in a training course as a condition for receiving temporary income support during the spell of unemployment. Such an approach can be particularly useful to provide income support to those unemployed who are not eligible to unemployment benefit. But such a program should be considered as a conditional cash transfer rather than an unemployment reduction program. Box 5 discusses in more detail policy responses to unemployment under different macroeconomic and labor market conditions.

84. **The short-time work subsidy program is a new policy initiative meant specifically to alleviate the employment impact of the current crisis.** It was introduced in the mid 2009 after tripartite negotiations. The program is intended to respond to the falling demand by helping employers to reduce labor costs without resorting to lay-offs. Eligible employers who reduce working hours receive subsidy in the form of the reduction in social insurance contributions proportional to the working time reduction. The idea of the program is to encourage job-sharing and the adjustment of working hours in response to a falling product demand and to discourage lay-offs.

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35 Expenditures on public works were also increased because some local Employment Offices were not able to absorb resources allocated to other programs. These unutilized resources were then transferred to those local offices which had the capacity to expand the public works program.

36 In 2008, regulations were changed so as to make NGOs eligible for implementing the public works program. However, in practice NGOs play a negligible role. Only 16 unemployed were employed by NGOs under the public works program in 2008. In 2009, NGOs became somewhat more active in organizing public works, especially those dealing with the disabled workers.

37 The rationale is not to hide government employment under the “public works” category.

38 Local governments engage in cost-shifting and use public works to reduce their social assistance expenditures. While social assistance benefits are paid out of the local governments’ own budget, public work wages are paid out of the budget of Employment Centers.

39 One argument for expanding training programs during the downturn is that the opportunity cost of training decreases and is low. However, at the same time the opportunity cost of public funds increases and is high during the economic crisis.
Put differently, the program is meant to promote adjustment on the intensive (working hours) rather than extensive (employment) margin. In practice the take-up rate for the program has turned to be very low. Two factors explain the low interest on the part of employers to use the subsidy. First, strict eligibility conditions and onerous administrative requirements. This is not necessarily a flaw since strict eligibility requirements and transaction costs ensure that only those employers self-select into the program that are most in need of support. Nonetheless, a balance needs to be struck between limiting access to the program and maximizing the program’s employment impact. Second, the financial incentives provided by the program are low. Social insurance contributions can be reduced by 20 percent, which is roughly 8 percent of the gross wage. For many employers such a modest benefit does not justify high transaction costs associated with applying for the subsidy. Consequently, given that only a small number of firms benefited from the program, the program’s impact on employment was negligible. Still, the program may be used during a future downturn after some revisions to its design.

**Box 5: Adjusting the mix of active labor market programs to the changing labor market conditions can enhance the programs’ impact**

This box argues that active labor market programs used during the economic downturn should be different from those used during the upturn. This is because different factors cause unemployment during the bad times and during the good times. The key indicator in this respect is the unemployment/vacancies (U/V) ratio. During the downturn the unemployed per one job vacancy is high, whereas it is low during the upturn. During the upturn unemployment is largely structural. The number of job openings is roughly equal to the number of jobseekers; however, some jobseekers lack information or skills to take available jobs. Unemployment is thus a result of a skills mismatch. In addition, there may be spatial mismatch between the location of jobs and that of jobseekers.

During the downturn, unemployment is largely due to demand deficiency. The number of jobseekers exceeds the number of job openings and labor is thus in excess supply. Programs to address structural unemployment focus on the supply side and aim at improving the matching of unemployed with jobs, and on improving the skills of the unemployed so that they meet jobs requirements. They include job intermediation, job search assistance, training, hiring subsidies and mobility allowances. As a rule these programs are targeted at disadvantaged workers (low-skilled workers, youth without labor market experience, disabled workers).

Programs to address demand deficiency unemployment focus the demand side and aim at fostering job creation or at limiting job destruction and preserving the existing jobs. They include public works, wage subsidies, short-term work subsidies, reductions in social insurance contributions and support for self-employment. Given that the number of layoffs increases during the downturn, these programs are often extended to cover regular workers in addition to disadvantaged workers.

Programs designed to tackle structural unemployment and aiming to improve job matching may turn to be ineffective during a severe downturn. First, they do little to address the underlying cause of unemployment, which is weak labor demand that in turn reflects weak product demand. Second, the returns to job matching services and to training decrease with the increase in the unemployment/vacancies ratio. Matching more unemployed with fewer jobs is increasingly difficult and costly. And training does not improve current job prospects if jobs are not around. Accordingly, economic efficiency requires that the program mix is adequately adjusted when the economy is hit by a demand shock. Priority should be given to programs meant to support labor demand and foster job creation, and program resources should be reallocated accordingly.
**Box 5: cont.**
The table below summarizes the results of the analysis.

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Good times (economic upturn)</th>
<th>Bad times (economic downturn)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cause of unemployment</td>
<td>Low U/V ratio</td>
<td>High U/V ratio</td>
</tr>
<tr>
<td>Program objectives</td>
<td>Structural mismatches (skills, spatial)</td>
<td>Demand deficiency</td>
</tr>
<tr>
<td>Target group</td>
<td>Disadvantaged workers</td>
<td>Regular workers</td>
</tr>
<tr>
<td>Typical programs</td>
<td>Job intermediation and job search assistance</td>
<td>Public works</td>
</tr>
<tr>
<td></td>
<td>Training</td>
<td>Wage subsidies</td>
</tr>
<tr>
<td></td>
<td>Hiring subsidies</td>
<td>Short-time work subsidies</td>
</tr>
<tr>
<td></td>
<td>Mobility allowances</td>
<td>Reductions in social insurance contributions</td>
</tr>
</tbody>
</table>

Source: Bank staff analysis.

The effectiveness of employment services varies across regions

85. **The allocation of funds to local Employment Offices, which implement active labor market program, is driven by the offices’ absorption capacity.** That is, offices with a higher capacity to implement ALMPS tend to receive a higher share of funds. Local needs, as measured by the unemployment share, play some role too, but seem to be a secondary factor. Some one-third of the variation in the number of ALMPS participants across 21 regions is not accounted for by the level of unemployment. Regional allocation of ALMP funds is largely historically determined and changes little in response to the changing local labor market conditions. There is virtually no correlation between the change in the region’s share in unemployment and the change in the share of ALMPS funds that the region receives. The implementation capacity is identified by the historical track record of program execution. Naturally, negotiations between the central Croatian Employment Service and local Employment Offices over the regional distribution of funds introduce some flexibility into the allocation procedure and allow for periodic corrections.

86. **The capacity-based allocation rule ensures that program funds are absorbed.** However this may come at a cost of regions where capacity is relatively low but needs are high. Obviously, allocating resources to regions which cannot effectively absorb them would be inefficient. But the overall efficiency of the utilization of ALMP funds would be significantly enhanced if the implementation capacity of high-needs regions was improved. This would require investments in capacity building but such investments, although potentially costly in the short-run, would pay-off in the longer run. Another important factor that needs to be taken into account when allocating program funds across regions is performance of local Employment Offices. Performance is determined based on program outcomes such as job placement rates and cost per placement. At present these outcomes are not monitored, so the introduction of performance based budgeting would be a longer-term objective.

87. **The effectiveness of Employment Offices varies by regions.** For instance, some offices are much more effective in collecting information on job vacancies and in matching the unemployed with jobs than others. Figure 21 illustrates this point using the ratio of newly reported vacancies to

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40 Whether or not they are absorbed effectively is a separate issue.
the number of unemployed placed to jobs, which is a proxy indicator of the capacity of local Employment Offices to collect information on job vacancies. A low value of the ratio indicates that the local Employment Office is able to collect information on only a small proportion of the available vacancies, in other words that the vacancy penetration ratio is low.41 A high value points to a high capacity to collect vacancies. Such capacity is important because it determines the effectiveness of job intermediation services provided by Employment Offices. Given the number of registered unemployed, the potential effectiveness of job intermediation services is the higher the larger the number of collected vacancies. As Figure 21 shows, the ratio of vacancies to outflows from unemployment to jobs ranges substantially from less than 0.5 to over 2.5. The ratio less than one means that some of the unemployed find jobs on their own (the number of unemployed who found jobs is higher than the number of vacancies at the disposal of the Employment Office). The ratio higher than one means that some of the vacancies cannot be filled in. This may be because of the skills mismatch (the skills possessed by the unemployed do not match the job requirements) or because of the high reservation wages of the unemployed. Alternatively, a given Employment Office can be effective in collecting vacancy information but less effective in matching the unemployed with vacancies. Thus the measure used shows only one side of the equation.

Figure 21: Some local Employment Offices are much more effective in collecting information on job vacancies than others

Source: Croatian Employment Service (HZZ), Bank staff calculations.

88. The variation in performance of local Employment Offices implies that there is space for efficiency gains. The efficiency of the delivery of employment services could be enhanced by bringing poorly performing offices into line with the average performance standards. This is exactly the purpose of the benchmarking exercise: to identify poorly performing units in order to improve their capacity and thus to improve the overall efficiency of service delivery. However, one needs to be cautious, since the performance of local Employment Offices may be affected by factors that are

41 The vacancy penetration ratio is the ratio of number of vacancies collected by the Employment Office to the total number of available job vacancies. The total number of vacancies is not know, however one can approximate it by the number of the unemployed who were placed to jobs. The actual number of vacancies is obviously higher, but the underlying assumption that there is a significant linear relationship between the number of unemployed placed to jobs and the total number of vacancies is likely to hold. If so, then the indicator used here (V/UE) is a good proxy for the vacancy penetration ratio.
beyond their control. For example, there is a positive association between the vacancy penetration ratio and local labor market conditions in Croatia: the vacancy penetration ratio increases with the improvement in employment opportunities. Employment Offices in regions where labor markets are slack seem to be able to collect less vacancies information than Offices in regions where labor markets are tight. If so, then the relatively poor performance of a particular Employment Office may be a reflection of a depressed local labor market.

89. **To summarize: active labor market programs in Croatia have been only partly adjusted to the crisis conditions and their impact on unemployment has been negligible.** First, the programs are implemented on a small scale: the number of beneficiaries is very low in relation to the number of the unemployed. Second, the expansion of the training programs in response to the crisis is rather unlikely to improve the current employment prospects of the unemployed, although it may improve their future chances. The program can also be thought of as a means of providing conditional income support to the unemployed. The expansion of the public works program partially compensated for the diminishing job opportunities and provided temporary income support to those unemployed who are not eligible to unemployment benefit. However, even after the expansion the size of the program is small. Third, the newly introduced program of short-time work subsidies, intended as a direct response to the crisis, had not prevented layoffs because of the take up rate was practically zero. Fourth, the allocation of ALMPs funds across regions has only partially been adjusted to the changing needs of the regions, which were hit by the crisis to a different degree. The allocation of funds is driven by the regions’ capacity to absorb them, which is not necessarily correlated with their needs measured by the unemployment rate and its change.

### Social assistance: helping the vulnerable

90. **The overall spending on social assistance in Croatia is high by regional standards.** In fact, Croatia allocates double the amount of GDP for social assistance programs compared to an average of the Central and Eastern European countries (Figure 22). However, despite a large allocation of budgetary resources for this purpose, the coverage of the poorest 20 percent of population with any of the hundred different social assistance programs\(^{42}\) remain on the low side compared to the best performing peers (Hungary, Romania, Poland; Figure 23). Therefore, there is a large scope for improving the system effectiveness.

91. **Resources allocated to social assistance would be sufficient to eliminate poverty in Croatia if they were spent efficiently.** Higher efficiency would require the reallocation of resources between programs: away from those poorly targeted towards the well targeted ones with strong positive impact on poverty. In 2008, under the assumption of perfect targeting, all the poor could have been lifted out of poverty at the cost of approximately 0.5 percent of GDP. The assumption of perfectly targeted transfer implies that each poor family receives a transfer in an amount adequate to fill in the gap between its current consumption and the poverty threshold. In reality though, households would change their behavior based on the expectation of being fully subsidized by the state so that these amounts would not suffice anymore. Also, the cost of administration of such transfers would likely be large.

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\(^{42}\) World Bank 2008b
The high cost of social assistance in Croatia is due to heavy reliance on categorical benefits, as opposed to needs-based ones. The overall spending mix is heavily biased towards categorical programs, with means-tested programs playing a marginal role (they account for 7 percent of total spending in 2009). With regard to main target groups, the largest share of spending accrues to war veterans and their survivors (1.8 percent of GDP in 2009), families with children (0.8 percent of GDP), and to the disabled, single elderly persons, and vulnerable children. Means-tested programs for low-income households (the social welfare support program and allowance for care for elderly and disabled) amount to 0.28 percent of GDP. The child allowance program – targeted to a broader group of poor families with children using a self-declared, imperfect income test – accounts for another 0.5 percent of GDP. However, this program needs to be complemented with an additional one percent of GDP that is spent through tax allowances.

The two best targeted social assistance programs in Croatia are social welfare support and the child allowance programs. Targeting efficiency of the remaining programs is considerably lower. The HBS data show that the poorest 20 percent of the population receives 52 percent of total cash social assistance (Table 13), which compares moderately with other ECA countries. This result

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43 Excluding pensions of war veterans.
reflects the good targeting performance of the child allowance program (46 percent of the spending reaches the poorest quintile) and especially that of the social welfare support program (71 percent of the spending reaches the poor, which is one of the best regional targeting results). The targeting outcomes remain stable over time (those in 2008 were similar to those in 2004) which shows the ability of the various administrations to identify the poorest remains at relatively high levels, and has not deteriorated over time. However, there is a large scope for improvements in the child allowance program both on the side of inclusion and exclusion errors.\(^4\)

94. **The poor rely more on state transfers and less on earned income than the non-poor.** Less than a quarter of incomes for the poorest 10 percent come from paid employment (wages), while for the non-poor, this share is almost two times higher, around half of their income. The poorest decile relies strongly on state transfers; around 23 percent of their incomes are pensions and other social benefits (child, family and disability allowances, and social assistance benefits), substantially more than for other population where this share is only 8 percent.

95. **Although the means tested programs are well targeted in Croatia, their coverage is low.** Less than 13 percent of the poor 20 percent of population has an access to the social welfare support program and 37 percent to the income-tested child allowance program. To cover the poorest 10 percent of population, the social welfare support program would need to be quadrupled. In both programs, part of the funds that should be allocated to the poorest quintile leak to the upper income quintiles (so-called “elite” capture); although less so in the case of means-tested social welfare support program. This is mostly due to imperfect targeting practice of child allowance that is based on reported and taxed incomes rather than asset and income test operated by the centers for social care in Croatia.


Table 13: Croatia: Targeting Accuracy of Social Protection Programs, 2008

| Source: Staff estimates based on the 2008 HBS |

| Targeting accuracy = percent of total benefit expenditures that go to the bottom quintile. |

<table>
<thead>
<tr>
<th>Quintiles of per ac consumption, net of each SP</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total</td>
</tr>
<tr>
<td>All social protection</td>
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<tr>
<td>All social insurance</td>
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<tr>
<td>All labor market programs</td>
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<tr>
<td>All social assistance</td>
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<tr>
<td>Child allowance</td>
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<tr>
<td>Maternity leave benefit</td>
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<td>Layette assistance</td>
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<tr>
<td>Housing allowance</td>
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<tr>
<td>Allowance for nursing and disability</td>
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<tr>
<td>Social assistance in cash (social welfare support)</td>
</tr>
<tr>
<td>Social assistance in kind (food, firewood, clothes)</td>
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<tr>
<td>Scholarships and study awards</td>
</tr>
</tbody>
</table>

Targeting accuracy = percent of total benefit expenditures that go to the bottom quintile.
The social welfare support program, the main means-tested program in Croatia, plays an effective poverty alleviation function. This is evidenced by the best targeting accuracy among all social assistance programs operating in Croatia, as well as among performance in Central and Eastern Europe. The excellent performance of the social allowance programs is robust to the use of different welfare aggregates (income and consumption, per capita or per adult equivalent) (Table 14 and Figure 24). The elite capture is the smallest among all programs (less than 28 percent of all funds are distributed to upper quintiles). Entitlement to the social welfare support is determined by (a) family size, (b) combined family income, (c) combined family assets, and also (d) a limited number of proxy means, for example a second property or a car.

Table 14: Coverage: Share of Population Receiving Social Assistance Programs, 2008

<table>
<thead>
<tr>
<th></th>
<th>Quintiles of per ace consumption, net of each SP transfer</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Total</td>
</tr>
<tr>
<td>All social protection</td>
<td>68.3</td>
</tr>
<tr>
<td>All social insurance</td>
<td>50.8</td>
</tr>
<tr>
<td>All labor market programs</td>
<td>4.5</td>
</tr>
<tr>
<td>All social assistance</td>
<td>26.9</td>
</tr>
<tr>
<td>Child allowance</td>
<td>19.0</td>
</tr>
<tr>
<td>Maternity leave benefit</td>
<td>5.0</td>
</tr>
<tr>
<td>Layette assistance</td>
<td>2.0</td>
</tr>
<tr>
<td>Housing allowance</td>
<td>0.6</td>
</tr>
<tr>
<td>Allowance for nursing and disability</td>
<td>3.1</td>
</tr>
<tr>
<td>Social assistance in cash (social welfare support)</td>
<td>4.3</td>
</tr>
<tr>
<td>Social assistance in kind (food, firewood, clothes)</td>
<td>0.9</td>
</tr>
<tr>
<td>Scholarships and study awards</td>
<td>1.4</td>
</tr>
</tbody>
</table>

Coverage = the percentage of the population within a given quintile who receive the benefit.

Source: Staff estimates based on the 2008 HBS

96. However, the social welfare support program covers only a fraction of the poor, and moreover its coverage has eroded over time. It covers only about 2 percent of the total population, which is less than around 4 percent coverage rate in the EU new member states for the guaranteed
maximum income benefit. The program should be operated like an automatic fiscal stabilizer, i.e. expanding with an increase in poverty which would be expected during recession. This program has been shrinking before the crisis, but continues to lag behind expected increase during the whole of 2009 (Figure 25). This is due to design features, whereby the arbitrarily set income threshold of HRK 500 (40 percent less than the poverty food basket) diminishes the role of the program as the automatic fiscal stabilizer. The duration of benefit is not limited in time.

98. The social welfare support program is the only existing social assistance program that has the potential to mitigate the fall in incomes resulting from an aggregate shock. The program is means-tested and it is well targeted. It is also relatively generous for low-income households (Table 15). However, its low coverage, which reflects strict eligibility conditions, limited its immediate poverty mitigation role during the current crisis. Nonetheless, the program’s role may increase in the aftermath of the crisis if – what is likely – job creation and hiring lag economic recovery. If so, then workers who exhausted the eligibility to unemployment benefit and failed to find new jobs may claim social welfare support.

99. At the same time, the social welfare support program may create labor supply disincentives. At present the duration of the program is unlimited, and a large number of beneficiaries remain in the system for more than five years. This is inefficient given that close to 50 percent of beneficiaries receiving a support allowance are persons of working-age (18-60 years). By lowering labor supply incentives the program is likely to contribute to a very high incidence of long-term unemployment in Croatia (around 60 percent). Thus in order to mitigate the adverse labor supply incentives created by the program, it should be accompanied by activation or welfare-to-

Table 15: Generosity of Social Assistance Programs, 2008

<table>
<thead>
<tr>
<th></th>
<th>Quintiles of per annum consumption, net of each SP</th>
<th>Total</th>
<th>Q1</th>
<th>Q2</th>
<th>Q3</th>
<th>Q4</th>
<th>Q5</th>
</tr>
</thead>
<tbody>
<tr>
<td>All social protection</td>
<td></td>
<td>41</td>
<td>86</td>
<td>44</td>
<td>29</td>
<td>18</td>
<td>12</td>
</tr>
<tr>
<td>All social insurance</td>
<td></td>
<td>47</td>
<td>82</td>
<td>44</td>
<td>29</td>
<td>21</td>
<td>16</td>
</tr>
<tr>
<td>All labor market programs</td>
<td></td>
<td>13</td>
<td>37</td>
<td>12</td>
<td>9</td>
<td>9</td>
<td>4</td>
</tr>
<tr>
<td>All social assistance</td>
<td></td>
<td>13</td>
<td>26</td>
<td>12</td>
<td>9</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>Child allowance</td>
<td></td>
<td>8</td>
<td>14</td>
<td>8</td>
<td>6</td>
<td>4</td>
<td>3</td>
</tr>
<tr>
<td>Maternity leave benefit</td>
<td></td>
<td>16</td>
<td>22</td>
<td>17</td>
<td>16</td>
<td>10</td>
<td>9</td>
</tr>
<tr>
<td>Lafayette assistance</td>
<td></td>
<td>2</td>
<td>2</td>
<td>3</td>
<td>2</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>Housing allowance</td>
<td></td>
<td>5</td>
<td>18</td>
<td>2</td>
<td>1</td>
<td>1</td>
<td>5</td>
</tr>
<tr>
<td>Allowance for nursing and disability</td>
<td></td>
<td>9</td>
<td>19</td>
<td>11</td>
<td>4</td>
<td>5</td>
<td>5</td>
</tr>
<tr>
<td>Social assistance in cash (social welfare support)</td>
<td></td>
<td>15</td>
<td>27</td>
<td>10</td>
<td>7</td>
<td>5</td>
<td>4</td>
</tr>
<tr>
<td>Social assistance in kind (food, firewood, clothes)</td>
<td></td>
<td>7</td>
<td>10</td>
<td>10</td>
<td>4</td>
<td>2</td>
<td>5</td>
</tr>
<tr>
<td>Scholarships and study awards</td>
<td></td>
<td>11</td>
<td>27</td>
<td>11</td>
<td>12</td>
<td>7</td>
<td>5</td>
</tr>
</tbody>
</table>

Generosity = average benefit amount as a percentage of the average post-transfer consumption of the benefiting households.

Source: Staff estimates based on the 2008 HBS

work programs, which make benefit receipt conditional on active job search, or participation in training.

45 See Sucur (2010) for a detailed socio-economic analysis of social welfare beneficiaries and reasons for the system erosion.
46 World Bank (2009) and Sucur (2010).
47 There are several examples of such reforms introduced in the EU new member states. Hungary modified the design of its regular social assistance benefit so that beneficiaries could continue to receive some benefits for up to 6 months after getting a job. Similarly, Latvia has introduced a guaranteed minimum income benefit of limited duration that can be received in reduced amounts after getting a salaried job. In Slovakia, the program
100. **The child allowance program contributes to poverty alleviation, although its targeting accuracy is moderate.** The poor (bottom quintile) receive 46 percent of the program’s funds, but the elite capture\(^{48}\) remains significant – 27 percent of funds go to upper 40 percent of population (Table 15). This program did not expand with the recession, but not because it was not designed as an automatic fiscal stabilizer, but because the applications are submitted on the annual basis. Its income threshold is three times higher than of social welfare support, but has narrower definition - it captures only taxed and reported income.

101. **There are several options on how to get better results from the child allowance program.** Firstly, using the same income and asset testing procedures as for the support allowance with different threshold would improve targeting accuracy of this program and reduce leakage. Secondly, given this program has the same poverty alleviation objective, the administration of it could be merged with the welfare support program. This would hugely reduce administrative burden to applicants, but would also allow for better social planning. Currently, the welfare support program is administered by the centers for social care, while the Pension Insurance Fund processes child allowance applications. Thirdly, when addressing the design feature of various social programs, it is important to address possible work disincentive effects. In the case of child allowance program, its exclusion from means-testing combined with the high threshold may lead to inactivity on the labor market. Fourthly, if the program aims to stimulate human capital accumulation, certain elements of conditionality could be introduced, like school enrollment, retraining for unemployed parents, etc.

102. **The child tax allowance program is the worst performing social protection program in terms of targeting accuracy and effectiveness.** It duplicates child allowance program, but by design is less transparent. It is a quasi-fiscal program, which absorbs the most of public funds among all social assistance programs (after war veterans’ benefits). The revenues foregone are assessed at one percent of GDP in 2008. A simulated analysis of this program points to quite a regressive benefit incidence, which is in addition very generous but only for the higher-income families (Figure 26).

103. **Child tax allowance, along with other categorical benefits, is a good candidate for rationalization.** Croatia has developed a generous social protection system with the parallel social safety nets programs. This has resulted in an overly complicated social system which is not well-targeted at the poor and is costly to administer. In addition to central government spending, at least an additional 0.5 percent of GDP is spent by local governments annually. Local governments, depending on their fiscal capacity or political will, can develop their own social assistance programs or supplement the ones that are provided by the central government. These mostly include supplements to pensioners, housing and fuel allowances, public kitchens, free of charge summer

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\(^{48}\) See also Sucur (2010) on errors of inclusion.
vacation for children of socially vulnerable families, etc. Local governments can also define the eligibility criteria and use the income census that differs from the nationally set levels. They further distort the targeting accuracy.

104. The inefficiencies in the current social assistance administration system increase the errors of inclusion and exclusion and thus hinder the efficient utilization of resources. There are over a hundred of different benefit schemes available to a large number of different categories of beneficiaries. The majority of social benefits are categorically targeted and many of the categories overlap, resulting in multiple entitlement provisions. These are administered by a wide range of institutions with no single institution responsible for the overall coordination. There is half a dozen government institutions at the national level and over 700 at local levels with little coordination of their activities. There is no central database of welfare system beneficiaries and no shared databases with other institutions involved in social protection (Employment Offices, Croatian Institute for Health Insurance, Croatian Institute for Pension Insurance, local government departments). Each institution keeps its own records, which makes the exchange of information difficult, time consuming and provides opportunities for errors and fraud. The system is cumbersome and complex for the beneficiaries/applicants requiring visits to a range of government offices to obtain the required information/documentation and increasing the scope for false or incomplete information.

105. During 2009, the Government took a number of steps to improve coordination and to enhance the administrative efficiency of social protection programs, but these efforts need to be enhanced. These include: (i) the introduction of a unique personal identification number in 2009, which will be used to facilitate data-matching and to reduce the burden of documentary evidence by applicants, and (ii) the testing of a new Management Information System administered by the Ministry of Health and Social Welfare, which aim is to reduce the processing time of applications below the current 30 days.

V. Crisis: an Opportunity for Reforms

106. Croatia spends substantial resources on social protection. Nonetheless, the ability of the social protection system to mitigate the adverse social effects of economic shocks turned out to be limited. Enhancing the impact of the social protection system requires changing program design as well as mix, rather than increasing expenditures. Efficiency of the social protection system would increase if resources were reallocated away from programs that are ineffective and poorly targeted towards programs that have a significant impact on poverty reduction. The analysis carried out in this report points to the main directions for the reform of the social protection system in Croatia. However, more thorough evaluation of programs performance is necessary to redesign the system. Moreover, the overhaul of the social protection system, envisaged in the recent Economic Recovery Program, should be coupled with efforts to strengthen institutional capacity to design, evaluate and effectively implement labor market and social protection programs.

107. The current economic crisis has revealed that the social protection system in Croatia is relatively ill fitted to cope with a sudden increase in unemployment and the corresponding fall in incomes. Poverty has likely significantly increased and the social protection system did little to mitigate the effects of the crisis. After all, only two programs: unemployment benefit and social welfare support, have partly cushioned the impact of the crisis. However, the coverage of both programs is low, and accordingly many of the workers and families affected by the crisis were left
without adequate income support. But every crisis creates an opportunity for reforms. Below we consider possible reform options. First, we discuss options to enhance the potential of labor market programs to mitigate the effects of an aggregate demand shock and the associated increase in unemployment.49 Second, we examine options to improve the efficiency of the social assistance system.

108. The relevance of the policy options considered below extends beyond the current crisis. As every market economy Croatia is bound to experience cyclical downturns and demand shocks also in the future. These downturns will be associated with the rising unemployment and falling incomes, even if the magnitude of the shocks will be smaller than that of the current one. Hence it is important to design employment and social safety net policies capable to mitigate the adverse social effects of the future economic downturns and alleviate their poverty impact. The purpose of the ensuing policy discussion is thus to suggest ways to strengthen the social protection system in Croatia so that it can effectively tackle the rapid increase in unemployment and vulnerability to poverty resulting from the possible future demand shocks.

Enhancing the effectiveness of active labor market policies

109. Each economy periodically experiences adverse aggregate demand shocks which translate into the drop in labor demand. There are four broad options to enhance the impact of labor market policy on employment outcomes during the crisis.50 First, to increase expenditures on effective labor market programs and increase their coverage. Second, to change the program mix by expanding programs designed to tackle demand deficiency unemployment and potentially contracting programs meant to address structural unemployment. Third, to adjust regional allocation of ALMPs funds to the regional distribution of the demand shock. Finally, to regularly monitor and periodically evaluate program outcomes and impact in order to improve the programs’ cost–effectiveness and efficacy. Box 6 presents measures adopted in response to the current crisis by OECD countries; Kudo (2009) describes measures adopted by ECA countries.

110. Scaling up effective labor market programs. Currently the size of labor market programs is too small in Croatia to have an impact on labor market conditions. Accordingly, the programs would need to be substantially expanded in order to effectively mitigate the employment effects of the crisis. Two issues need to be considered in this context. First, fiscal constraints. A balance needs to be struck between fiscal and social considerations. On the one hand, the government budget is strained during the downturn. On the other, increasing unemployment is likely to translate into growing poverty. Determining spending priorities is thus critical. Second, the impact of different labor market programs on employment and incomes of workers affected by the crisis. When the government budget is strained and unemployment is rising, then only those labor market programs should be expanded that have a clear positive impact either on incomes of the unemployed or on their employment opportunities. Programs whose effects are uncertain or delayed are of less value.

111. Adjusting program mix to the crisis conditions. During the economic downturn the government could consider scaling up programs that compensate for weak labor demand (see Box 5 above). This may be accompanied by temporarily scaling down programs meant to address structural unemployment in order to make labor market expenditures fiscally sustainable.

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49 Policies to address structural unemployment in Croatia are discussed at length in World Bank (2009).
50 A comprehensive discussion of labor market policies in response to the crisis is contained in Carone and others (2009), ILO (2010), OECD (2009) and World Bank (2008).
market interventions in response to the fall in labor demand can be divided into three groups. First, programs to provide temporary income support for workers who lost their jobs. Second, programs meant to create new jobs for those who become unemployed. Finally, programs intended to discourage firing and encourage hiring by subsidizing employment.

- **Income support programs.** Croatia runs an unemployment benefit system. However, the program does not cover workers who do not have a necessary contribution record. Therefore, faced with a sharply growing unemployment the government may consider introducing additional temporary income support programs to those who are not eligible to unemployment benefit (e.g. new labor market entrants). These programs may take a form of conditional cash transfers, for example the receipt of the benefit may be made conditional on participation in training, workfare or work experience programs.\(^{51}\) An alternative option is to temporarily (for the duration of the recession) extend coverage of unemployment benefit to groups normally not covered (e.g. workers with short prior employment). The duration of the benefit can be also temporarily extended.

- **Job creation programs.** *Public works*, that is direct job creation in the public sector, is a traditional response to high unemployment resulting from weak labor demand. Public works program, although expanded in 2009 in response to the crisis, is still very small in Croatia. The government may consider further expanding public works during the period of growing unemployment. This would require (a) strengthening the capacity of local governments to implement such programs, and (b) extending eligibility to run public works programs to NGOs and public institutions which are not part of local government (such as schools, hospitals, etc.).\(^{52}\) Other programs intended to increase job creation include *support for self-employment and business start-ups*. However, these programs tend to be very costly and tend to cover only a small proportion of the unemployed. Given the fiscal constraint, they cannot be run on a large scale and thus can play only a limited role in enhancing job opportunities.

- **Subsidized employment.** Programs in this group include hiring subsidies, apprenticeships, short-time work subsidies and reductions in social insurance contributions.

  i. **Hiring subsidies.** The programs of hiring subsidies that are currently in place in Croatia are targeted at disadvantaged worker groups but their unit cost tends to be high (much higher than unit cost of public works program). At the same time evaluation studies show that the net impact of hiring subsidies on employment is low. Workers often lose their jobs once the subsidy expires and the deadweight and substitution effects are large. For these reasons the expansion of the hiring subsidies program during a downturn would be probably fiscally unviable and simultaneously not a cost-

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\(^{51}\) In this case participation in training is a condition for receiving income support. This does not imply that training is effective in terms of improving current employment chances of the unemployed during the downturn. But it still may be justified as a way of improving future employment chances provided that it addresses well identified skill deficiencies of the unemployed. In other words, we are arguing against the use of training as a means to address unemployment resulting from a demand shock. However, we recognize the important function training can play in improving the skills of the unemployed and thus addressing the skills gap.

\(^{52}\) An additional benefit of involving more actors in the provision of public works would be that they would provide jobs that are not limited to simple labor and therefore would be attractive to the newly unemployed, who are more skilled than the long-term unemployed.
effective option. The costs would be high while expected benefit would be low. Accordingly, the expansion of the program (in its current design) would not be warranted.

ii. Apprenticeships. An alternative option could be to introduce a new program of apprenticeships for the youth (and potentially also other new labor market (re)entrants, such as women after maternity leave). The school-to-work transition is particularly difficult when the labor market is depressed. The apprenticeship program could be a way to facilitate the transition and therefore to reduce the high unemployment rate among the youth. The principal difference between the apprenticeship program and the current program of hiring subsidies for young workers would lie in program cost. Under the apprenticeship program the subsidy would be pegged to the minimum wage and would be thus substantially lower than under the current hiring subsidy program, where it is pegged to the market wage. Thanks to the lower cost the coverage of the apprenticeship program could be much higher, implying a larger employment impact.

iii. Short-time work subsidy. The government may consider revising the current program’s design so as to increase its attractiveness to employers. Particularly the amount of the subsidy would need to be higher to influence labor demand in the eligible firms. The scheme could be redesigned so as to act as a partial unemployment benefit, or partial wage insurance scheme. In the former case, workers on reduced working hours schedule would receive a corresponding portion of unemployment benefit they would be eligible to if unemployed. In the latter case they would receive a certain percentage of their lost wage. From the employer perspective, the subsidy would allow to lower wages and thanks to this support labor demand. The impact of the program critically hinges on the eligibility conditions and thus an efficient selection of enterprises to be covered by the program. In general, only those firms should be eligible which experience temporary liquidity problems as a result of the downturn, as opposed to enterprises facing structural solvency problems. Box 6 below elaborates on this issue.

iv. Reduced social security contributions. In its current design the Croatian short-time work subsidy program is de facto a program of reduced social security contributions for firms affected by the crisis (see the program’s description above). Such programs tend to be costly. In order to be fiscally sustainable they need to be temporary and/or narrowly targeted at firms affected by the crisis or vulnerable workers (as a rule low-paid/low productivity workers for whom labor demand is the most elastic). Thus a potential expansion of the program could only be done so as not to undermine the long-term viability of the social insurance system.

112. The adjustment of regional allocation of ALMPs funds. The government may consider developing an algorithm for adjusting the allocation of ALMPS funds to the changing labor market conditions. In principle, the regions share in ALMPs funds should be proportional to its share in unemployment, with possible corrections for other factors (mainly the absorption capacity and

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53 For example, workers who are on four day working week schedule (which implies 20 percent reduction in working time) would receive 20 percent of their unemployment benefit.
spending effectiveness). As a result, regions where unemployment increased more than the average would receive a higher share of funds than regions where it increased less. However, for this approach to work effectively, an increase in funding that would follow an increase in unemployment share would need to be coupled with an investment in the region’s capacity to absorb the increased funds. Otherwise there is a risk that funds will be utilized inefficiently.

113. **Evaluation of program outcomes and impact is critical for designing a cost-effective ALMP package.** Not all newly introduced programs will be cost-effective and have a positive impact on employment chances of the unemployed. Improving program design and mix with the aim of achieving the maximum impact is a permanent process. This implies the need for regular monitoring of program performance, and periodic program evaluation. Monitoring consists of observing and examining program inputs, outputs and outcomes with the aim of benchmarking program performance and identifying well and poorly performing units. The aim of program evaluation is to determine the program’s impact, that is the change in job prospects of program participants (employment status, wages) resulting directly from program participation. Programs which show positive net impact for a particular worker group and are cost-effective could be expanded, while those which have little effect could be either redesigned or downsized. However, it should be borne in mind that labor market programs may have different objectives (e.g. job placement, work experience, skills upgrading, income support), and thus evaluation should be done against these objectives. Still, the main point is that it is the design of specific programs, and the selection of programs that are most cost-effective that are critical for the efficiency and impact of ALMPs (Betcherman and others, 2004, Kluve, 2006; Card and others, 2009). Properly designed ALMPs can improve labor market outcomes; at the same time there are numerous examples of program failures (Boon and van Ours, 2004; Martin and Grubb, 2001, Wunsch and Lechner 2007). That is why rigorous program evaluation is important.

**Box 6: Effective Labor Market Policy Response of OECD to the Current Economic Downturn**

OECD countries have a range of labor market programs in place to reduce the social costs of a recession. Below are the steps that OECD countries have taken as a response to the current crisis:

- The first response was the social safety nets (unemployment benefits and social assistance) which provide an essential income support to job losers during the economic downturn.
- Governments have also sought to scale up the resources for active labor market policies (ALMPs) aimed at helping job-seekers find work. However, the increase in spending on ALMPs was rather modest in many countries. Calls for additional public spending on labor market policies have to bear in mind that public finances are facing growing constraints in many countries due to the actual and projected build-up in public debt. Still, the expansion of some ALMPs can be justified on cost-effectiveness grounds.
- A key priority is to provide effective employment services to a rapidly rising pool of jobseekers and ensure that the most vulnerable of them do not lose contact with the labor market and drift into inactivity. Many countries implemented successful activation/mutual-obligation strategies over the last decade, where, in return for receiving benefits and being offered re-employment services, recipients are required to participate in job search, training or employment programs, enforced by the threat of benefit sanctions.
- At the same time, OECD research suggests that it would be advisable to shift the focus and resources behind activation from the “work-first” approach which tended to dominate prior to the crisis to a “train-first” approach for those at high risk of long-term unemployment. This is likely to be particularly important at present, since the global economic crisis is accelerating structural adjustments in OECD countries and measures to foster skill formation and training can play an important role to ensure that workers are well-equipped with the appropriate skills.

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54 For example, public works are supposed to play a double function: that of temporary income support and that of a bridge to regular employment. Evidence indicates that while they are effective in playing the former part, they fail in performing the latter.
Many OECD countries have introduced or scaled-up subsidies that encourage firms to retain or hire workers (e.g. short-time working schemes, hiring subsidies, cuts in social security contributions, etc.). In the short-term, these subsidies are playing a positive role in supporting labor demand. But they have often been plagued by high deadweight costs in the past. To minimize these costs, it is important that these schemes be temporary and well-targeted to firms for whom the demand is only depressed temporarily and to workers at high risk of long-term unemployment. Without these key features, there is a significant risk that these schemes will not only be less effective in preserving jobs but also become an obstacle to the recovery, by putting a brake on the required reallocation of workers from declining to expanding firms.

The figure below shows the additional labor market measures taken by the OECD countries in response to the crisis.

Source: OECD, 2009.
Box 7: Impact of the short-time work subsidy program depends on well-designed eligibility criteria for firms

Developing adequate eligibility criteria for program participation is critical for minimizing the deadweight loss associated with subsidizing employment, and thus for enhancing the programs efficiency. To subsidize jobs that are unviable and will be closed once the support ends would clearly be inefficient. The program aimed at preserving jobs should only support firms that are essentially viable but experience temporary liquidity constraint due to the crisis. The anti-crisis labor market program should not protect jobs in unviable enterprises that face a structural solvency problem. Otherwise it may have a detrimental effect of inhibiting the reallocation of labor resources from less to more productive activities. The Figure below presents a simple conceptual framework for matching labor market interventions to the nature of the problem faced by the enterprise. There is the case for temporarily subsidizing employment in firms facing temporary liquidity constraint due to the recession, but not in firms facing structural solvency problems.

While short-time work programs typically aim to support jobs and workers affected by temporary reductions in labor demand, in practice it is difficult to determine ex ante whether economic difficulties are temporary and the jobs in question will be viable once the subsidy ends. Typically, the eligibility criteria for short-time work subsidy include two conditions relating to the firm’s financial standing: (a) the firm in question was profitable (did not receive subsidies) before the crisis, and (b) it experienced a substantial fall in revenues in the wake of the crisis. In order to ensure that only viable jobs are supported a scheme could also be adopted that requires employers to return half of the benefit paid to the employee if the employee loses his/her job during the three months following short-time work (a solution adopted in the Netherlands). Another way to limit the deadweight effect is to ensure that the duration of short-term working subsidies is limited, while sufficiently long to preserve jobs that are viable when the economy recovers (OECD 2009).

Source: Bank staff analysis.

Improving the efficiency of the social assistance system

114. There is ample room to improve the efficiency of Croatia’s social assistance system. Given the resources spent on social assistance, the outcomes in terms of poverty reduction can be significantly better. Improving the system’s efficiency is all the more important because of the growing number of new applicants as a result of the crisis and, simultaneously, the mounting fiscal
pressures. Below we summarize the results of the earlier analysis and lay out options to enhance the system’s performance. We start by presenting measures that can be implemented in the short term and then proceed with presenting a possible medium-term reform agenda.

**Immediate priorities**

- **Improving the spending mix to protect the poorest during crisis.** Increasing the share of social expenditures for the support allowance could improve the capacity of the best targeted program to reach more low-income families. To increase the allocation for poverty-focused programs within the spending envelope, the budgetary basis for determining categorical benefits should be frozen and budget expenditures (or taxes foregone in the case of child tax allowance) from other non-contributory social protection programs redirected to the means-tested support allowance program.

- **Reducing the number of categorical benefits.** Measures to streamline and simplify benefits are important for increasing the efficiency and quality of the social assistance programs. With the 2009 supplemental budgets some of untargeted categorical programs have been discontinued: the free-of charge textbooks, and subsidies for transportation and dormitories. Children living in the poorest families, such as the support allowance beneficiaries, or children of war-veterans, remained protected. War veterans’ benefits have been rationalized as well through the October 2009 amendments to the War Veterans’ Rights Act.

- **Improving targeting.** The good practice of using means-testing for the support allowance should be used as a basis for targeting other benefits, including family benefits and those in the health insurance and war veterans. This would reduce the risk of underestimating household income due to informal labor arrangements and underreporting of income or that of providing support to client categories that are not needy. The Government is considering a number of other measures that will improve the targeting accuracy of the social assistance programs over the medium term. The Ministry of Health and Social Welfare is preparing a new Social Welfare Law, which provides for the automatic indexation of the eligibility and benefit threshold for the support allowance and other means-tested programs. Using means-testing procedures for war veterans’ cash benefits (opskrbnina) will be effective from 2010, and could be extended to family benefits and those in the health insurance with the application of the newly introduced Personal Identification Number.

- **Simplifying benefits.** Measures to streamline and simplify benefits are important for increasing the efficiency and quality of the social assistance programs. It is also important for improved monitoring and evaluation of the results of these programs. The Ministry of Health and Social Welfare has prepared a proposal to simplify the benefits under its jurisdiction. The most desirable option would be to establish a single, unified welfare benefit which would also include family benefits that are administered by other ministries/agencies (like child allowances).
Medium-term agenda

- Developing activation policies. The incidence of long-term unemployment is high in Croatia by regional standards, and most of the long-term unemployed are clients of the social assistance system. The purpose of activation policies (also known as welfare-to-work schemes) is to prevent labor market exclusion, and to reintegrate the long-term unemployed into the labor market (Eichhorst and Konle-Seidl, 2008). Activation consists of making benefit receipt conditional either on active job search, or on participation in active labor market programs, such as workfare schemes (work for benefits), subsidized employment or training. The approach is based on the principle that the rights of the unemployed (to receive the state’s support) are coupled with obligations (to actively seek employment and to accept all suitable work). Often these obligations take the form of a contract between the unemployed individual and the employment agency. Benefit recipients who fail to meet their obligations are sanctioned by (temporary) benefit withdrawal. On the other hand,
there often are financial incentives to find employment (back-to-work bonuses, earnings disregards, increased earned income tax credits). Activation interventions are tailored to the needs of different categories of clients. This involves “profiling” of the unemployed; that is dividing them into different categories based on the distance from the labor market and the amount of help needed. Different programs are offered to different categories. Activation programs are effective when there are jobs available; they are less effective when the labor market is depressed and job opportunities are few. For this reason, the implementation of activation policies should begin only once labor market conditions improve and the availability of jobs increases. The development of activation policies should be accompanied by efforts to enhance the capacity of regional employment offices to collect information on job vacancies (which as the earlier analysis has shown is limited in many regions). Activation policies will be successful only when employment offices will be able to offer jobs to the unemployed and closely work with the centers for social work. Box 9 presents plans of the Ministry of Health and Social Welfare to foster labor market inclusion of the long-term unemployed recipients of social assistance benefits.

**Improving effectiveness of pro-birth policies.** A number of potential measures, proved effective in other countries with the similar level of development, can be considered (Box 10). As the risk of poverty is positively correlated with the number of children, the targeting of the child allowance program can further be improved if the allowance for families with one child will be lowered to generate fiscal savings or to reallocate the savings to increase the allowance for families with more children. Such measure will not only support the equity objective pursued by the Government, but will strengthen the pro-birth focus of the allowance, given that such monetary incentives tend to be effective in protecting the living standard of low-income households. Parametric measures to this effect are: modifying the parameters of the child tax exemption or even abolishing it; modifying the eligibility thresholds for the child allowance program; modifying the benefit levels for the child allowance program.

**Addressing institutional fragmentation at central and local levels.** Currently, Croatia operates a complex system for policy development, implementation, monitoring and evaluation, which acts as a bottleneck to a cost-effective social protection and social assistance system. At central level, three separate ministries develop and implement the social protection policy. Each ministry has its own territorial administration; both central and local-level coordination is rather poor. The number of programs on offer, the number of institutions involved, and the lack of harmonization on eligibility criteria lead to a costly system to administer, allows for double dipping and causes unequal treatment of claimants. Adverse effects include the resulting confusion, and errors of exclusion and inclusion which negatively impacts value for money. Over the medium term, the Government may consider consolidating administration to the extent possible by merging relevant functions under fewer ministries, and/or single offices at the local levels with a view to easing access to social assistance programs and to coherent planning.

**Upgrading the social assistance information system.** The planned MHSW Management Information System needs to implement linkages to the other government information systems that are already available or are in the planning phase. In addition, linkages or clear mechanism of information exchange should be established with the social assistance
systems of local governments as well as with the employment bureau, if Croatia aims to strengthen the poverty impact of social spending by improving geographic targeting through increasing the program coverage rates in poorer regions. Improving information-exchange system would also cut the administration cost and would reduce errors of exclusion and inclusion.

**Box 9: Routes to Inclusion of Disadvantaged Workers: Mentoring for Social Inclusion and Work Integration Social Enterprises**

In order to support disadvantaged workers entry into labor market, the Ministry of Health and Social Welfare is implementing the project “Establishing Support in Social Integration and Employment of Marginalized and Disadvantaged Groups”.

The overall objective of the project is to promote social inclusion of disadvantaged groups by supporting their access to the labor market, focusing on the long term unemployed beneficiaries of social assistance. To this end staff of Social Welfare Centers will be trained to become so called social inclusion mentors. The task of the mentors will be to provide individualized services tailored to specific needs of the beneficiaries, including addressing the needs of persons facing multiple disadvantages. This new approach is expected to improve the responsiveness of the Social Welfare Centers to the needs of their clients and thus improve their employment prospects. The project will be implemented on a pilot basis in selected regions.

Another possible route to promote employment of the long-term unemployed welfare recipients that is being considered by the Ministry is the establishment of Work Integration Social Enterprises (WISE). The objective of WISE is to facilitate labor market integration of disadvantaged workers (long-term unemployed, persons with disabilities, low skilled workers, new labor market entrants, etc). In WISEs, the integration of disadvantaged workers is achieved through on-the-job-training which is followed by their involvement in productive activities.

Box 10. Reversing Low Fertility and Low Female Labor Force Participation

Croatia is experiencing the double challenge of not only being among the group of lowest-low fertility countries (1.4) but also having low level of female labor force participation (56.5%). This combination may reflect an incompatibility between motherhood and working that is also observed in the other low fertility countries: “Combining childrearing and being in employment is most incompatible in the Mediterranean countries, some central European countries, Japan and Korea” (OECD, 2007). The experience of other countries has shown that effectively addressing the compatibility between work and family can enable countries to enjoy relatively high fertility levels and labor market participation by women.

Croatia’s current mix of family policies provides families with direct financial incentives to have larger families and to a lesser extent seeks to address specifically the compatibility between family and work. Including foregone revenues through the child based tax allowance, Croatia spends approximately 2% of GDP on family benefits, comparable to OECD countries where public spending on family benefits increased from 1.6% of GDP in 1980 to 2.4% in 2003 (OECD, 2007). Among the policies, the child tax allowance policy is the least likely to be pro-natalist. International evidence suggests that a greater emphasis of the National Population Policy guidelines toward promoting its goals of reconciliation of family and professional life and childcare services and reducing its reliance on family benefits, especially the current system of child tax allowances, is more likely to help the government achieve its pro-natalist goals in the context of ensuring social protection, pensions, and gender equity.

Evaluation of Croatia’s family policies of cash benefit, parental leave, and tax credits, should consider the likely impact on their pro-natalist objectives as well on the labor market participation, particularly of women. There is a large and growing literature seeking to evaluate the impact of different pro-natalist policies on family size and on participation in the labor market (e.g. Del Boca and Locatelli (2006), Gauthier (2007), Hoem (2008), and OECD (2007)). The figure below shows the changes in fertility and female labor force participation that have occurred in Western Europe between 1980 and 2007. In 1980 (left panel), proportionally more women participated in the labor market in countries such as the Nordics, but birth rates in these countries were lower. This is consistent with standard economic theories of fertility which emphasize the trade-off between time spent raising children and time spent working. However, while twenty-seven years later (right panel) we find that female labor force participation has increased in nearly all countries—commensurate with greater emancipation and higher female wages—some countries have succeeded in combining this greater participation with overall higher levels of fertility, while others, including Croatia, have seen fertility drop, sometimes well below replacement fertility.

References


Wunsch, Conny and Michael Lechner (2007) "What Did All the Money Do? On the General Ineffectiveness of Recent West German Labour Market Programmes" IZA Discussion Paper No. 2800
Annex 1: Data Quality Issues in Croatia

The sustained efforts need to be directed at improving the overall quality of the Household Budget Survey (HBS) data in Croatia – the main instrument for poverty and welfare monitoring. In the context of the current economic crisis, the existent information gap may lead to inadequate policy response design. This nationally representative annual survey carried out by the CROSTAT, collects data on expenditures and incomes of households in Croatia. The original sample was framed following the 2001 Population Census; corrected afterwards based on administrative registries available. In 2008, 3,108 private households were successfully interviewed that include 8,609 individuals. The response rate was 71 percent.

Consistency checks between HBS data and macro and population data reveal significant drawbacks in the survey design and administration. Over the period 2005-2008, there was a constant under-representation of the middle-age and employed population, while the unemployed persons were over-represented. The response rate is higher among the elderly, unemployed and inactive persons. The CROSTAT does not perform post-stratification to control for such selective attrition in HBS with a larger share of non-responses among the mid-to-upper income groups.

The selection problem has likely widened over time and led to increasing underestimation of incomes and consumption and reduced income/consumption dispersion. As a result, counter-intuitively, the average real household income and consumption in the HBS have been declining in the period 2005-2008, contrary to wage, national accounts and other statistics. While per capita GDP and consumption increased by 23 percent over 2004 to 2008 in the macro accounts, the HBS exhibited a largely constant per capita income and consumption, and a fall in inequality to 0.236.

Annex 2: Consumption-Based Poverty Calculation Method

In this analysis, consumption is used as the main indicator of well-being. It is calculated as a sum of household expenditures on various consumption items and imputed housing rent for owner-occupied dwellings. Expenditures on durable goods are excluded as the survey does not provide information on the age of durables to calculate their imputed service. Accounting for purchase of durables would bias the welfare ranking in that particular year.

During the 2009 crisis, the reduction in household consumption captured in the national accounts was largely driven by a large reduction in consumption of goods with high income elasticity such as cars and other durables. However, in this welfare measurement, the actual spending on large durable goods are excluded from the consumption aggregate, so that the consumption measure is much stable over time than the national accounts figures for household consumption. Expenditures on health, funeral and means-tested services are excluded as well as larger expenditures on these services do not necessarily imply higher welfare for the household. The household income is calculated as an auxiliary indicator of well-being, where income in kind and the imputed rent are included in the income definition.

The group of individuals considered poor in consumption terms overlaps moderately well with the group of income-based poor. TableA1 below shows that the group of the poorest 10 percent by consumption covers a half of those belonging to the group of the poorest 10-percent by income, while the other half belongs to higher-income groups. If the poor are defined as those belonging to the poorest 20 percent in consumption, then overlap with income poverty is a bit stronger, about two-thirds. Consumption is considered as more accurate measure of well-being due to potentially high underreporting of income and considerable volume of in-kind transactions. A distributional effect of social policy thus differs depending whether we use consumption or income as means testing mechanism.

Table A2: Overlap between Consumption and Income Poverty
### Table

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<tr>
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<th>Poorest 10%</th>
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<th>Poorest 20%</th>
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<td>Income</td>
<td>Income</td>
<td>Income</td>
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<tr>
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<td>Non-poor</td>
<td>Total</td>
<td>Poor</td>
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<td></td>
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<td>5.0%</td>
<td>10.0%</td>
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<tr>
<td>Consumption</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Non-poor</td>
<td>5.0%</td>
<td>85.0%</td>
<td>90.0%</td>
<td>7.7%</td>
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<tr>
<td>Total</td>
<td>10.0%</td>
<td>90.0%</td>
<td>100.0%</td>
<td>20.0%</td>
</tr>
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</table>

*Source: Estimates based on the 2008 HBS.*

### Annex 3: Simulation of the Effects of the 2009 Crisis on Incomes and Consumption

The assessment of poverty and distributional impact of the crisis in 2009 is built upon a simple micro-simulation model, which is based on the 2008 HBS data, the most recent micro data available at the time of doing simulations. Focus was on the prediction of labor market outcomes at the micro level. The model also took into account changes in government transfers, inflation as well as income impact of policy measures undertaken in 2009. Macroeconomic projections gave a framework for micro level changes. Population is assumed to remain constant, as it was mainly the case in the recent years. The simulated change in total household incomes was translated into several scenarios of consumption changes depending on macroeconomic scenarios and assumed consumption elasticity of income shocks. The key steps in modeling individual incomes and consumptions were the following:

- **Modeling changes in employment by industry.** A probit model to predict employment chances was developed for each industry. Employees with the lowest probability of being employed (the proportion is given by macro forecasts based on the elasticity estimate) were assumed to lose job and become eligible for unemployment benefit in amount in accordance with the prevalent rules. The simulation did not look into flows from formal to informal employment or retirement, but assumed full transition of job losers to unemployment. The actual increase in unemployment (data that were made available after first drafts of simulation results were distributed) turned out to be somewhat smaller than the simulated one, indicating that some of the job losers withdrew from the labor force or found informal employment (see table below).

- **Accounting for income growth in 2009.** Individual wage growth is replicated from macroeconomic projections by industry, leading to an average net growth of 2.7% in nominal terms in 2009, which turned out to be close to the actual rate of wage growth of 2.6%. All incomes from self-employment were assumed to fall by 5%, pensions to increase by 5.3% (in line with the regular Swiss formula indexation), while social assistance benefit is set to increase by 25% (as to account for an increase in the benefit from November 2008). Other incomes were assumed unchanged in nominal terms. Comparison with the actual data shows that the actual average pension growth was smaller than the simulated, but the total pension bill in 2009 increased by more than 6% due to higher number of pensioners. On the top of the projected income growth, the model imposes the “crisis tax” on individual wages and pensions in line with the rules valid in 2009.

- **Accounting for effects of changes in social policies on household income.** The simulation model took into account (a) change in health insurance which led to the increase in the price of health services, and (b) the elimination of free textbooks. Household incomes were reduced by an amount which is expected to burden each household depending on its income status and the number of school-age children. Additional expenditures on supplemental health insurance and textbooks in 2009 do not increase welfare compared to the previous year, and therefore they took a form of taxes on income in the simulations.

- **Adjusting for inflation.** Consumer price inflation is used to convert nominal income changes in 2009 to real changes.
• **Consumption decline.** In our macroeconomic projection, aggregate household consumption is estimated to decline by 7.1% in the baseline scenario. Through abovementioned micro-simulations, the household income was adjusted downwards on average by 3.6%. For each household, the income change is mapped to consumption change. The mapping explained only a part of the projected consumption decline, while the remaining part (up to projected baseline of -7.1%) is uniformly distributed among all households by a linear decrease of their consumption. The simulations included also a low case consumption shock, a high case consumption shock, and a “pure” income shock with average consumption decline of 9%, 5.5% and 3.8%, respectively. The actual consumption decline in 2009 was 8.5%, as shown by recently released national account figures. However, the national accounts definition of consumption is highly dependent on car and durables sales. Impact of these purchases on household welfare is moderated in standard poverty analyses due to slightly different consumption definition applied. Therefore, a decline in consumption aggregate used in poverty estimates might be lower than in consumption aggregate used by national accounts calculations. The simulated baseline case (consumption drop of 7.1%) and the low case scenarios (-9%) resulted in poverty increases by 35 and 40 percent, respectively. Given the relatively minor difference in the poverty impact between these two scenarios, actual data showing 8.5% of consumption decline do not undermine the simulation results. Overall, the main economic indicators for 2009 shows some discrepancy between the simulated and the actual data (the later were not available in time of doing simulations), but the balance seems fair enough for a valid simulation of the poverty impact (see table below).

### Simulated and Actual Data for 2009

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<thead>
<tr>
<th></th>
<th>Simulated</th>
<th>Actual</th>
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<tr>
<td>Consumption (baseline, national accounts definition, annual change in %)</td>
<td>-7.1</td>
<td>-8.5</td>
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<tr>
<td>Total employment (annual change in %)</td>
<td>-2.9</td>
<td>-3.5 (-3.2 without the self-employed)</td>
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<td>Average Net Wage (annual change in %, nominal)</td>
<td>2.7</td>
<td>2.6</td>
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<td>Average Net Pension (annual change in %, nominal)</td>
<td>5.3</td>
<td>4.4</td>
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<tr>
<td>Income from self-employment (annual change in %, nominal)</td>
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<td>…</td>
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<tr>
<td>CPI inflation, %, annual average</td>
<td>2.5</td>
<td>2.4</td>
</tr>
<tr>
<td>Social welfare beneficiaries, annual average, % of population</td>
<td>4.0</td>
<td>2.1*</td>
</tr>
<tr>
<td>Unemployed, ILO, annual average, % of population</td>
<td>4.5</td>
<td>3.8</td>
</tr>
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</table>

*Covers only beneficiaries of the central government social assistance program, without local government.*

*Source: Bank staff analysis.*
### Table A 1. Employment and unemployment, 2007-2010

**Thousand**

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<th></th>
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<th></th>
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<th>Unemployment (registered)</th>
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<td>2008</td>
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<td>2010</td>
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<td>2008</td>
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<td>2010</td>
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<tr>
<td>January</td>
<td>1,457</td>
<td>1,506</td>
<td>1,525</td>
<td>1,430</td>
<td>299</td>
<td>261</td>
<td>254</td>
<td>310</td>
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<tr>
<td>February</td>
<td>1,455</td>
<td>1,504</td>
<td>1,516</td>
<td>1,417</td>
<td>299</td>
<td>260</td>
<td>263</td>
<td>318</td>
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<tr>
<td>March</td>
<td>1,461</td>
<td>1,511</td>
<td>1,512</td>
<td>1,412</td>
<td>292</td>
<td>255</td>
<td>267</td>
<td>319</td>
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<tr>
<td>April</td>
<td>1,470</td>
<td>1,521</td>
<td>1,513</td>
<td>1,416</td>
<td>278</td>
<td>245</td>
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<tr>
<td>May</td>
<td>1,485</td>
<td>1,535</td>
<td>1,518</td>
<td></td>
<td>263</td>
<td>233</td>
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<td>June</td>
<td>1,499</td>
<td>1,549</td>
<td>1,524</td>
<td></td>
<td>250</td>
<td>222</td>
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<td>July</td>
<td>1,511</td>
<td>1,559</td>
<td>1,526</td>
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<td>246</td>
<td>220</td>
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<td>August</td>
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<td>1,558</td>
<td>1,518</td>
<td></td>
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<td>September</td>
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<td>October</td>
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<td>234</td>
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<td>December</td>
<td>1,481</td>
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<td>1,457</td>
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<td>254</td>
<td>240</td>
<td>292</td>
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*Source: Crostat, HZZ.*
Table A2. Unemployment rate, employment/population ratio and activity rate by age and sex, 2005-2009

Percentages

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<th>2008</th>
<th>2009</th>
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<td><strong>Total</strong></td>
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<td>6.0</td>
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<td>9.8</td>
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<td><strong>Men</strong></td>
<td></td>
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<td>13.2</td>
<td>11.5</td>
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<td><strong>Employment/population ratio</strong></td>
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<td><strong>Total</strong></td>
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<tr>
<td>15 – 24</td>
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<td></td>
</tr>
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<td>15 – 24</td>
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