



ECONOMIC AND SOCIAL VULNERABILITY IN GEORGIA

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ECONOMIC AND SOCIAL VULNERABILITY IN GEORGIA

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The United Nations Development Programme is presenting a comprehensive research on different aspects of vulnerability in Georgia. I am confident that it will contribute to the ongoing policy debate in the wake of reforms that put people in the centre of development.

The Government of Georgia has recognized that more needs to be done in order for reforms to improve the lives of all sectors of the population and that greater care should be provided to those in need. This research examines the sources of most prevalent vulnerabilities in Georgia and compares the status of disadvantaged groups with the average situation in the country.

Competent and detailed analysis included in this report is expected to provide guidance to policy-makers and a verified data on the most critical areas of concern.

The report results from the insights from a wide range of national and international experts, individuals and organizations. I extend sincere gratitude to all who contributed to this research and helped us make it inclusive, balanced and forward-looking. I wish to particularly highlight the contribution of the National Statistics Office of Georgia who provided us with invaluable data and statistical information.

UNDP strongly believes in key principles of human development which puts the quality of people's life ahead of income indicators. We also believe that with Georgia moving to a new phase of reforms it is the right time now to renew the dialogue about the policies focusing on the human dimension. These opportunities are rare and UNDP is well placed to be a part of the process.

ACKNOWLEDGEMENTS

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We learned a lot about the situation of IDPs, persons with disabilities and households living high up in the Georgian mountains during discussions with Government officials, representatives of UN Agencies, civil society and colleagues at various research institutes. We are especially grateful to Mr. Roeland Monasch and Ms. Tinatin Baum of UNICEF, Ms. Danijela Popovic-Efendic of UNHCR, Mr. Valeri Kopaleishvili of the MRA, Mr. Moris Tsamalashvili, of the MoLHSA, Mr. Vakhtang Balavadze of the Regional Policy, Self-Government and Mountainous Regions Committee of Georgia Parliament, Mr. Hans Gutbrod of the CRRC, Mr. Giorgi Dzneladze, Ms. Maya Bibileishvili and Ms. Tamar Nadiradze of the Coalition for Independent Living, Ms. Tina Gewis of the NRC and others who have been always ready and open to share their opinion. A very special thank you goes to the participants of the Focus Group Discussions who were willing to share their experience and openly discuss the barriers and obstacles they face in their daily lives.

LIST OF ABBREVIATIONS

CATRD	Centre for Advanced Training in Rural Development
CC	Collective Center
CHCA	Charity Humanitarian Centre Abhkazeti
CRRC	Caucasus Research Resource Center
DEA	Association of Disabled Women and Mothers of Disabled Children
ESCAP	United Nations Economic and Social Commission for Asia and the Pacifics
Eurostat	Statistical Office of the European Communities
FGD	Focus Group Discussion
GDP	Gross Domestic Product
GEL	Georgian Lari
GEOSTAT	National Statistics Office of Georgia
GoG	Government of Georgia
HBS	Household Budget Survey
IDMC	International Displacement Monitoring Centre
IDP	Internally Displaced Person
IMF	International Monetary Fund
IOM	International Organization for Migration
IRC	International Red Cross
ISSA	Institute of Social Studies and Analysis
MoLHSA	Ministry of Labour Health and Social Affairs of Georgia
MRA	Ministry of Internally Displaced Persons from the Occupied Territories, Accommodation and Refugees of Georgia
MSL	Minimum Subsistence Level
NBG	National Bank of Georgia
NRC	Norwegian Refugee Council
SSA	Social Service Agency
UN	United Nations
UNDP	United Nations Development Programme
UNECE	United Nations Economic Commission for Europe
UNEP	United Nations Environment Programme
UNHCR	United Nations High Commissioner for Refugees
UNICEF	United Nations Children's Fund
USD	United States Dollar
WB	World Bank
WHO	World Health Organization

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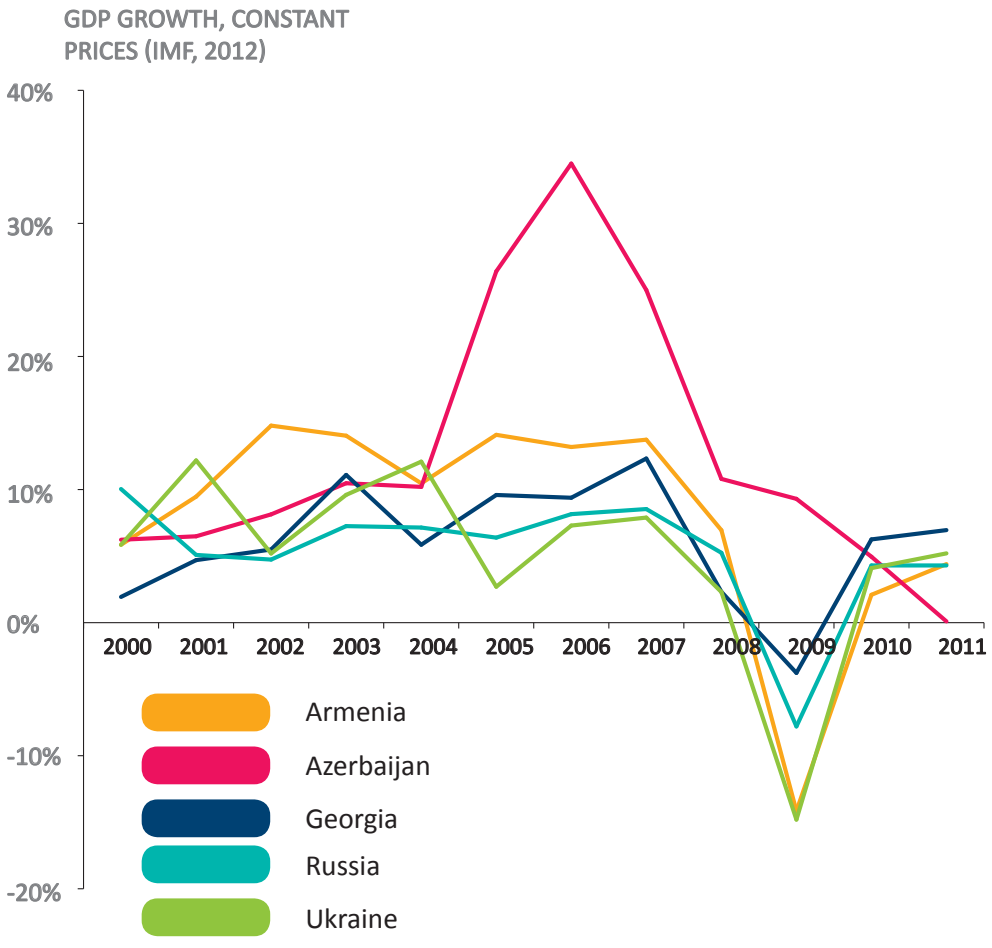
EXECUTIVE SUMMARY

This report presents a comprehensive baseline analysis of the dimensions, patterns and determinants of social and economic vulnerability in Georgia, with a particular focus on Internally Displaced Persons (IDPs), people with disabilities and the population living in high mountain regions. The study develops a multidimensional, country-specific approach to measure economic and social vulnerability and identifies groups that suffer from single and multiple vulnerabilities. Furthermore, the report investigates the level of exposure to shocks and sheds light on prevalent coping strategies.

Background

Despite of impressive economic growth in recent years, a substantial part of Georgia's population is still living in poverty. Between 2004 and 2008, average annual economic growth rates amounted to 6.8 percent and only came to a temporary halt in mid-2008, when the conflict with Russia and the global economic crisis hit the country. The economy quickly recovered from the dual shock with growth rates at almost pre-crisis level in 2010 and 2011. However, poverty has remained a critical issue. Estimates range from 10 percent for extreme poverty to 45 percent if a less conservative poverty threshold is chosen. Poverty rates differ across regions and population groups. Income disparities are substantial with an estimated Gini coefficient of 0.42 in 2011.

Existing evidence suggests that some groups of the population are particularly disadvantaged regarding access to assets and basic services, and have fewer opportunities to engage socially and politically. As a result of the wars in the 1990s in South Ossetia and Abkhazia and the 2008 Georgian-Russian conflict, Georgia currently counts 258,595 *IDPs* out of a total population of 4.5 million. The most pressing issues are inadequate housing conditions and high levels of unemployment. *Persons with disabilities* are especially at risk of being socially excluded. In



2011, 129,599 persons with disabilities were registered in Georgia. Employment rates are very low and access to education and health services are constrained by physical barriers, societal attitudes, and financial issues. Finally, a large proportion of the *high mountain population* engages in agricultural activities that are characterized by low productivity, low incomes, and orientation towards self-subsistence. Poorly developed infrastructure hampers access to product markets, health services and education in high mountain areas.

The Government of Georgia (GoG) has set up a range of public policies targeted towards specific groups of the population. Registered IDPs are entitled to a monthly allowance, temporary shelter and plots of arable land, free primary and secondary education, and assistance in finding employment. Registered persons with disabilities receive a disability pension, depending on the severity of their disability. Moreover, the GoG has initiated programs that pursue their social integration. In contrast, there are no specific policies directed at high mountain regions yet. Targeted social assistance is available for poor families that applied for registration in a database. Depending on a ranking score, beneficiaries receive a subsistence allowance, free health insurance vouchers and/or electricity subsidies.

Conceptual framework

Household well-being, broadly understood as economic and social well-being, evolves over time in response to events that change a household's demographic composition and its economic and social position. Household well-being is defined as the household's ability to acquire basic goods and services and to fully participate in economic, social and civic life. Households are exposed to risks that may impact their welfare in case the risk materializes. Not all households are equally exposed to risk, nor are all households equally affected by an occurring shock.

In line with the broad understanding of well-being, the study develops a multidimensional approach to vulnerability that distinguishes between economic and social vulnerability. Economic vulnerability is the risk of becoming poor, or the inability to maintain an appropriate living standard in the event of a welfare shock. Social vulnerability is defined as the risk of not being able to fully participate in economic, social and civic life. Notably, economic vulnerability is both an outcome in itself, and determinant of deprivation in other dimensions of well-being, thereby contributing to social vulnerability.

The degree of economic and social vulnerability is related to a household's exposure to risks and its resilience to withstand the effects of a shock. Exposure to risk contributes to vulnerability as it makes the future uncertain. The higher the probability of a shock, the larger is exposure. Household resilience in case of a shock depends on the resources a household owns and the ability to use these resources. Resources broadly include financial resources, productive assets, human capital, and social resources. The ability to use resources depends on access to markets, public services, and social resources. The higher the initial resource endowment and the better the exchange opportunities, the more likely a household can protect itself in case of a shock.

The degree of vulnerability may further differ between households based on their composition and personal characteristic of household members. Each household has their own priorities and preferences that determine the relative importance of a given resource, but also decisions regarding the use of available resources and coping strategies if a shock occurs.

Methodology and data

Based on the conceptual framework, domains, indicators and thresholds are defined for each dimension, i.e. household resources, ability to use resources, and exposure to risk and coping strategies, and adapted to the country-specific situation in Georgia. The definitions of indicators and thresholds take into account the social and economic conditions in Georgia as well as prevalent norms and beliefs. Multidimensional vulnerability indices are generated for two dimensions, namely household resources and ability to use these resources.

The study applies a mixed-method approach using both quantitative and qualitative data. Data for the quantitative analysis stem from the Household Budget Survey (HBS)

implemented by GEOSTAT in the fourth quarter of 2011, and supplemented with a special vulnerability module developed for the purpose of this study. The regular HBS sample was extended with 500 additional households for each target group, resulting in a final sample size of 4,301 households. In-depth interviews and Focus Group Discussions (FDGs) with representatives from the respective target groups were conducted to enhance the understanding of obstacles and barriers that these groups face, and to gain additional insights regarding exposure to risks and coping strategies.

Main results

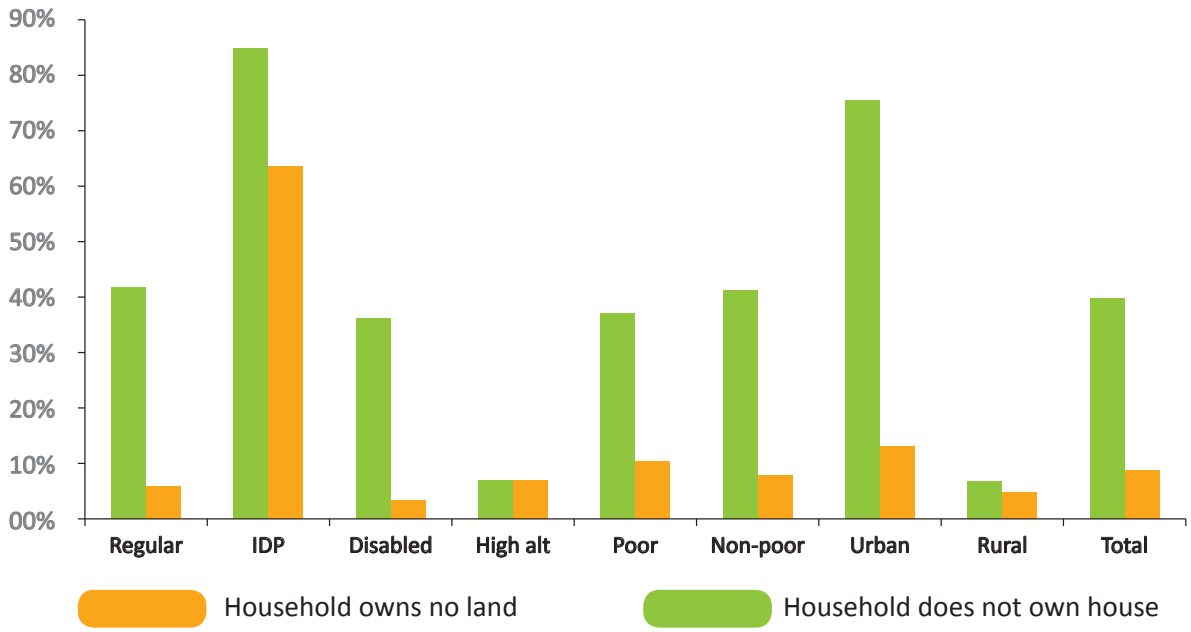
The availability of resources is an important aspect determining the resilience of households against shocks, and as such their economic and social vulnerability. Household resources include financial, physical, human and social resources. Each resource dimension protects the household in different ways. The availability of sufficient *financial and physical resources* allows households to smooth consumption over time and reduce the risk of falling into monetary poverty in the event of a shock. The availability of *human resources* determines the current and future earning power of a household. Lastly, *social resources* are important for social inclusion and the participation in family and community life. Access to a broad social network is beneficial in the event of a shock. It can facilitate finding (new) work, providing access to informal financial support, or simply be a source of information.

The size of a household and its composition, type of income, and the employment status of the household are the main determinants of vulnerability to financial resources. On average, 36 percent of the population is living in a household with average consumption below the official Minimum Subsistence Level (MSL), 61 percent has no ability to save money at the end of the month, 22 percent owe money to the bank or somebody else and 22 percent have no stable income, such as a regular wage or old-age pension. The likelihood of being poor is increasing with the number of adults and children living in the household. The location of the household also plays a decisive role. The risk of having consumption below the MSL is higher in rural areas. Households living in Kakheti and Kvemo Kartly are significantly more vulnerable to living in monetary poverty than similar households in Tbilisi. Relying on income from social transfers other than pensions, also contributes to the risk of living below the MSL. Naturally, employment has a positive effect on household consumption. The higher the share of employed household members, the lower is the risk of living in poverty. The same applies to having income from wage. An income from wage also contributes positively to the ability to save money. On the other hand, households with income from social transfers, self-employment or agriculture have a higher chance of being in debt. From a financial resource perspective, this makes them even more vulnerable.

The three focus groups of this report, IDPs, households with persons with disabilities, and households in high mountain areas are not particularly at risk with respect to *financial resources* compared to 'regular' household. Although the poverty incidence is highest among IDP households at first sight, the location of the household and other factors are much stronger determinants for monetary poverty and financial vulnerability in general. Moreover, IDPs living in the private sector more often have income from a regular source and as such are less vulnerable in this respect. Households with disabled persons have a five percent higher likelihood of being in debt compared to regular households, but they are less vulnerable with respect to the regularity of their income. Given that disabled households have more elderly household members, they more often benefit from an old-age pension compared to regular households. Even though households in high mountain areas mainly live from agriculture, they are not more vulnerable than an average household in this domain.

Vulnerability to *physical resources* is particularly pronounced among IDP households who are less likely to own land, livestock or a house. On average, 40 percent of the Georgians do not own land, 49 percent have no livestock, but only 9 percent do not own the house they are living in. The situation is dramatically different for IDP households. More than 60 percent do not own their place of residence and more than 80 percent do not own land or livestock. While livestock looses its relevance when including more factors in the analysis, the difference remains significant for land and house ownership. IDPs

NO LAND, NO HOUSE



have lost their houses in the course of the displacement and only a minority managed to become home owners again. Compared to regular households, IDPs living in the private sector have a 14 percent lower probability of owning the place of residence. With respect to the quality of housing, the analysis confirms that the IDP housing in the private sector is of inferior quality. They more frequently live in houses with inappropriate floors, walls and roofs. As for the IDPs living in collective centers, overcrowding is a particular problem. Compared to regular households, the risk of living in an overpopulated apartment is 24 percent higher for IDPs in collective centers.
High mountain households are also less likely to own a house compared to regular households, but at the same time, the probability of owning livestock is seven percent higher. Disabled households appear to be not particularly vulnerable in this domain. Further important determinants include the urban/rural divide, the level of education, and the share of employed household members.

With regard to vulnerability to *human resources*, bad health is a major concern among all three special groups. Among regular households, the prevalence of having at least one household member with a chronic disease is 45 percent compared to 91 percent in disabled households and 66 percent in IDP households. Similarly, IDP and disabled households more frequently assess their health as bad or very bad. IDP households (14 percent), disabled households (26 percent) and high mountain households (11 percent) are more likely than regular households to suffer from bad health, everything else being equal. Considering other household characteristics, the age of the household head also has a negative impact on health. The older the head, the higher is the likelihood of assessing the health status negatively.

Employment and education related human resource indicators are not significantly different across the three groups. . The place of residence (urban/rural) and the monetary poverty status are the main determinants for low levels of education and the absence of hired employees in the household. Households in urban areas are on average better educated than those in rural areas and the likelihood of having at least one person in the household with a formal job is also significantly higher. Living with limited financial resources is strongly associated with a lower education level and the absence of formally employed household members.

Vulnerability to *social resources* is only weakly associated with any of the three special groups considered. Social resources are the final domain in the household resource dimension. Indicators consider the social status of friends

and relatives, the availability and use of media, the level of connectedness with other people and possibilities for interaction with others within the community. The analysis highlights some notable exceptions. Having friends or relatives with a higher status in society can be an important source in times of need. It may facilitate finding a job, but also provide access to financial or product markets. IDPs living in collective centers have a 12 percent higher chance that they have no one with a higher social status among their social network. This is not surprising taking into account the relative isolation from society and the rather homogenous composition of the people living in these centers. Poor households are more likely to feel disconnected from the society and to suffer from feelings of emptiness than other households. Not only do these household suffer from financial distress, but the chance of being socially excluded is also higher. Having more family members, either adults or children, has a positive effect on the level of connectedness.

The ability to use resources **is the second component contributing to household resilience. It depends on access to markets, public services and social networks.** The availability of resources and the opportunities to employ them eventually determine the level of economic and social vulnerability. Access to financial markets can help households to smooth consumption over time, while access to product and labor markets enables households to exploit their productive and human resources. Access to public services, such as education and health, is essential to maintain the available human capital in the household. Finally, being able to use the social network may provide essential financial, physical or emotional support in times of a crisis.

Vulnerability to *access to markets* is more pronounced among poor households, whereas belonging to IDP, disabled or high mountain households does not contribute to vulnerability in this domain. These three groups are not more likely to be deprived from market access than any regular household. Overall, 66 percent of the population has no access to any means of private transport. The perspectives with respect to the labor market are very pessimistic. 55 percent claim that it is very difficult to find a job nowadays in Georgia. IDPs, both in collective centers and the private sector, seem to be better connected to the financial market. However, IDPs in collective center are less likely to be able to raise an instant sum of money in case of an emergency than other households. Being monetary poor, on the other hand, is a much stronger determinant for vulnerability to access to markets. Female-headed households are also at a disadvantage in this domain. They are less likely to be able to raise cash in an emergency situation and are also more often without any means of transport, making access to all kinds of markets and services more difficult.

Vulnerability to *access to services* is lower among high mountain and poor households, whereas disabled households do not differ from regular households in this respect. Although health care facilities are available, coverage with health insurance that would facilitate the use of health care services is still very low. In more than 80 percent of the households not all members have health insurance. Almost 40 percent refrain from applying for social assistance, even though they would need this kind of support. The likelihood that high mountain households have no health insurance and do not apply for social assistance is significantly lower (11 and 12 percent respectively) than for regular households or the other groups. The same applies to poor households and to IDPs living in collective centers. IDPs in the private sector are less likely to apply for social assistance in case of need. Having children has a positive effect on the use of services. Households with children are more likely to health insured and they also apply for social assistance when needed.

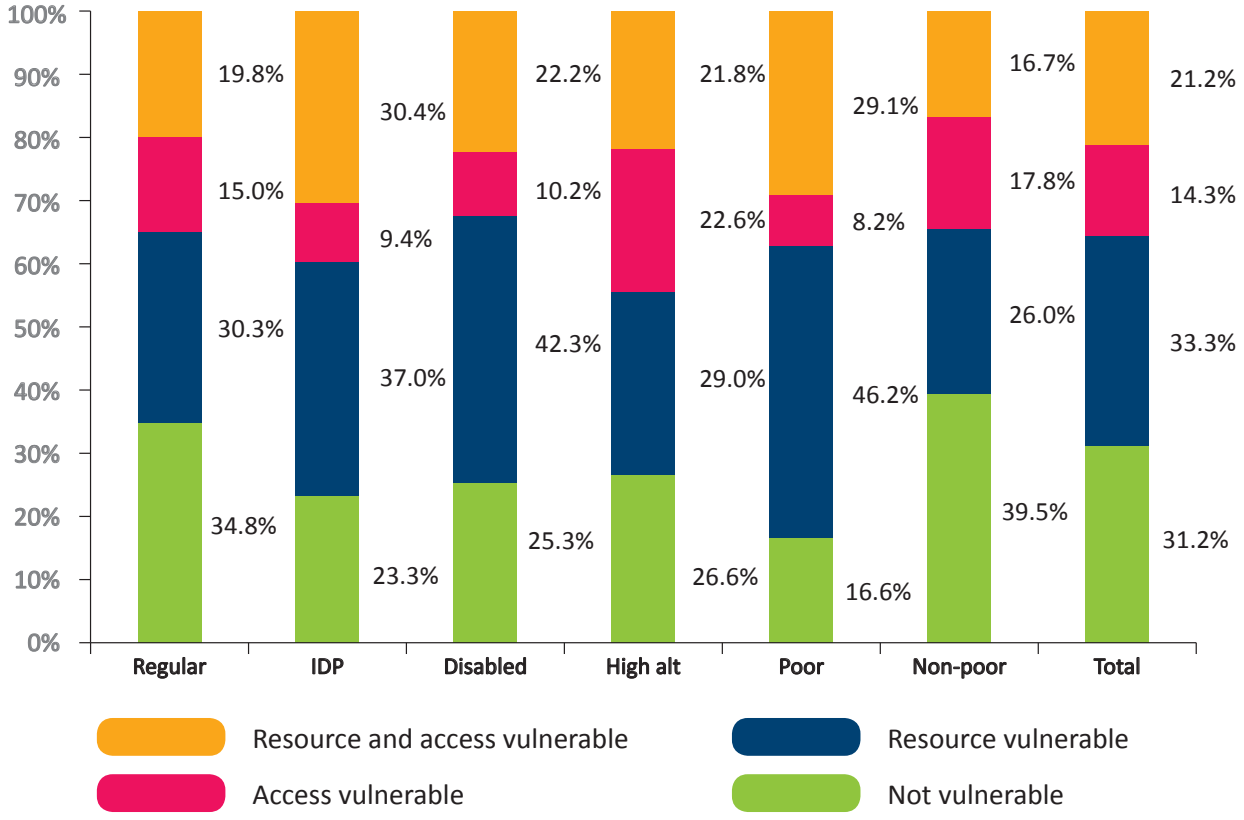
With regard to vulnerability to social resources, overall vulnerability rates are low. Only 15 percent of the population does not participate in any kind of association at community level, and only 2 percent have no one that could support them emotionally. IDPs in the private sector and disabled households are less likely to lack support from social networks, though the size of these marginal effects only ranges between one and three percent. Moreover, being poor increases the probability of lacking this kind of support, whereas it makes it at the same time more likely to participate in an association.

Overall, the material living standard of the household is a much stronger indicator of economic and social vulnerability. Individuals

living in poor households are significantly more likely to be vulnerable with respect to human resources and the ability to use the resources. IDP households are clearly at a disadvantage with respect to land and house ownership, though one has to differentiate between IDPs living in collective centers versus those living in the private sector. This confirms findings of previous studies and was also corroborated in the qualitative study. Households in high mountain areas more frequently own livestock, which is also expected since animal husbandry is one of the main livelihood strategies in mountain areas. With respect to human resources, the findings indicate that all three groups are significantly more vulnerable to health compared to regular households. They assess their health status more frequently as bad or very bad. The traumas experienced in the past as well as their current housing situation have a negative impact on the health of many IDPs. For high mountain areas the finding might be related to the demographic situation and the larger share of elderly living there. Difficulties in accessing health care facilities, either caused by lack of financial resources, insufficient health insurance coverage or simply the limited availability of high-quality health care in the community further increase the vulnerability with respect to health. It was also one of the issues frequently raised in the Focus Group Discussions.

The analysis of multidimensional vulnerability reveals that vulnerability with respect to resources is more prevalent than with respect to access to resources. Two multidimensional vulnerability indices were generated measuring vulnerability with respect to resources and the ability to use resources. For each dimension, an index has been established including ten and seven indicators, respectively. A household is considered vulnerable if it is vulnerable in at least 30 percent of the indicators. Overall, 54 percent of the population is resource vulnerable and 36 percent is access vulnerable. On average, individuals are vulnerable in 4.2 out of ten resource indicators and 3.3 out of seven

VULNERABILITY OVERLAP

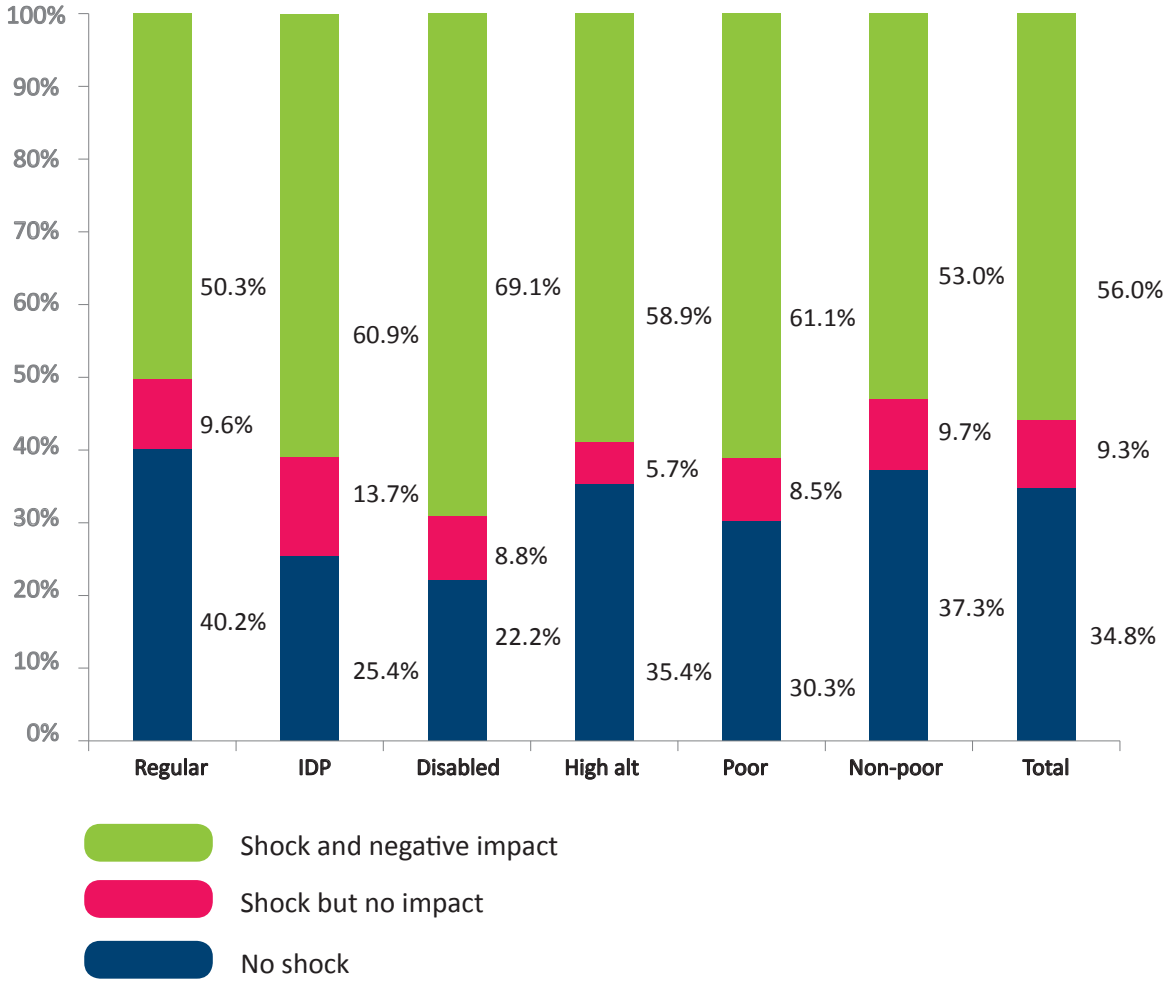


access indicators. 21 percent of Georgians are vulnerable in both dimensions, with the share being highest among IDP households (30 percent).

Group membership hardly plays a role as determinant for multidimensional vulnerability, but poverty status matters. Two exceptions emerge: IDPs in collective centers are 12 percent more likely to be vulnerable with respect to resources, while high mountain households are 11 percent more likely to be access vulnerable than regular households. Once again, the monetary poverty status of a household is a better determinant for multidimensional vulnerability, both with respect to resources and exchange opportunities. Moreover, higher levels of education are associated with a reduced likelihood of being vulnerable. A larger share of employed household members and having income from wage or self-employment also decreases resource vulnerability.

Economic and social vulnerability are not only the result of insufficient resources or lack of access to exchange opportunities, but they are also influenced by the probability that a household experiences a harmful shock. With respect to exposure to shocks, disabled households are more likely to have experienced a family-related shock in recent years, whereas IDP households living in the private sector evidently have a higher probability of having suffered from a livelihood shock, such as displacement

SHOCK AND IMPACT



during the last five years. Exposure to shocks contributes to economic and social vulnerability of households. Overall, 65 percent of the population experienced at least one shock. Disabled households are 10 percent more likely to having suffered from a family-related shock within the last five years. For IDPs in the private sector, the probability of a livelihood shock is 15 percent higher. Characteristics such as age or gender of the household head or poverty status apparently do not matter in this regard.

Of all households that indicated having experienced at least one shock with a negative impact, four out of ten did nothing to mitigate these consequences. Among high mountain households, even 50 percent did not resort to any coping strategies. Households apply different strategies to cope with a shock, for instance try to increases resources, or aim to reduce expenses, or both. The prevalent strategy to increase resources is creating debts, with the exception of high mountain households who prefer seeking assistance from public or private organizations. Economizing consumption, especially with respect to non-food and food goods, is widely used to achieve a reduction of expenditures. Households rarely refer to coping strategies with potentially devastating consequences. Only five percent of the households resorted to measures such as taking children out of school, postponing enrolment, reducing the use of health care services or cancelling insurances. However, the use of devastating measures is more frequent in disabled households, amounting to nine percent.

Conclusion

This report aims at answering the question to what extent are IDPs, people with disabilities and households living in high mountain regions more vulnerable than other groups of the population. The study develops a multidimensional, country-specific approach to measure economic and social vulnerability and identifies groups that suffer from single and multiple vulnerabilities. Furthermore, the report investigates the level of exposure to shocks and sheds light on prevalent coping strategies.

Overall, belonging to one of the three focus groups of this report more strongly determines vulnerability with respect to household resource than indicators that capture the ability to use resources. As expected based on previous findings, and also confirmed by the qualitative analysis, IDP households are most vulnerable with respect to land and house ownership. In contrast, IDP and disabled households' vulnerability to financial resources is partly reduced due to the fact that they are more likely to enjoy some type of regular income. Considering vulnerability to human resources, a major concern arises from the fact that all three groups are more likely to suffer from bad health than regular households. Though, this finding probably results from different factors, such as traumatic experiences and inadequate living conditions for IDP, or the demographic structure in high mountain regions with an older than average population. Vulnerability to health is further increased by the difficulty to access health care that can be caused by financial constraints, restricted health insurance coverage, or non-availability of adequate health care facilities in the community. These issues were also frequently mentioned in the FGDs. Despite of these effects of group membership on vulnerability, the poverty status of a household in general is a much stronger predictor of economic and social vulnerability.

Based on the multidimensional indices, resource vulnerability is more widespread in Georgia than access vulnerability (54 and 42 percent respectively). One fifth of the Georgian population is vulnerable in both dimensions, with the share being highest among IDP households (30 percent). Remarkably, group membership plays a limited role as determinant of multidimensional vulnerability. The only exception emerges with regard to IDPs living in collective centers, which more likely to be resource vulnerable, and high mountain households that have a higher probability of being access vulnerable. Once again, the monetary poverty status of a household is a better determinant for multidimensional vulnerability, both with respect to resources and exchange opportunities.

Finally, exposure to shock contributes to the degree of social and economic vulnerability of a household. 65 percent of the total population suffered from at least one shock within the past five years. The likelihood of family-related shocks is higher among disabled households, whereas IDP

households evidently are more likely to having been exposed to a livelihood shock, such as displacement. Notably, in case of shocks with negative impacts, not all households attempt to mitigate these detrimental impacts.

The overall conclusion from this study is not as straightforward as one might wish. The analysis has shown that other personal and household characteristics play a much larger role in determining social and economic vulnerability than being member of an IDP, disabled or high mountain household. Household size, the demographic composition of the household, personal characteristics of the household members, such as the level of education or the employment status, are variables often more strongly correlated with the outcome. **In the end, one of the strongest and most consistent predictors of economic and social vulnerability is the monetary poverty status of the household. Poor household have fewer financial, human and social resources. They have limited access to financial and product markets and less likely to get support from their social network.**

I. INTRODUCTION

Georgia has experienced remarkable economic growth between 2004 and 2008 with average growth rates of 6.8 percent annually (IMF, 2012). Although the conflict with Russia in 2008 and the global economic crisis brought economic growth to a halt, the country's economy recovered quickly with growth rates at almost pre-crisis levels in 2010 and 2011. Despite impressive economic growth, a substantial part of the population is still living in poverty. Estimates vary between 10 percent for extreme poverty and 45 percent depending on the poverty threshold taken into account (UNICEF, 2010). Economic prosperity is unequally distributed across the country. Georgia suffers from relatively high levels of inequality with an estimated Gini coefficient of 0.42 for 2011 (GEOSTAT, 2012). Furthermore, poverty rates differ significantly between urban and rural areas and across regions. Children and households without any wage earners are particularly at risk of living in poverty (UNICEF, 2010). Also, the higher the educational level of an individual, the less likely he or she is living in poverty (World Bank, 2010).

Economic growth does not automatically translate into better job opportunities (UNDP, 2011). The official unemployment rate of 15.1 percent in 2011 (GEOSTAT) masks the real situation considering the fact that 64 percent of the employed are self-employed, of which a large share is engaged in subsistence farming. Based on a national opinion poll in 2012, employment remains the main national issue for Georgians, even before territorial integrity and poverty (Navarro & Woodward, 2010, 2012; CRRC, 2010). Anecdotal evidence further suggests that Internally Displaced Persons (IDPs), persons with disabilities and persons living in high mountain areas are particularly limited with respect to employment and income generation activities. They are disadvantaged with respect to access to assets and basic services and have fewer opportunities to engage socially and politically.

There is incomplete evidence on the level and depth of the economic and social limitations for these and other groups in Georgia. Therefore, the objective of this study is to provide a comprehensive baseline analysis of social and economic vulnerabilities for Georgia with a specific focus on IDPs, disabled persons and the population living in high mountain areas. Understanding and analyzing the dimensions of vulnerability will help to identify those that suffer single or multiple vulnerabilities. It will also contribute to a better understanding of the barriers and obstacles contributing to social and economic vulnerability. Expanding people's opportunities will benefit the society at large and contribute to the further human development of Georgia. The question guiding this study is:

What are the dimensions, levels, patterns and determinants of economic and social vulnerability in Georgia and to what extent are IDPs, disabled persons and households living in high mountain areas more vulnerable than other groups of the population?

Vulnerability as a concept still lacks consensus in academia and among practitioners. There is agreement that it differs from 'poverty' and that it is inherently a forward-looking concept. Depending on the perspective, vulnerability is understood as a dimension of poverty and vice-versa (Makoka & Kaplan, 2005). Therefore, the study starts with the development of a conceptual framework for the analysis of vulnerability. Economic and social vulnerability is the lack of resilience of a household to cope with a shock and the level of exposure to a shock. The final outcome, i.e. the degree of vulnerability, may differ between households based on characteristics of the household members. Different households have different priorities and may take different decisions regarding the use of resources. Following this framework, dimensions of economic and social vulnerability in Georgia will be defined reflecting different elements of vulnerability. Indicators are selected for each domain in order to reflect a household's situation within the respective domain.

The report unfolds as follows: the next section sets the stage by describing recent economic and demographic developments in Georgia; it introduces the three target groups and provides a concise overview of current public policies targeted to the specific groups and the poor in general. The third section develops the conceptual framework for the definition and measurement of economic and social vulnerability and introduces the data and methodology for the subsequent analysis. The results of the analysis are presented in section four. Section five concludes.

II. BACKGROUND

2.1 Economic context

Georgia, a lower middle-income country with GDP per capita of USD 3,210 in 2011 (IMF, 2012) and ranking 75th on the Human Development Index (UNDP, 2012) has witnessed a remarkable political and economic modernization between 2004 and 2008, which contributed to a significant improvement of the population's living standard. During this period, the country experienced sustained economic growth with average growth rates of 6.8 percent annually (Figure 1). Similarly, average household incomes increased by 31.6 percent between 2003 and 2007 (World Bank, 2009b:31). Although the conflict with Russia in 2008 and the global economic crisis brought economic growth to a halt, the country's economy recovered quickly with growth rates at almost pre-crisis levels in 2010 and 2011. Despite impressive economic growth, a substantial part of the population is still living in poverty. Estimates vary between 10 percent for extreme poverty and 45 percent depending on the poverty threshold used (UNICEF, 2010). Restoration of financial discipline, elimination of corruption, and increasing government budget revenues (Figure 2) facilitated positive changes in the social protection system in the aftermath of the "Rose Revolution". The improvement of the State budget enabled the Government of Georgia (GoG) to increase public expenditures for education, health care and social protection (Government of Georgia).

The armed conflict with Russia in August 2008 and the global financial crisis that developed in parallel resulted in a severe deterioration of the economy and a drastic reduction of the level of investments (Figure 2).[1] In 2009, real GDP contracted by 3.8 percent. Subsequent to the economic downturn and a new wave of IPDs, official unemployment rates rose to 16.9% in 2009, and poverty reemerged as a critical issue. Annual inflation fluctuated between 5 and 10 percent in pre-crisis years, but dropped in 2009 when the economy cooled down (IMF, 2012).

Despite of this dual shock, the Georgian economy has proven to be rather resilient. Sound macroeconomic and financial sector policies, and financial support from the international donor community[2] put the country back to economic stability. In 2010 and 2011, economic growth rates rose again to 6.3 and 7.0 percent respectively. From a structural point of view, the economy has undergone profound changes for the last 20 years. Agriculture, industry and services contributed approximately an equal share to GDP in 1990. Nowadays, services (68.4%) and industry (23.2%) have become the main sectors of the economy (World Bank, 2009a), although the largest share of the employed is still active in the agricultural sector (UNECE, 2012). Economic growth between 2004 and 2008 was mainly pushed by the service sector and partly the manufacturing sector. At the same time, these are also the sectors that were most severely hit by the economic downturn, going along with a sharp drop in FDI inflows (World Bank, 2010:3-4).

1 Investment is measured by the total value of the gross fixed capital formation and changes in inventories and acquisitions less disposals of valuables.

2 At a joint conference hosted by the EU and World Bank in Brussels in October 22, 2008, 38 countries and 15 international organizations pledged 4.5 billion USD (of which 2 billion USD constituted grants, and 2.5 billion USD were loans) to assist in the post-conflict economic recovery, over a three-year period (EC, 2008).

FIGURE 1. GROSS DOMESTIC PRODUCT, CONSTANT PRICES, PERCENT CHANGE (IMF, 2012)

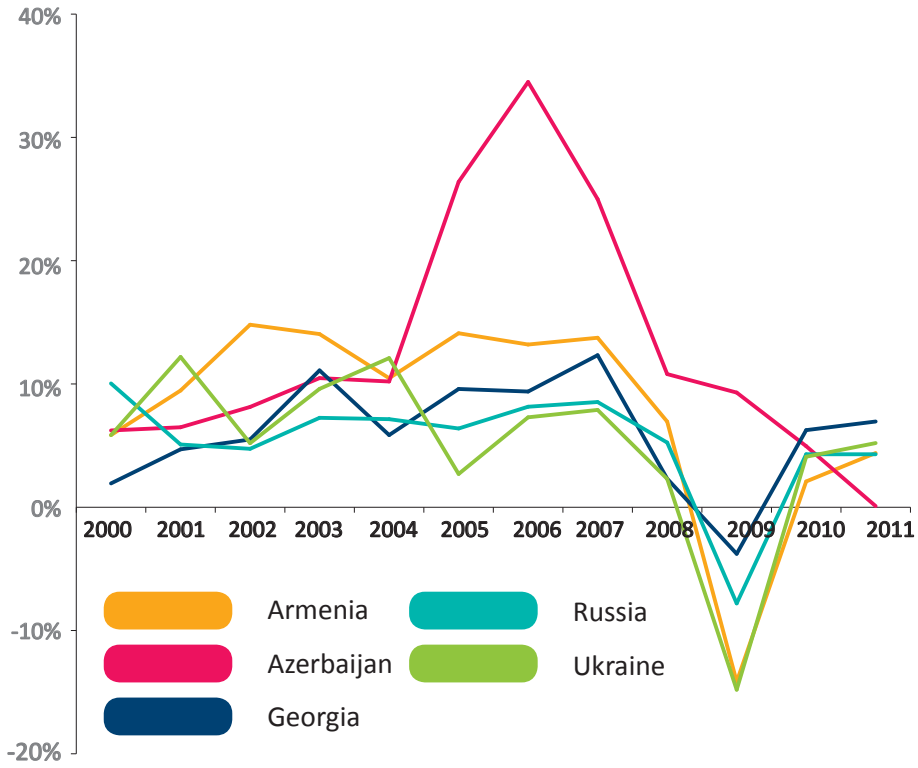
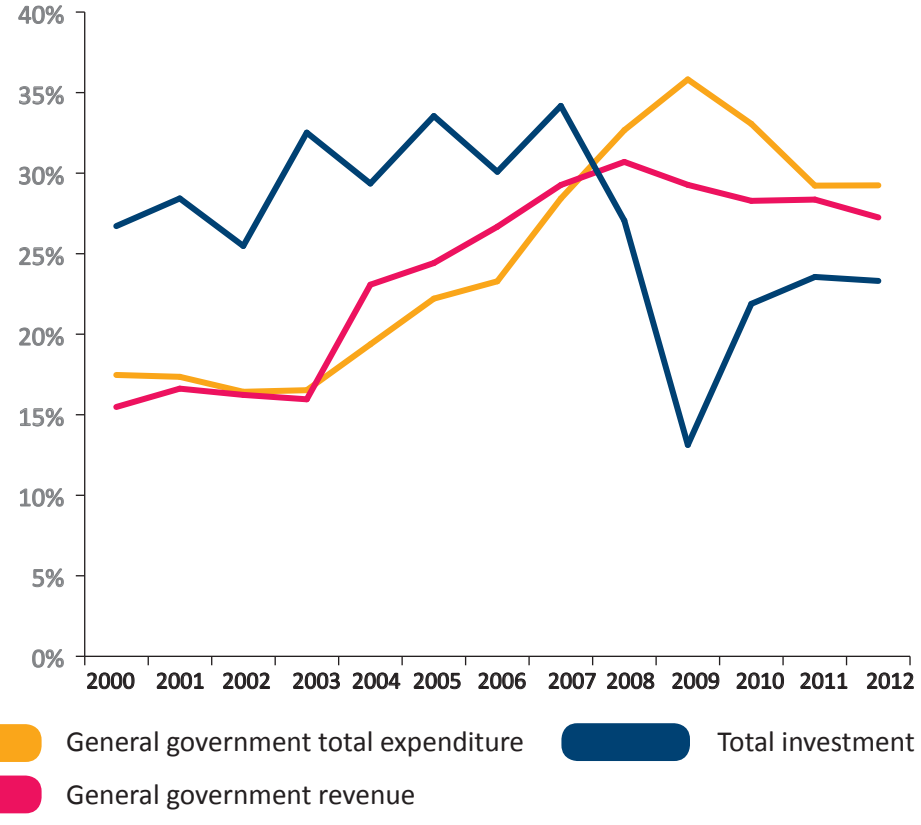


FIGURE 2. GENERAL GOVERNMENT REVENUE, EXPENDITURE, AND LEVEL OF INVESTMENT, PERCENT GDP (IMF, 2012)



Note: Estimates start after 2010.

2.2 Demographic aspects

Over the last two decades, a volatile economy, intensive urbanization, low living standards, a large number of IDPs and many additional factors have adversely impacted on demographic developments. Nowadays, the total population has become fairly stable after many years of negative demographic trends. Total population amounts to 4,497.6 thousands (as of January 2012), with 52% of the population being female.

Compared to other countries in the region, the total fertility rate is relatively low in Georgia (Figure 3). Various social, political, ethnic, psychological, and economic factors may explain this low rate, reflecting women's behavior and the socio-economic conditions of families. Between 2005 and 2011, the birth rate fluctuated between 10.7 and 14.4 newborns per 1,000 persons.

The infant mortality rate per 1000 live births has decreased from 19.7 in 2005 to 12.1 in 2011 (UNICEF, 2012). Access to health care facilities has been improved and women's reproductive rights have become better protected as a result of continuing reforms regarding the health care infrastructure and the introduction of health insurance. However, infant mortality in Georgia is still twice the average rate of infant mortality in the EU (Eurostat, 2012).

Similar to many other countries, the Georgian society is in the process of ageing. Between the censuses in 1989 and 2002, the average median age of the population increased by 2.5 years and currently amounts to more than 37 years of age. Life expectancy at birth has increased from 67.5 to 70.2 years for males and from 75.0 to 78.6 years for females between 1990 and 2011 (GEOSTAT, 2012).

The share of people aged 65 or above out of the total population has remained relatively stable since 2005 and amounts

FIGURE 3. TOTAL FERTILITY RATES (BIRTHS PER WOMEN) (UNICEF, 2012)

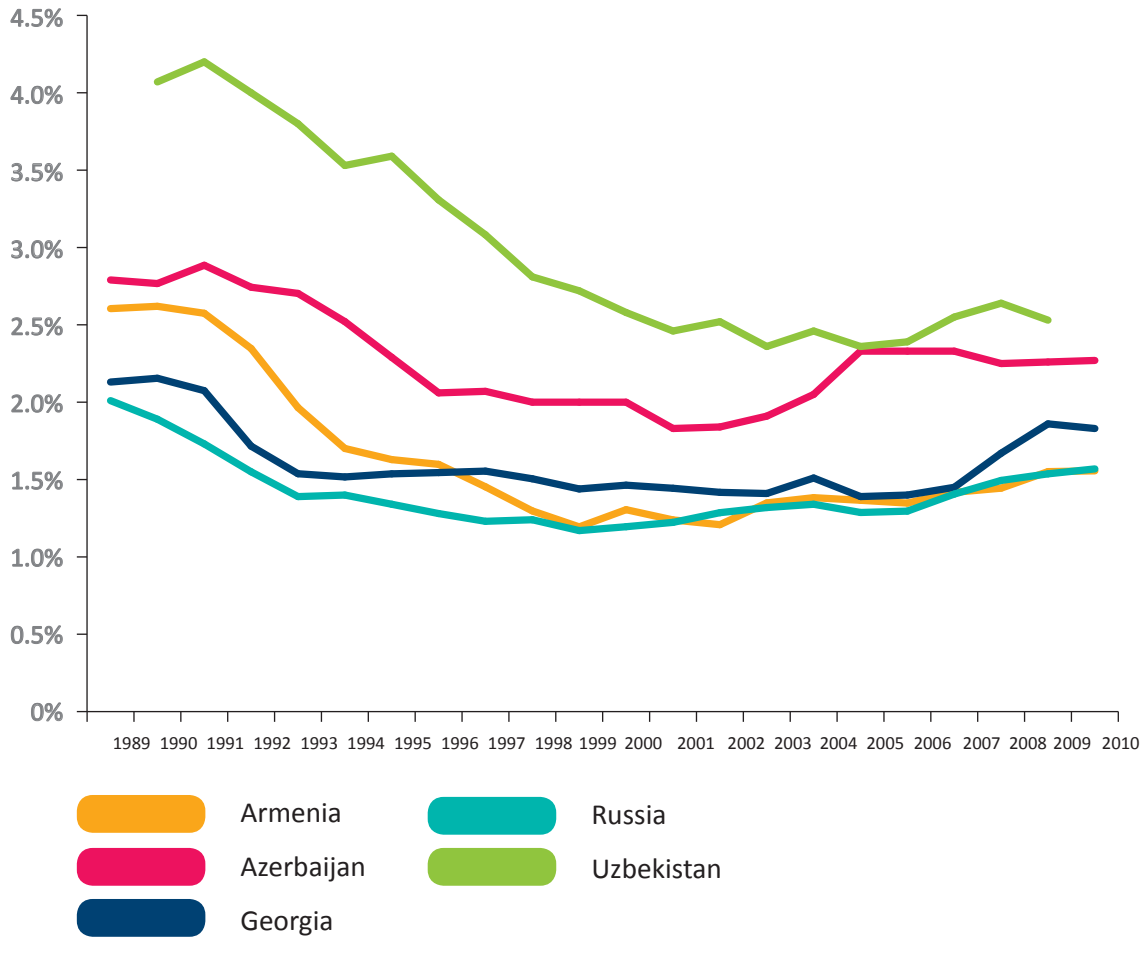


FIGURE 4. POPULATION BY AGE GROUPS (WORLD BANK, 2012)

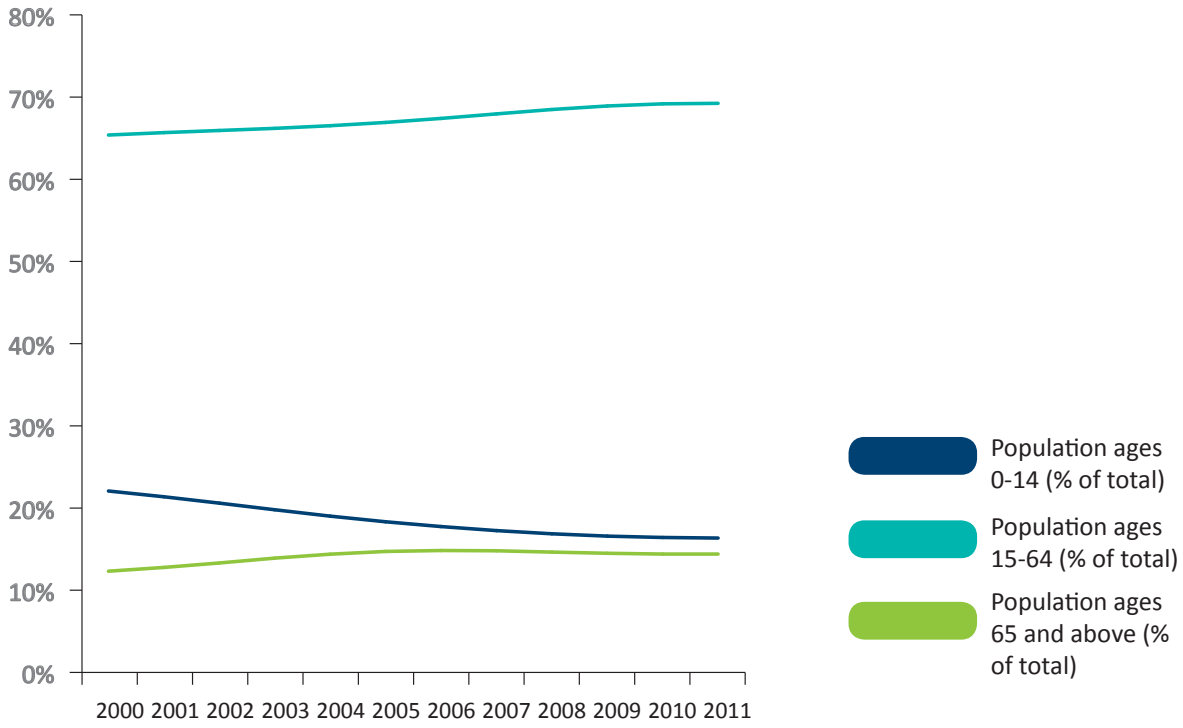
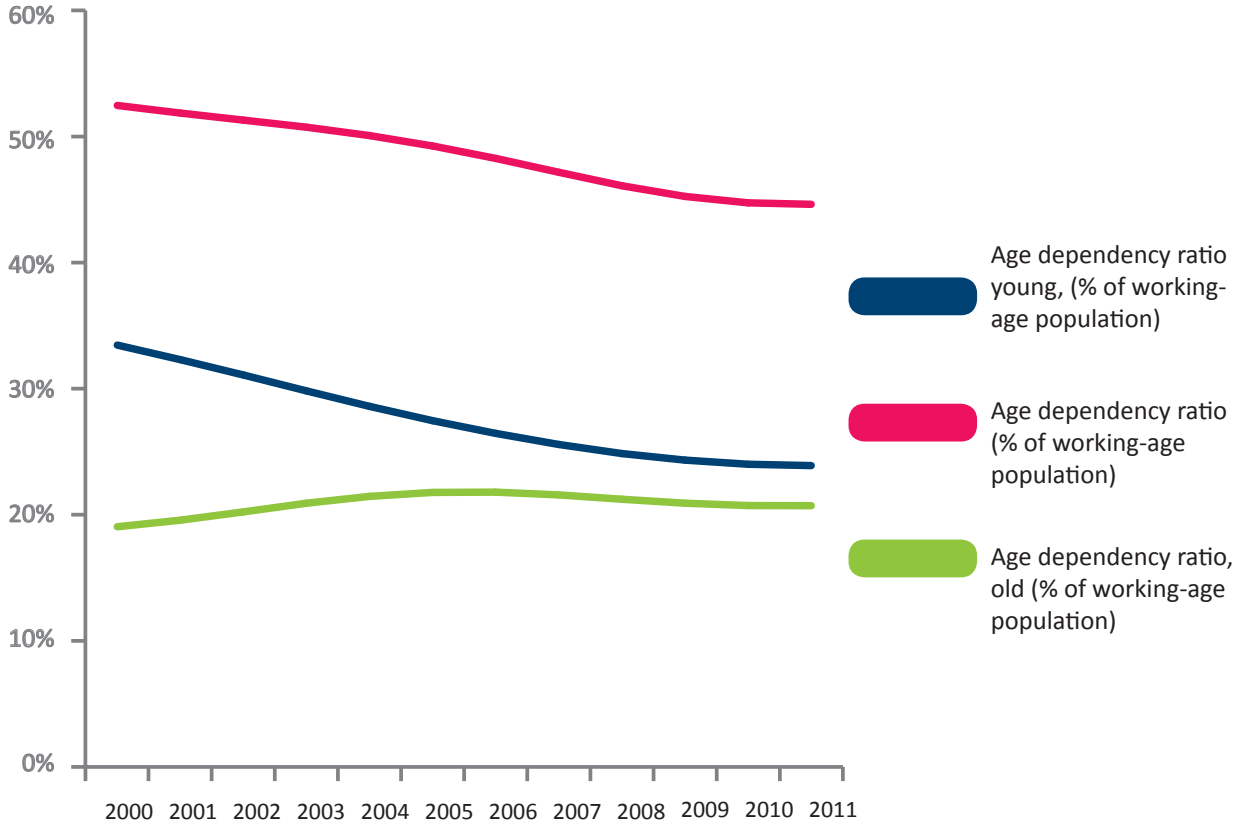


FIGURE 5. AGE DEPENDENCY RATIOS (WORLD BANK, 2012)



to approximately 14.5%. In contrast, the proportion of people aged below 15 has continuously declined from 22.0% in 2000 to 16.5% in 2011, and the share of the working age population (15 to 64) has increased slightly (Figure 4). As a result of these demographic trends, the young age dependency ratio[3] has declined, whereas the old-age dependency ratio has remained at constant levels in recent years (Figure 5).

The demographic ageing of the population will put an increasing economic burden on the working population in the future. This process is particularly observable in rural areas where parts of the population, mainly young people, are moving to the cities due to adverse living conditions (Table 1). Migration from rural to urban settlements is most evident in the northern mountain regions of Georgia[4], where the majority of the population now is elderly. As a result, the share of people living in cities has been increasing constantly. At present, 53.2% of the total population lives in urban areas, compared to 46.8% who reside in rural parts of the country (GEOSTAT, 2012). 26.1% of the population resides in Tbilisi, the capital and largest city of the country

Out-migration has contributed to worsening demographic conditions in Georgia. According to the International Office of Migration, 0.6 percent of the population migrated in 2010, of which 57.1 percent was female (IOM, 2012). The feminization of labor migration carries long-term socio-demographic risks, for

3 The young age dependency ratio is defined as the number of people aged below 15 compared to the number of working age people (15-64). Simultaneously, the old age dependency ratio compares the number of people older than 64 to the working age population. The age dependency ratio is the ratio of all dependents (aged below 15 or above 64) to the working age population.

4 In Georgia there is no rigid definition that distinguishes mountains from non-mountain regions. The "Law on Social-Economical and Cultural Development of High Mountain Regions", adopted in 1999, defines high mountains as territory located 1500 m above sea level and beyond, but in some cases lower level territory (between 800 and 1500 m above sea level) can also be classified as a high mountain region (item 4).

Table 1. Number of population by regions as of January 1, 2009-2012 (thousand persons)

Region	2009	2010	2011	2012	Growth (%) in 2012
Georgia	**4385.4**	**4436.4**	**4469.2**	**4497.6**	**0.6**
Tbilisi	1136.6	1152.5	1162.4	1172.7	0.9
Adjara A.R.	382.4	386.9	390.6	393.7	0.8
Guria	138.8	139.8	140.3	140.3	0.0
Racha-Lechkumi and Kvemo Svaneti	47.7	47.6	47.3	47	-0.6
Samegrelo-Zemo Svaneti	468.0	474.1	477.1	479.5	0.5
Imereti	693.5	700.4	704.5	707.5	0.4
Kakheti	401.4	404.5	406.2	407.1	0.2
Mtskheta-Mtianeti	105.2	108.8	109.3	109.7	0.4
Samtskhe-Javakheti	208.1	211.3	212.8	214.2	0.7
Kvemo Kartli	488.8	499.9	505.7	511.3	1.1
Shida Kartli	313.0	310.6	313.0	314.6	0.5

Source: GEOSTAT, 2012.

instance when young children are left behind as a result of their mother's migration. Most migrants are of working age and looking for better employment opportunities abroad.[5] Remittances sent by labor migrants are crucial, as they are the only income source for many families. As such they play a significant role in reducing poverty. The volume of remittances has been increasing every year and amounted to USD 1.268 billion in 2011, representing 8.9 percent of GDP (National Bank of Georgia, 2012).

2.3 Specific groups

Three specific groups are the main focus in this study, namely IDPs, people with disabilities and people living in high mountain areas. The following sections summarize previous findings on these groups and provide background information.

Internally Displaced People (IDPs)

During the period following independence and the break-up of the Soviet Union in 1991, Georgia experienced significant problems. These have been stemming from both political instability, imposed by armed conflicts in separatist regions and civil war, as well as from issues related to the transition to a free market economy. In particular the wars between 1991 and 1993 in South Ossetia and Abkhazia led to the displacement of more than 300,000 people (Loughna, et al., 2010:13). The recent Georgian-Russian conflict of August 2008 resulted in a second wave of displacement during which approximately 128,000 persons have moved from the conflict regions. Though the majority of newly displaced could soon go back to their place of residence, almost 26,000 people have not been able to return to their homes (Amnesty International, 2010:6-7). According to official data for April 2012 provided by the Ministry of Internally Displaced Persons from the Occupied Territories, Accommodation and Refugees, Georgia currently has 258,599 IDPs who live in 88,796 IDP households. The majority of IDPs resides in Tbilisi (37.4%), Samegrelo (33.5%) and Imereti (10.5%) (Table 2).

Approximately 212,000 IDPs have been displaced for more than 19 years, and have been living without proper shelter or the means to become self-sufficient. Over 106,000 IDPs have returned to the Gali and Shida Kartli regions or have been resettled within the Shida Kartli, Kvemo Kartli and Mtskheta-Mtianeti regions. However, they still need help with housing assistance, income generation and community mobilization (UNHCR, 2010-11). A document prepared by the UN Resident Representatives' Humanitarian Affairs Team in 2006 stresses that for 45 percent of the total 245,000 IDPs who appeared in the 1990s, no significant improvements of their socio-economic status have materialized (United Nations, 2006:17).[6]

Table 2. Internally displaced persons in Georgia by regions, 2012

Region	Number of IDPs	Percentage of IDPs	Number of households
Adjara	4,727	1.8	1,901
Guria	589	0.2	196
Tbilisi	96,694	37.4	34,633
Imereti	27,078	10.5	9,093
Kakheti	1,458	0.6	503
Mtskheta-Mtianeti	10,106	3.9	3,444
Racha-Lechkhumi-Kvemo Svaneti	963	0,4	383
Samegrelo-Zemo Svaneti	86,679	33.5	28,416
Samtskhe Javakheti	2,327	0.9	960
Kvemo Kartli	11,620	4.5	3,962
Shida Kartli	15,126	5.8	4,844
Without address	1,232	0.5	461
Total	**258,599**	**100**	**88,796**

Source: Ministry of Internally Displaced Persons from the Occupied Territories, Accommodation and Refugees of Georgia, www.mra.gov.ge

5 For more information on migration in Georgia, see, e.g., IOM (2008, 2012), and Selm (2005).

6 Note the number of IDPs differs according to different sources. Some refugees were able to return to their homes within months and others could not register. Legislative amendments at the end of 2011 further narrowed the definition of an IDP, including only those that to leave an area occupied by a foreign state (IDMC, 2012).

IDPs in Georgia can be classified into two broad groups: "New" and "old" IDPs depending on the time of displacement which happened either in the early 1990s (old) or after 2008 (new). Tarkhan-Mouravi (2009) describes these groups as follows:

- 'New' IDPs:
  - IDPs from Gori and from villages in the 'adjacent' area, which in most cases have already returned.
  - Newly displaced IDPs originating from South Ossetia and Abkhazia, the people who will not be able to return in the foreseeable future.
  - The remaining population in the settlements in the Akhalgori district.
  - IDPs from the Gali region in Abkhazia.
  - Vulnerable non-displaced population, who has experienced additional vulnerability as a direct consequence of the August events.
- 'Old' IDPs:
  - Returned IDPs, i.e. the population that was previously displaced but has returned to their homes.
  - IDPs living throughout Georgia in so called collective centers (CCs) that are not designed to accommodate permanent residents (e.g. factories, kindergartens, sanatoria, hospitals, etc.).
  - IDPs living in private accommodations.

Though poverty is a serious problem for a large part of the Georgian population, in some respects IDPs suffer from more severe poverty that is extremely difficult to mitigate (Tarkhan-Mouravi, 2009). A survey on housing and socio-economic conditions of IDPs reveals that the general economic conditions of IDPs are very poor (Nadareishvili & Tsakadze, 2008): 17.2 percent of IDP families claim that they starve systematically or that they can hardly afford normal nutrition; 17.4 percent assess their economic state as hard; 48.1 percent say that their income is just enough for nutrition; while only 17.3 percent of households evaluate their economic conditions as average or above average. The situation is better in Tbilisi, while Samegrelo shows the worst conditions (Nadareishvili & Tsakadze, 2008).

According to official data, 39.2 percent of the IDPs live in collective centers while 60.8 percent reside in private housing Table 3). Of those living in private accommodation, less than half of them own their houses. Few IDP households who are living in someone else's house pay rent, while a majority of them have been provided temporary shelter by friends or relatives (Nadareishvili & Tsakadze, 2008).

Table 3: Housing distribution of IDPs by sectors, 2012

Type of housing	Number of IDPS	Percentage (%)
Private sector	157,276	60.8
Collective centers	101,323	39.2
Total	**258,599**	**100.0**

Source: Ministry of Internally Displaced Persons from the Occupied Territories, Accommodation and Refugees of Georgia, http://mra.gov.ge/main/ENG#section/50

Inadequate living conditions have remained one of the most serious concerns, in particular in the case of 'old' IDPs. About 45 percent of this category of IDPs lives in collective centers, of which a substantial part does not meet minimum shelter standards (UNHCR, 2009b). The collective centers originally represented nonresidential buildings such as hospitals, factories, schools, hotels and kindergartens. Living conditions in such centers are characterized by lack of adequate privacy, access to water, proper insulation and functional sewage systems. In addition, the poor and overcrowded living environments breed tension and render studying difficult for IDP children (UNHCR, 2009b). Research conducted by UNICEF (2009) that mainly focused on living facilities and infrastructure also concludes that both old and new IDPs lack many services, especially water and sanitation, despite of the prompt provision with homes and special buildings.

Although 'new' IDPs were provided with individual housing and land parcels in newly

established settlements and this property can be privatized by IDPs,7 there is a lack of social infrastructure and essential services in 'new' IDP settlements, such as pharmacies, health facilities or grocery stores (Tarkhan-Mouravi, 2009; GeoWel Research & CRRC, 2009). Most of the houses have outside wooden latrines, usually shared by several households (UNICEF, 2009).

Those of the newly displaced persons who have returned to their original dwellings are also under risk of impoverishment. Agricultural activities in which they have been traditionally involved yield insufficient returns due to problems of irrigation, lack of investment, infrastructure and machines. Moreover, returnees were reluctant to rehabilitate their houses in the absence of a political settlement of the conflict and weak rule of law (Tarkhan-Mouravi, 2009).

Unemployment and the state of displacement are considered key reasons for the economic problems faced by IDPs (Mamuka & Tsakadze, 2008). Less than one third of the economically active IDPs is employed (ISSA, 2011). Though there is in general no discrimination against IDPs in the employment sphere, the social kinship factor, which is an important issue in the Georgian labor market, may limit access to jobs for IDPs. A recent UNHCR draft report observes that unemployment among IDPs is higher since access to formal sector employment is limited. This is a result of "lack of information, established networks and marginalization" (UNHCR, 2009b:30). Contrary to that finding, Dershem et al. (2002) suggest that IDPs differ from the general population not in terms of unemployment but rather in income levels and positions held.

Existing studies state that allowances for IDPs and other social benefits, including pensions, are the main source of income for IDPs (Nadareishvili & Tsakadze, 2008). This is especially true for Samegrelo, where income from employment is marginal. Contrary, salary is the main source of income in Tbilisi. Other livelihood strategies of IDP families include small-scale petty trading, remittances and assistance from family and friends, subsistence agriculture and sale of homegrown agricultural products for their survival (Tarkhan-Mouravi, 2009). However, limited access to finance due to unavailability of real estate to back loans, lack of infrastructure and machinery in the agriculture business, and limited managerial capacities of IDPs erect barriers for successful development of these businesses (UNHCR, 2008:30).

Still, official employment statistics may distort the real picture since it assumes that everybody who works on his or her own land plot is employed. Taking into account the fact that these activities are mainly oriented towards self-consumption and that a significant portion of self-employed agriculture workers are unpaid members of family farms, one can conclude that unemployment partly is just disguised According to GEOSTAT, agriculture in 2011 accounted for 53.4 percent of employment while its share in GDP was relatively small (8.8%). Moreover, average salaries were the lowest among the sectors (61.7 percent of the average wage).

As for access to education, a study of the Norwegian Refugee Council finds that though IDP children are often disadvantaged in the educational system in Georgia, this appears to be more due to their economic status than their IDP status (Loughna et al., 2010). The authors suggest that differences in economic conditions limit access to those educational resources that are dominantly funded through private sources, including school textbooks and private tuition. Furthermore, economic hardship may cause malnutrition, and the poor housing environment may discourage children from successful study (Tarkhan-Mouravi, 2009:37).

Similarly, Nadareishvili and Tsakadze (2008) conclude that almost every school age IDP attends school, and the absolute majority of them on a regular basis. However, the quality of education may suffer from poor educational facilities and teaching level, lack or high cost of educational materials, and segregation. This is specifically true for school age children living in collective centers, as they have little opportunity to socialize, prepare homework, conduct a healthy lifestyle, and enjoy fulfilling recreational or sports activities (Tarkhan-Mouravi, 2009). Some studies find that children of IDPs tend to be discriminated against by other children in or out of school, although this is a less problematic issue today than a few years ago (Loughna et al., 2010).

Overall, the motivation to enter higher education is substantially lower among IDPs than among the general population. Once again, negligible financial resources limit the possibilities to hire coaches and thus to successfully pass examinations, or to pay tuition fees in case someone succeeds in exams. In addition, 'returned' IDPs from Gali district face a language barrier since they do not sufficiently master the Georgian language, thereby limiting their opportunities to enroll in institutions of higher education (UNHCR, 2008:21; Tarkhan-Mouravi, 2009:27). Recently, however, the number of IDPs that graduate from universities has increased (Nadareishvili & Tsakadze, 2008).

In general, the morbidity rate is assumed to be higher among IDPs than among the general population due to inadequate living and sanitary conditions in many collective centers, lack of access to quality medical services, unhealthy life style and low quality of life. Continuous stress caused by an uncertain future, and the impact of traumatic memories are further risk factors (Dershem, et al., 2002; UNHCR, 2009b). In particular, a UNHCR study finds that "the deplorable living conditions in collective centers as well as in the private sector have negatively impacted the physical and mental health of IDP children" (UNHCR, 2009b:20).

Economic hardship and the distance to services in villages are stated as the main reasons preventing IDPs from buying medication and medical service. The main source for financing health-related expenses is the family budget. Medical insurance is used for this purpose mostly by IDPs from villages. Medical insurance is also employed more often in collective centers than in the private sector. Economic assistance from friends or relatives is mainly mentioned in Tbilisi and other large cities (Nadareishvili & Tsakadze, 2008:8).

People with disabilities

The importance of social integration of people with disabilities has undergone growing recognition within the international community. Though precise data are not available, estimates assume that 7 to 10 percent of the world's population has a disability (Dudzik et al. 2000), and there is substantial evidence that disability represents an important development issue (Bonnel, 2004). Dudzik et al. (2000) observe that disability has often been associated with poverty and marginalization due to lack of resources and economic opportunities, unavailability of adequate support services in the respective communities, and physical and attitudinal barriers to full participation in society. Similarly, the WHO (2011) concludes that many people with disabilities do not have equal access to health care, education, and employment opportunities, do not receive the disability-related services that they require, and experience exclusion from everyday life activities.

According to official data provided by the Social Service Agency, the number of registered disabled persons in Georgia amounted to 129,599 in 2011 (see Table 4). This figure has declined substantially over the last five years due to reforms of the pension and social protection system. Nevertheless, the real number of disabled people may exceed these figures due to underreporting issues caused by stigma effects, lack of information, limited access to registration and prohibitive costs of registration (World Bank, 2007). In 2004, the following main causes and categories of disability were identified (World Bank, 2007):

- Disability due to chronic illnesses: 60.1%
- Persons disabled since birth: 16.0%
- Persons with restricted abilities: 13.8%
- War veterans: 6.5%
- Persons disabled due to work trauma or professional disease: 3.6%

The results of a study conducted by ISSA and IRC (2007) suggest that the rate of employment among people with disabilities prior to 2007 merely amounted to 7.5 percent. Unemployment is a widespread phenomenon within this group and a 'stable' social characteristic of people with disabilities. Given high unemployment rates in general and scarce jobs, they have limited access to jobs and incomes and very little employment

Table 4. Number of registered persons with disabilities in Georgia, 2006-2011

	2006	2007	2008	2009	2010	2011
Number of persons with disabilities	228,960	160,638	137,808	139,932	138,614	129,599

Source: Social Service Agency, www.ssa.gov.ge

opportunities (World Bank, 2007). Almost all enterprises that had employed disabled persons have been closed since the dissolution of the Soviet system, and private business is in general reluctant to employ people with disabilities. Furthermore, people with disabilities usually have limited financial resources to start their own business.

The social environment and state policy do not provide sufficient incentives for private business to employ people with disabilities. In particular, current Georgian legislation does not include any provisions that would force or encourage local businesses or organizations to employ persons with disabilities. Employment of persons with disabilities is neither enforced by a quota system nor incentivized by any kind of benefits (World Bank, 2007). At the same time, there is a profound desire of people with disabilities to have a job, as they emphasize that "they did not want assistance, but rather a possibility to earn money to support themselves and their families" (World Bank, 2007:2-18).

Although the Law on Education stipulates inclusive education, access to quality education is in reality limited for people with disabilities. The Government has launched pre-school intervention programs aimed at introducing inclusive education, but they are still at an initial stage. The absence of a clear policy towards education of persons with disabilities along with attitudes of parents, mobility and architectural barriers are the main obstacles to attending educational facilities by disabled students (World Bank, 2007).

Firstly, there is a lack of physical infrastructure that restricts accessibility, for instance shortage of special ramps, lifts, or lack of rest rooms for children with disabilities. Secondly, teachers are often not trained on how to deal with children with disabilities, and special teacher assistants and psychologists are not available. Finally, the attitude of parents can hinder inclusive education, for instance when parents hide their children at home to protect them from mockery. In contrast, some experience has shown that school children, unlike some teachers, approach disabled schoolmates with understanding and try to support them. "Schools are not ready to provide education to disabled persons, and teachers don't know how to care for these kind of children. Mothers try to avoid sending their children to school and keep them at home out of fear that their children would become objects of mockery or irony".[7] The same position was expressed by Madona Kharebava, Head of the Association of Disabled Women and Mothers of Disabled Children: "Even when a child with disability has a very high intellectual level, the parents are not able to carry the wheelchair upstairs in the school every day. […] In many cases parents are ashamed to let their children with disabilities play outdoors with other children or to go to school…"[8]

People with disabilities are also in a disadvantaged position regarding access to higher education. Social programs that would incentivize disabled persons to enter higher education are missing, and financial resources to hire coaches for exams are limited. As one of the FGD participants noticed: "Only few English language or computer skills training courses that are financed by the Government have become available for us recently. We are quite a few who can afford to study by ourselves... Others feel abandoned and are locked up in their lonely lives".[9]

7 Personal Interview with Maia Shishniashvili, Head of NGO "xeli xels" ("Give a helping hand"), Tbilisi, 19.07.2011.

8 Personal Interview with Madona Kharebava, Head of the Association of Disabled Women and Mothers of Disabled Children (DEA), Zugdidi, 06.07.11.

9 FGD with disabled persons, Tbilisi, 23.10.2012.

A large majority of people with disabilities has limited access to quality health care and services. Therapy and rehabilitation services are underdeveloped and almost non-existent in the regions partly due to the population's inability to pay for them. Home doctors do not have special skills and training to deal with children with disabilities. Moreover, "… disabled people don't have access to medical insurance programs, as long as they represent a risk group. This kind of people enjoy only state insurance program for deprived people, which in many cases does not cover most of their medical service needs. This insurance program doesn't take into account the special needs of disabled people. All this makes disabled people more vulnerable".[10]

Mountain regions

Almost 22 percent of the worldwide land area is mountainous, and more than half of the world's population depends on resources from mountain areas (Zeleke, 2010). Mountain regions represent a vital source of agricultural production and livelihoods, water supply and hydroelectric power and serve as important climate regulators. Furthermore, they constitute focal points of biological and cultural diversity and provide opportunities for recreation and tourism. At the same time, mountains are highly vulnerable bio-geographic areas that are predisposed to land degradation and deterioration of mountain environments and livelihoods of the population (Ravera, 2006).

The Caucasus mountain region, located at the crossroads of Europe and Asia between the Caspian and Black Seas, has acquired geopolitical and economic importance as a transit region (UNEP/REC Caucasus, 2009). Despite of its profound biological and agricultural diversity, the region is in general characterized by structural weaknesses, increased energy dependency and reduced economic diversification. Furthermore, local water pollution, human-induced soil and forest degradation are critical issues. Unsustainable management and use of natural resources due to high poverty level and the striving for short-term economic profits threatens the existence of natural ecosystems. There is no integrated approach for the Caucasus region with regard to the protection of nature and environment for livelihoods, and none of the countries is mastering the entire integrity of the natural subsystems that make up the Caucasus eco-region (UNEP/REC Caucasus, 2009).

One of the main sources of income in mountain regions in Georgia is agriculture, in particular animal husbandry and crop and vegetable production. Agricultural employment accounts for more than 50 percent of total employment. The agricultural sector is dominated by small farms (on average 0.8 ha of arable land per farmer) that are predominantly operated for domestic consumption and self-subsistence. According to the Agricultural Census in 2004, 30 percent of the holdings are between 0.5 and 0.8 ha,

10 Interview with Madona Kharebava (DEA), Zugdidi, 06.07.11.

Table 5. Average monthly household income by urban and rural areas (in GEL), 2006-2011

	2006	2007	2008	2009	2010	2011
Urban	386.4	455.1	603.4	651.4	733.8	762.4
Rural	384.2	388.2	477.0	486.9	568.1	649.5
Rural as % of urban	99.4	85.3	79.1	74.7	77.4	85.2

Source: National Statistics Office of Georgia, www.geostat.ge
Note: Average monthly income includes total cash and non-cash inflows.

21 percent are between 0.2 and 0.5 ha and 23 percent are between 1 and 2 ha per holding (GEOSTAT, 2005). In 2011, the share of income from sale of agricultural products in the total income of family holdings accounted only for 7.7 percent (GEOSTAT, 2012).

Various factors contribute to the fact that productivity in this sector is very low, among others fragmentation of land, lack of watering systems, or underdeveloped infrastructure. Moreover, high prices of fertilizers, shortage of processing factories in the countryside, but also knowledge gaps are crucial issues. These factors reduce competitiveness of petty farmers and render markets less accessible. In the long run, they compromise perspectives that the agricultural sector could become a driving force of the economic development of the mountain region (CATRD, 2006). Rural incomes grow at much lower rates as compared to urban regions, and there is a continuous increase in urban-rural disparities in terms of poverty (see Table 5). This is especially true for what is known as the Northern Mountain Arc north and east of Tbilisi, the regions of Shida Kartli, Mtskheta-Mtianeti, and Kakheti (Waal, 2011:17).

The forestry sector, in particular firewood and timber production, represents another source of employment and income for people in mountain regions. In Racha, 20% of the working age population is employed by small timber (saw mills, factories) or equipment (tractors, wood drivers) enterprises. For a long period of time, and mainly in areas where timber production dominated, each household received approximately 5-10 m^3 of wood material for free. It could be sold at the market, thereby providing households with some income. Nowadays, timber production has been commercialized and the former practice is abandoned.

Privatization and commercialization of previously commonly owned forests, meadows and pastures impacted negatively on poor villages in mountain areas. Local farmers and small entrepreneurs usually do not possess sufficient financial resources to participate in large privatization and construction tenders and thus have lost their source of income. This has also enhanced the outflow of the local population from the mountain region since the winning companies usually do not hire local employees (Metreveli, 2010). Non-timber forest products and handicrafts production can constitute new income opportunities as an attractive alternative to the forestry sector (CATRD, 2006).

Some mountain regions, for example Svaneti and Tusheti, have considerable touristic potential. Since the Government has launched a program for the promotion of tourism in the mountain region of Svaneti, some households have succeeded in starting a hotel business. The promotion of tourism in the region has also created incentives for out-migrants to return to the mountains and to start their own business. According to a study on perspectives for sustainable development of Svaneti region, tourism is considered to have the greatest growth potential in the long run, whereas cattle breeding offers the best short-term potential for increasing income (CATRD, 2006).

Lack of jobs and income-generating activities have led to outmigration of mainly young people from mountain regions, leaving behind pensioners and the elderly population. Migration tendencies of this kind have substantially impacted on the demographic situation in this region. At the beginning of 2012, 35% of the 22,400 people living in Racha mountain region are pensioners. A similar picture emerges for another mountain region, Mtsketa Mtianeti (GEOSTAT, 2012; SSA, 2012). Nevertheless, there are substantial socio-economic disparities across the mountain regions. Whereas many regions are characterized by the above-mentioned factors of low income, extreme poverty and out-migration, others, especially those close to the seashore, are in a slightly better socio-economic position.

Access to health care is limited in mountain regions. Although each village has a doctor who can render first aid, there are no pharmacies, and people have to go to the cities to get medicines. Similarly, access to education is partly problematic. Primary schools are located in each village, whereas secondary schools can only be found in some villages. As a result, the walking distance to the nearest school can range between 8 and 12 kilometers. Children from mountain regions often encounter difficulties in passing the national exams for college education. Furthermore, those who wish to take national exams and continue their education at a college face financial constraints. Usually, children pursue their parents' trade[11].

11 Interview with Nodar Nijaradze and Zamir Ratiani (Upper Svaneti, Community of villages Ushgyli), 09.07.11.

2.4 Public policies targeted to special groups

IDP

After the dissolution of the Soviet Union, virtually all countries in the Caucasus region were ridden by ethnic conflicts. As a result, the problem of internally displaced people became widespread in the region. The amount of IDPs that the countries have to face differs. Likewise, governments' responses to the problems of IDPs vary across countries, though the socio-economic situation of IDPs is very poor regardless of the country of residence.

This is in particular observable in Armenia and Azerbaijan. The Armenia-Azerbaijan Nagorno-Karabakh conflict that came to an end in 1994 led to large-scale internal displacements in Azerbaijan. Officially, Azerbaijan currently has more than 586,000 IDPs (United Nations, 2010), constituting approximately 7% of the total population. The 1999 Law on IDPs determines that IDPs benefit from a wide range of services, including among others free temporary accommodation, public health care, social assistance and pensions, as well as allocation of land plots and assistance in seeking employment (UNHCR, 2009a). The conflict led to less severe internal displacement in Armenia, but the situation was aggravated by a huge amount of homeless people as a result of the Spitak earthquake in 1988. IDMC (2010) estimates that approximately 65,000 and 500,000 people were displaced respectively. In contrast to Azerbaijan, the Armenian government did neither offer any housing assistance to conflict-induced IDPs (Cohen & Deng, 1998), nor any special health care services for IDPs and returnees. Besides, particular issues of IDPs are not reflected in poverty reduction programs (IDMC, 2009).

In Georgia, the Government introduced a specific law governing the status of IDPs in

Table 6. Number of IDPs and IDP families registered in the united database of socially unprotected families and receiving subsistence allowance, 2011

	Registered IDP		IDPs receiving the benefit		Share of IDPs receiving the benefit as % of IDPs registered in the database	
Region/District	Families	Population	Families	Population	Families	Population
Tbilisi	11,556	34,342	2,085	4,965	18.0	14.5
Guria	160	367	42	82	26.3	22.3
Racha-Lechkhumi Kvemo Svaneti	275	611	104	196	37.8	32.1
Kakheti	338	770	101	199	29.9	25.8
Imereti	4,951	3,788	965	4,921	39.7	35.7
Mtskheta-Mtianeti	243	642	91	220	37.4	34.3
Samegrelo-Zemo Svaneti	9,925	28,744	1,384	3,496	13.9	12.2
Samtskhe-Javakheti	526	1,129	223	512	42.4	45.3
Kvemo Kartli	1,453	4,042	246	580	16.9	14.3
Shida Kartli	2,088	5,873	459	1,091	22.0	18.6
Autonomous Republic of Achara	437	1,224	38	89	8.7	7.3
Zemo Abkhazeti	266	749	118	284	44.4	37.9
Total	32,218	92,281	6,856	16,635	21.3	18.0

Source: Social Service Agency, 2012.

1996 (*Law of Georgia on Internally Displaced Persons adopted on 28 June 1996,* last amended December 23, 2011). IDP benefits as a form of categorical social assistance are available for all IDPs who were displaced due to conflicts in Abkhazia and South Ossetia in the 1990s and in 2008. The monthly allowance is GEL 22 for IDPs in collective centers and GEL 28 for those living in the private sector. "In addition, IDP households in collective centers are entitled to 100kWh electricity per person free of charge. (SSA, 2012). Those who were displaced as a result of the events in August 2008 are by default entitled to targeted social assistance (UNICEF, 2011:10). This group, as well as IDPs living in collective centers, are further entitled to free health insurance without additional means-testing (UNICEF, 2011:30). Based on the database of socially vulnerable families, 21.3% of the registered families who receive subsistence allowances in 2011 are IDPs (Table 6). Moreover, the Government has also transferred ownership of some living facilities to IDPs, and plans to build new blocks for IDPs in the Western region of Georgia (Action Plan for the Implementation of the State Strategy on IDPs during 2012-2014: Item 2.1)[1].

The growing number of IDPs exerted great pressure to redirect state budget expenditures to meet the social needs of IDPs. These needs were aggravated by the detrimental impact of the financial crisis. Parts of the financial aid of the international donor community were directed towards improving the living conditions of IDPs and eliminating conflict-inflicted damage (IDMC, 2012).

A recent report by the International Displacement Monitoring Centre (IDMC, 2012) acknowledges that the Georgian government has made considerable efforts to improve the situation of IDPs, in particular in recent years. Next to the above-mentioned development of a legal framework, it has also established a national coordinating body aimed at raising awareness of the internal displacement problem. Further activities include collecting data on the number and location of IDPs, devoting resources to assistance for IDPs, establishing an IDP call center and reception office and supporting the Public Defender's Office in monitoring IDPs' rights.

Nevertheless, the IDMC (2012) emphasizes several deficiencies regarding the Government's IDP policy that could compromise the implementation of a comprehensive approach for durable solutions. Among other things, it has been criticized that resources devoted to IDPs are still limited, the action plan to implement the state strategy does not reflect available funding levels, and prioritization of activities and projects is not based on vulnerability criteria. Moreover, adopted standards on allocating housing, complaints mechanisms and evictions have not been applied in a systematic manner. There is no mechanism for IDPs to recover their housing, land and property at their place of origin or receive compensation for its loss, and livelihoods, education and health of IDPs have been neglected.

Disabled people

Policy responses to disability issues have undergone a substantial transformation during recent decades (WHO, 2011). In particular, the focus has been adjusted from solutions that segregate people with disabilities towards community and educational inclusion. The United Nations Convention on the Rights of People with Disabilities, adopted in 2006, plays a crucial role insofar as it treats disability first and foremost as a human rights issue. It promotes the recognition of the necessity to incorporate the human rights standards for disabled persons in national legislation, with the ultimate purpose of ensuring the economic, social and cultural rights of people with disabilities worldwide.

The comparative study "Disability at a Glance" (ESCAP, 2010) contrasts disability-related policies across countries in Asia and the Pacific. Though most states provide definitions of disability and/or persons with disabilities, these definitions vary widely. Only few governments define disability in line with the social model of disability.[2] Various institutional arrangements with regard to disability have been established in the region and the involvement of multi-ministerial mechanisms is widespread. However, some governments still lack financial and human resources as well as the technical capacity to engage in policy development and

1 Note that as a result of the elections on September 30, 2012, and the change in power, the future process of the action plan and ownership rights over living facilities for IDPs needs to be determined again.

2 For a discussion of the social versus the medical model of disability, see ESCAP (2010:4-7).

implementation. Finally, the legislative and policy frameworks vary widely and only few countries in the region – Georgia not among them – have adopted a disability-specific anti-discrimination law.

The Constitution of Georgia and several laws include a special provision on the rights of people with disabilities. In addition, there are a number of specific laws dealing with this issue (e.g. *The Georgian Law on Social Protection of Persons with Restricted Possibilities*). In 2008, Georgia signed the UN Convention on the Rights of Persons with Disabilities and thus committed itself to improving the living standards of people with disabilities by ensuring equal access to education, employment, and all social services. However, the convention has not been ratified yet. Georgia is also a signatory of the Proclamation on the Full Participation and Equality of People with Disabilities in the Asian and Pacific Region as well as the Asian and Pacific Decade of Disabled Persons (1993-2002 and 2003-2012). However, Georgia has not ratified ILO Convention 159 on vocational rehabilitation and employment (ESCAP, 2010).

Persons with disability[3] are entitled to disability pensions. In 2010, 129,599 persons received disability pensions (SSA, 2012). These pensions are the only form of social benefits for the vast majority of persons with disabilities, while other types of aid such as humanitarian aid, privileged access to medical services, privileged use of public transport and other assistances are unavailable (ISSA, 2011). The monthly disability pension ranges between GEL 70 and 129 depending on the degree of disability and the cause of the disability (MRA, 2012).[4]

In 2006, the Government introduced a new healthcare assistance program for disabled persons. It provides partial coverage for services, free medication and special aids for several categories of persons with disabilities. A World Bank survey, however, finds that medication vouchers are mostly useless since "the list of medication that can be received for free is predefined and covers only basic drugs, not the medication needed by the disabled persons" (World Bank, 2007:2-11). People with disabilities who fall below the poverty threshold receive some financial assistance of GEL 300 in order to finance technical supplies such as a wheelchair, crutches, or hearing aid. Everybody else needs to purchase these aids on his or her own. Overall, people with disabilities rely on kinship relations in order to meet their medical needs.[5]

3 In order to be entitled to disability pension, applicants need to submit a document that proves the category of disability that a person suffers from. Beneficiaries of old-age pension cannot claim disability pension at the same time (UNICEF, 2011).

4 People that became disabled during World War 2, military activities for territorial integrity, freedom and independence are eligible for the highest disability pension (MRA, 2012).

5 Interview with Madona Kharebava, (DEA), Zugdidi, 06.07.11.

Table 7. Number of beneficiaries and expenditures of day centers and community organizations of people with disabilities in Georgia, 2010-2011

	Number of beneficiaries		Total Expenditure per year (Thousands of GEL)	
	2010	2011	2010	2011
Day Centers	747	874	1,628	1,561.5
Community organizations	45	57	254.5	257.4
Total	792	931	1,882.5	1,818.9

Source: Social Service Agency, 2012.

In recent years, the Georgian government has initiated programs on the social integration of people with disabilities. Currently, the Social Service Agency implements the program *Social rehabilitation of people with disabilities* with the aim of integrating people with disabilities into society and improving their social status (SSA, 2010:60). The main subprograms are day centers for people with disabilities and community organizations of people with disabilities. In 2010, 37 day centers and two community organizations were functioning in Georgia. The amount of daily financing of one beneficiary corresponded to 10 GEL and 15 GEL respectively (Table 7). Recently, another subprogram was introduced that is intended to foster the social integration of the deaf-and-dumb by offering communication in sign language for certain services by the Union of the Deaf of Georgia in eight regions of Georgia.[6]

The Georgian government has been criticized for lacking a clearly defined and consistent policy towards people with disabilities. Disability laws have not been supported by appropriate budget provisions, necessary institutional resources and normative acts, thereby diminishing the efficiency and enforceability of the legal system. Recently, the GoG has adopted an Action Plan for 2011-2013 responding to the disability issues. The legislative provisions for the integration of people with disabilities into the society are also very weak. The World Bank (2007) finds that though Georgia has adopted a number of well-intended laws and regulations on disability, only a small amount of these provisions have been applied. Makharadze et al. (2010) also conclude that lack of financial and human resources, adequate legislation and government policy, and extremely low levels of societal awareness compromise the implementation of obligations arising from laws.

Mountain regions

The severe climatic and natural conditions of mountain regions require special support programs for local population that currently are not in place. There is only one state program for the development of tourism that allows households to introduce a hotel business, but this is unique to Svaneti region.

In 1999, the Parliament of Georgia accepted the law on mountain regions that envisaged some tax reliefs and special wages, e.g. for teachers and regional public servants, in the mountain regions. This law was in force until 2003, when a new Government came into power. After several amendments, the state law on 'socio-economical and cultural development of high mountain regions' introduced special investment measurements for the development of tourism, resort and recreational establishments, handicrafts in different industries (pottery, stamping, carve wood, pottery, knitting, embroidery, weaving, folk instruments and other), and electricity industry. These investment programs positively impacted on some regions (source).[7]

Support for the development of the mountain regions that are dominated by the agricultural sector was expressed in a presidential declaration in 2011 that announced agriculture, along with infrastructure and tourism, a priority sector of the Georgian economy. The President stated that there was urgent need to turn the country's "medieval agriculture sector into the agriculture of the 21st century" and promised additional government spending of GEL 150 million (approximately $ 90 million) for the agricultural sector.[8]

Most of the population considering themselves as potential candidates for getting subsistence allowances live in mountain regions. According to information provided by the Social Service Agency, only two mountain regions (Racha-Lechkumi, Kvemo Svaneti regions, and Mtsketa-Mtianeti) accounted for 45% of the beneficiaries who received social allowance in 2011 (Table 8).

Policies targeted towards the poor

Georgia has embarked on an ambitious reform of its welfare system in 2004. A large bundle of different types of pensions have been mainstreamed, pension levels have been increased gradually, and general taxation instead of earmarked taxes has

6 Decree of Georgian Government #503, December 29, 2011 on State program on social rehabilitation and child care.

7 Investments in Georgian ski resorts (building of ski routes, toboggan runs, lifts, skating rinks) caused a large increase in visitors. For example, in 2011, Mestia (Svaneti) was visited by 2,500 tourists. This is a near 100 percent increase compared to the previous year. (Invest Today. Georgian National Investment Agency. April 2011, issue #2. http://www.investingeorgia.org/upload/file/GNIA_Newsletter_April_2011.pdf

8 Meeting at the Ministry of Agriculture, March 8, 2011. ("Saakashvili Calls for 'Active State Involvement' to Boost Agriculture", March 8, 2011. Online available: http://www.civil.ge/eng/article.php?id=23214).

become the source of funding. In addition, the Government has aimed to achieve more efficient allocation of scare resources by targeted social assistance instead of category-based social assistance (UNICEF, 2011).

With the aim of providing social protection to the poor, a state program on the identification and evaluation of socio-economic conditions of the families below the extreme poverty line was launched and a database was set up, the so called unified database for socially vulnerable families. Families who want to be considered for targeted social assistance and health insurance are required to apply to this database, i.e. families decide for themselves to what extent they are socially vulnerable and need assistance (UNICEF, 2011). Awareness of the existence of this database is very high and virtually all families in the bottom consumption quintile have heard about it. The majority of those who are aware but have not applied, state that they do not know how the application process works (UNICEF, 2011).

A proxy-means-testing score is calculated for all applicants based on criteria that were developed by the Social Service Agency and that are supposed to evaluate the socio-economic situation of families. Among others, these factors include income, size of family, assets, and special needs. In the end, the electronically computed ranking score can range between 0 and 200,000 (UNICEF, 2011). Depending on the score accrued, families are entitled to one, two or three schemes, namely monetary benefits, health insurance and subsidies on power supply. At present, the maximum rating score for receiving subsistence allowance is set at 57,001. In order to be entitled to free health insurance vouchers, the score needs to be below 70,001 (UNICEF, 2011). In 2011, nearly half of all families in Georgia, representing 36.5% of the total population, perceived themselves as potential candidates for receiving targeted social assistance and registered in the database.[9] However, only one third of the registered families finally benefit from the subsistence allowance (Table 8).

With regard to the poverty reduction impact of targeted social assistance, an analysis

9 In absolute numbers, 509,324 families are registered in 2011, representing 1,632,409 persons (SSA, 2012).

Table 8. Number of helpless families registered in the unified database and receiving subsistence allowance (2011)

	Registered as % of total population		Beneficiaries as % of total population	
Region/District	Families	Population	Families	Population
Tbilisi	31.7	22.7	7.6	4.8
Guria	63.5	50.5	15.4	11.7
Racha-Lechkhumi Kvemo Svaneti	81.3	63.3	41.9	32.1
Kakheti	61.9	43.6	19.2	12.6
Imereti	56	42.5	16.1	11.8
Mtskheta-Mtianeti	55.7	42.3	18.5	12.9
Samegrelo-Zemo Svaneti	54.1	38.5	10	7.4
Samtskhe-Javakheti	54.8	38.9	7.6	4.6
Kvemo Kartli	42.9	30.9	7.8	5
Shida Kartli	65.6	49.2	25.2	18.2
Autonomous Republic of Achara	52	42.9	9.6	8
Zemo Abkhazeti	-	-	-	-
Total	**49.6**	**36.5**	**12.9**	**8.8**

Source: SSA (2011:116-118).

based on 2007 data concludes that social transfers, in particular pensions, contributed to reducing the poverty incidence and gap, as well as inequality (World Bank, 2009b). Since 71 percent of the beneficiaries were among the income poor, targeting was considered satisfactory. However, the very limited coverage of targeted social assistance resulted in a marginal poverty reduction impact, as merely 19 percent of all consumption poor and 30 percent of the extreme poor received targeted social assistance. In order to alleviate the negative impact of the economic crisis, the Government used the existing social safety net and increased social transfers in 2009. Both targeted social assistance and pensions helped to cushion detrimental consequences for low-income groups (World Bank, 2010:12-13).

III. DEFINING AND MEASURING VULNERABILITY

3.1 Conceptual framework

The *economic and social well-being* of a household and its members is not a fixed or guaranteed entity over time.[1] It evolves over a household's lifetime in response to events that change a household's demographic composition and its economic and social position. Households are exposed to risks that may impact their welfare once the risk materializes. Not all households in a given society are equally exposed to risks, nor are all households equally affected by a shock. Some have sufficient buffers enabling them to maintain their economic and social welfare in the event of a shock. Others are more vulnerable as their abilities to cope are limited.

The concept of vulnerability still lacks consensus on how to define and measure it. Numerous authors have attempted to conceptualize and define vulnerability over the past 20 years (see, e.g. Chambers, 1989; World Bank, 2001; Alwang et al., 2001). They agree that vulnerability differs from poverty, which is an ex-post outcome. There is an intuitive understanding that vulnerability as a concept is forward-looking, that it includes risks and uncertainty about the future and the potential harm one may suffer as a result of a shock. It is an expression for the exposure to a fall in well-being rather than the outcome itself (Dercon, 2001). Yet, most definitions and attempts for its measurement found in the literature view vulnerability as the risk of falling into monetary poverty in the future or, in other words, the expected poverty outcome (Calvo & Dercon, 2005; Pritchett et al., 2002; Dutta et al., 2010; Chaudhuri, 2003; Ligon & Schechter, 2003; Haughton & Khandker, 2009). This approach does not explicitly consider the multi-dimensionality of vulnerability, nor does it consider the source of vulnerability.

A multi-dimensional understanding of well-being also requires a broader definition of vulnerability. For the purpose of the current study, we distinguish between economic and social vulnerability. *Economic vulnerability* is the risk of becoming income poor, or the inability to maintain the living standard in the event of a welfare shock.[2] *Social vulnerability* is defined as the risk of not being able to fully participate in economic, social and civic life. Although conceptually social vulnerability includes economic vulnerability, it is important to make the distinction. Low income (or consumption), one of the main drivers of economic vulnerability, can result in social exclusion. Income poverty and economic vulnerability, though outcomes in themselves, are important determinants for deprivation in other dimensions of well-being and contribute to social vulnerability.

The degree of economic and social vulnerability of a household is related to the household's exposure to risks[3] and its resilience to withstand the effects of a shock. *Exposure to risks* contributes to vulnerability as it makes the future uncertain. Not all households are equally exposed to risks and the potentially harmful consequences of a shock. As some people are more susceptible to certain diseases, some are more vulnerable to a drop in well-being in the event of a shock. Continuous exposure to risks prevents especially poor households to invest in productive activities or develop robust coping strategies. A vulnerable household is faced with the risk but unable to protect itself should the risk materialize (Ahmed & Gassmann, 2009; Ahmed, 2010). The higher the probability of a shock, the larger is the exposure.

Household resilience depends on the *resources* a household owns and the *capacity to use* these resources. Lack of resources can be seen as internal defenselessness, while lack of opportunities to employ the resources can be regarded as external defenselessness (Ahmed, 2010). Resources are broadly defined and include financial resources, productive assets, human capital, and social resources. The more limited the available resources, or the smaller the buffer, the less the ability

1 Household well-being in this study is broadly understood as economic and social well-being. It is inherently a multidimensional concept. We define well-being as the household's ability to acquire basic goods and services and to fully participate in economic, social and civic life.

2 Examples for welfare shocks with harmful effects are natural disasters, unemployment, old age, and loss or illness of the breadwinner. Households can insure themselves against anticipated shocks, thereby reducing the risk of a loss in well-being, or their vulnerability.

3 The probability that a shock will occur and the possibility of being harmed.

of the household to respond to a shock and maintain a given level of well-being. For example, if a household has savings, it is in a better position to overcome a period of hardship. It is however not only a matter of quantity, but also of quality. A household owning an old TV will get less money in case it has to sell its assets to generate income. A house or land that could serve as collateral for a bank loan will have more value if it is in a maintained state (house) or on fertile grounds (land).

Although the possession of resources in itself contributes to the resilience of a household, they only become valuable as means of protection if they can be used. The capacity to use the available resources depends on the opportunities to use them. It requires access to markets (financial, products, labor), public services (education, health, social services) and social resources (social networks, information, and community). Both, the level and combination of initial resources and the ability to use the available resources, determine the capacity of a household to cope with a shock, and as such its resilience.

RESILIENCE = RESOURCES + ABILITY TO USE RESOURCES

Economic and social vulnerability are driven by the (lack of) resilience of a household to cope with a shock and the level of exposure to a shock, i.e. the possibility of being harmed. The final outcome, i.e. the degree of vulnerability may differ between households based on their composition and the *personal characteristics* of the household members. *Personal characteristics* of the household and its members play an important role at different levels. Different households have different preferences with respect to their resource portfolio and may take different decisions regarding the use of resources. For example, a household with children may be more inclined to regularly save money even in a financially precarious situation, or they may value a safe housing environment as more important. Personal characteristics may also influence the extent to which a household is exposed to shocks. A household living in a remote area may run a larger risk of becoming the victim of a natural disaster, as living in a certain region may increase the risk of being exposed to civil unrest.

FIGURE 6. DETERMINANTS OF ECONOMIC AND SOCIAL VULNERABILITY

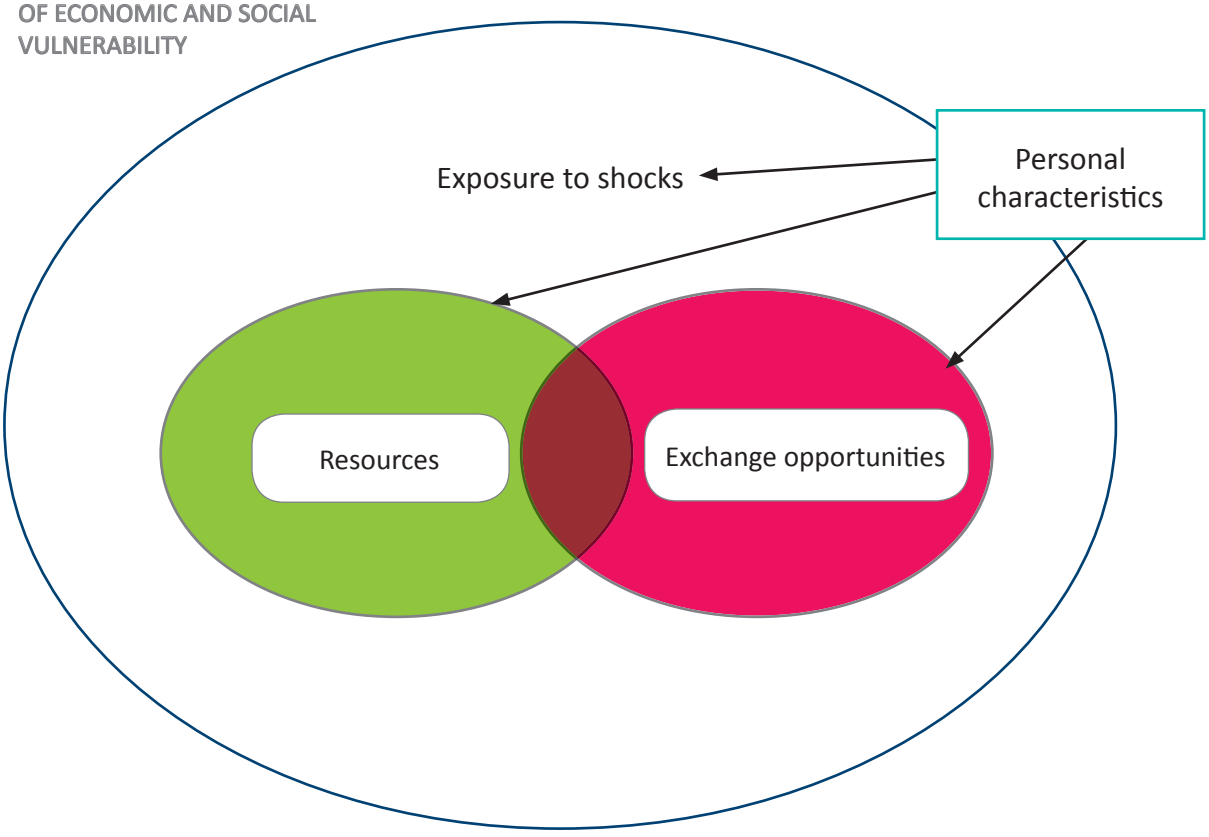


Figure 6 summarizes the conceptual approach to social and economic vulnerability as used in this study. The two inner circles represent resources and exchange opportunities, i.e. the ability to use the available resources. The more limited the available resources and the fewer the opportunities to use them, the less resilient is a household to shock, i.e. the household becomes more vulnerable. Clearly, if the household lacks both resources and exchange opportunities, its economic and social situation is critical making it highly vulnerable to any shock. The outer circle represents the risk exposure of a household. The higher the probability that a shock occurs, the more vulnerable a household in principal is. However, whether the shock has indeed a negative impact on the household depends on the resilience of the household, which is determined by resources and exchange opportunities, the two inner circles. Eventually, the variation in exposure to shocks and household resilience is also a function of personal household characteristics.

3.2 Dimensions and indicators of vulnerability

The concept of economic and social vulnerability as outlined above is multi-dimensional by definition. Research in poverty and well-being has seen a surge of studies applying multi-dimensional approaches over the last decade (e.g., Gordon et al., 2003; Alkire & Foster, 2011; Roelen & Gassmann, 2012; Notten & Roelen, 2010; Bradshaw et al., 2007; Richardson et al., 2008). The common approach underlying these studies (Roelen et al., 2009) will also be used for the present study. Based on the conceptual framework above, domains and indicators will be identified. Each domain (or dimensions) reflects a different element of economic and social vulnerability. Indicators are then selected for each domain allowing to assess a household's situation within a given domain (Roelen et al., 2009:248).

The conceptual framework outlined in the previous section guides the selection of dimensions and indicators necessary to assess the degree of social and economic vulnerability of households and individuals. Social and economic vulnerability is driven by deprivations in resources, the inability to use these resources, personal characteristics and the probability that a shock occurs, i.e. exposure to various risks. Eventually, social and economic vulnerability can only be indirectly measured. Each household has a unique bundle of resources, has different opportunities for their use, differs with respect to personal and household characteristics and is not equally exposed to shocks or the same shocks. Furthermore, each household has its own preferences which determine the relative importance of a given resource, but also the way a household copes in case of a shock. This makes the actual measurement very challenging as a large set of different combinations are possible.

Household resources

The quantity and quality of financial, physical, human and social resources determine the resilience of a household. Table 9 provides an overview of the different resource domains and proposed indicators. The relevance of the different domains and indicators differs across households. For example, land and livestock are typical indicators which are less important for households living in urban areas. Measuring the available resources, resource combinations and quality of resources at household level will allow identifying resource deprived households as well as the domains where resources are most limited.

Ability to use resources (exchange opportunities)

Exchange opportunities are the second component of household resilience. The ability to use and potentially increase or substitute resources depends both on the initial resource endowment and opportunities to employ the resources. The latter is largely dependent on factors external to a household, such as access to markets, public services and social networks. Table 10 provides an overview of domains and indicators measuring the ability to use available resources. For the subsequent analysis, the proposed indicators are supplemented with potential barriers households may face when trying to use their resources.

The resource and access indicators in the tables above are formulated in a rather generic way. For the analysis of economic and social vulnerability in Georgia, these indicators need to be fine-tuned in order to represent

Table 9. Household resources

Domain	Sub-domain	Content indicators
Material resources	Financial resources	Income
		Savings
		Debts
		Type of income
	Physical resources	Land
		Livestock
		House/apartment
		Durable goods
		Quality of housing
Human resources	Education	Educational attainment
		Quality of education
	Labor	Employment
		Type of employment
	Health	Health status
		Chronic illness
Social resources	Social network	Size
		Status
		Connection
	Information & communication	Source of information
		Means of communication
	Community	Presence of associations
		Variety of associations

Source: Authors' compilation.

Table 10. Ability to use resources

Domain	Sub-domain	Content indicators
Access to markets	Financial market	Bank
		Loans (formal and informal)
	Labor market	Job vacancies
		Distance
	Product market	Distance
		Transport (applies to many)
Access to services	Education	Distance to school
		Affordability
	Health	Distance to facility
		Affordability
		Availability of treatment
	Social services	Distance to center
		Awareness
		Eligibility rules
Access to social resources	Social network	Availability
	Community	Participation

Source: Authors' compilation.

the country-specific situation (Roelen et al., 2009, 2010). In addition, thresholds need to be set in order to identify households that are resource poor and/or lack the ability to use the resources. These thresholds are derived from existing evidence and in discussion with UNDP and national researchers.

Exposure to shocks and coping strategies

So far, we identified domains and indicators allowing the assessment of household resilience to a welfare shock. However, the level of social and economic vulnerability of a household is not only dependent on its resilience, but also on the probability that a shock occurs that can potentially harm the household. Shocks can occur at different levels. Covariate shocks, such as an armed conflict, earthquakes and other natural disasters, affect the total population at the country or regional level, whereas idiosyncratic shocks occur at household level. They can be family related, for example, when the breadwinner dies, or endanger the livelihoods of the household, such as the loss of the house. The degree of household exposure to a shock partly depends on the protective measures a household has taken in anticipation of a future shock. For example, if a household is covered by insurance, the effects of a shock will be mitigated, thereby reducing the impact of the shock. The location of the household may also be related to the type of shock a household is exposed to and affect the degree of exposure. For example, a household in a mountain area may have a higher likelihood to suffer from natural disasters such as landslides. Exposure to shocks is difficult to assess as it concerns an ex-ante assessment of the probability that something will happen in the future. One way to circumvent this challenge is by looking at the experience of households in the past.

As the concept of vulnerability is essentially forward looking, we do not know how and whether a household would cope with a future shock. Understanding household resilience measured in terms of available resources and potential to use the resources gives an indication of the household's ability to cope with a shock. Another way to understand how households react to a shock is by looking at the coping strategies they used in the past. This information can then be linked to the resource portfolios of households and potential limitations in access to exchange opportunities. Coping strategies can be classified into two groups: strategies to increase household resources and strategies aimed at reducing expenditures. Some coping strategies can be detrimental as they substantially erode the household's capacity to maintain its well-being in the future. It is important to understand why households refer to such strategies.

Table 11. Exposure to risks and coping strategies

Domain	Sub-domain	Content Indicator
Exposure to risks	Shocks experienced in the past	Type of shock experienced in the past
		Number of shocks experienced
	Impact of shocks	Effect on household economic situation
Coping strategies		Type of coping strategy applied
		Success/failure of strategy

Source: Authors' compilation.

Personal characteristics and other determining factors

Economic and social vulnerability determines the well-being outcome in the future. The level of exposure and the way households deal with a shock is also determined by personal and household characteristics and local context. These also determine household priorities in terms of resource portfolios and the use of the resources. Indicators to be taken into account are, for example, household composition, ethnic background, age, gender, and disability. Indicators identifying the local context are remoteness from an economic center, altitude, local infrastructure, local economy, and local conflict.

Within the context of this study, the main focus is on three specific groups: IPDs, disabled persons and people living in high mountain areas. These groups are by no means homogenous. For example IPD persons can belong to those being displaced in the early nineties (the 'old' IPDs) or after the 2008 conflict. They live either in collective centers or in private houses. The disabled vary with respect to their level and type of disability, thereby experiencing different challenges in their efforts to fully participate in economic, social and civic life. High mountain areas are also very diverse depending on their level of economic development and remoteness. Regions with developed tourism offer quite different economic and social opportunities than isolated communities. Furthermore, the study will take into account other personal characteristics such as characteristics of the household head, the demographic composition of households, monetary well-being and location of the household other than high mountain areas.

3.3 Data and Methodology

In order to study the economic and social vulnerability of different groups of the population in Georgia, we apply a mixed-method approach combining quantitative and qualitative analysis. Using data from an extended household survey, we analyze levels and patterns of available resources, access to markets, services and social networks, as well as barriers to access for different groups of the Georgian population. A qualitative study supplements the findings from the quantitative analysis. In-depth interviews and Focus Group Discussions (FGD) with representatives from the three target groups contribute to the understanding of barriers and obstacles faced by these groups. Furthermore, as exposure to shocks is difficult to measure empirically, the discussions may provide better insights with respect to the biggest economic and social risks these households have to face and whether and how they can protect themselves against these risks.

Table 12. Composition of the sample, 4th quarter 2011

Group	# of households	Percentage of total
From regular HBS sample	2,873	66.80
Booster: IDP households	475	11.04
Booster: Households with disabled persons	475	11.04
Booster: Households in high mountain areas	478	11.11
Total sample	4,301	100.00

Source: Authors' calculations.
Note: Due to rounding the total does not sum up to exactly 100 percent.

Data

Data for the quantitative analysis stem from the Household Budget Survey (HBS) implemented by GEOSTAT in the fourth quarter of 2011. The regular HBS questionnaire was supplemented with a special module for households and individuals in order to capture vulnerability aspects not covered in the regular survey. Furthermore, the sample of the survey was enlarged in order to cover a sufficient number of households belonging to the three target groups.

The full annual sample size of the HBS is 3,375 households (GEOSTAT). Households are selected based on stratified two-stage cluster sampling and divided into twelve rotation groups. Every month a new group starts the survey process, within which each household is interviewed four times over the course of 12 months. In order to ensure a robust representation of the three target groups (IDPs, disabled households, high mountain households), 500 additional households were sampled for each group. The booster samples were derived from households lists especially established for this exercise. Full survey information was eventually available for 4,301 households (Table 12).

Since the regular HBS sample also contains households belonging to the three target groups, the final distribution of households is summarized in Table 13. All households including at least one member of the target group are labeled as belonging to the respective group. Therefore, regular households are households without an internally displaced person, no disabled member and not living in high mountain areas. Probability sampling weights, taking into account the booster groups, are used to render the results of the subsequent analysis nationally representative.

Table 14 and Table 15 provide an overview of the demographic composition of the population based on the survey data and using individual population weights. The results are in line with official population statistics as reported by GEOSTAT.[4] Of the total population, 54 percent are women. The majority, 62 percent, is of working age (18-64 years) and 22 percent are younger than 18 years. Elderly account for 16 percent of the total population. Tbilisi is the largest region accounting for a quarter of the population.

4 See for more detail http://www.geostat.ge/index.php?action=page&&p_id=152&lang=eng

Table 13. Distribution of households and individuals across different groups

	# of households	Percentage of total observations	Using sampling weights (households)	Using sampling weights (individuals)
Regular households	1,786	41.53	62.49	62.19
IDP households	595	13.83	5.70	5.86
Households with disabled persons	1,144	26.60	22.36	22.55
Household in high mountain areas	776	18.04	9.45	9.39
Total sample	4,301	100.00	100.00	100.00

Source: Authors' calculations.

Mtskheta-mtianeti, Guria and Samtskhe-javakheti are the smallest regions population-wise with less than five percent of the total each. Georgia is not particularly dominated by rural or urban areas, accounting each for about half of the population. The demographic composition of the target groups is, with some exceptions, very similar to the country average. For example, the share of elderly is significantly higher in disabled households compared to country average. Some of the observed regional and settlement differences are in the nature of the target groups. Not all regions have high mountain areas or IDPs. IDP households are mainly located in urban areas (82 percent), whereas high mountain areas are characterized by rural settlements (92 percent).

Table 14. Demographic composition of the population, individual characteristics (%)

	Regular	IDP	Disabled	High mountain	Total
Gender					
Female	53.6	54.6	54.9	50.8	53.7
Male	46.4	45.4	45.1	49.2	46.3
Age					
0-17 years	23.3	21.8	18.1	21.1	21.8
18-64 years	63.7	65.7	58.9	60.4	62.4
65+ years	13.1	12.5	23.0	18.5	15.8
Region					
Kakheti	11.1	0.3	9.6	n.a.	9.1
Tbilisi	28.4	43.4	25.3	n.a.	25.9
Shida Kartli	7.0	7.0	9.0	n.a.	6.8
Kvemo Kartli	14.2	7.0	3.4	6.5	10.6
Samtskhe-javakheti	1.3	n.a.	1.4	36.0	4.5
Adjara	9.2	0.5	8.2	23.4	9.8
Guria	2.8	0.1	6.1	n.a.	3.1
Samegrelo	9.9	26.9	9.5	0.2	9.9
Imereti	14.8	11.5	25.9	24.9	18.1
Mtskheta-mtianeti	1.3	3.3	1.4	8.9	2.2
Type of settlement					
Urban	50.7	81.8	48.2	7.8	48.0
Rural	49.3	18.2	51.8	92.2	52.1

Source: Authors' calculations.
Note: Individual weights applied.

Table 15. Demographic composition of the population by characteristics of the household and household head (%)

	Regular	IDP	Disabled	High mountain	Total
Gender (hh head)					
Female	27.9	31.8	29.9	20.6	27.9
Male	72.1	68.2	70.1	79.4	72.1
Age (hh head)					
18-64 years	69.1	73.2	47.3	61.5	63.7
65+ years	31.0	26.8	52.7	38.5	36.3
Education(hh head)					
Less than basic	5.7	2.2	7.1	10.5	6.2
Full basic	9.4	3.8	11.4	14.4	10.0
Full general	37.1	42.7	41.6	50.2	39.7
Secondary	20.2	20.9	17.5	14.8	19.1
Higher	27.6	30.4	22.4	10.2	25.0
Household size					
One	4.7	2.8	4.0	4.6	4.4
Two	9.6	8.8	11.7	12.0	10.3
Three	14.0	16.7	12.9	11.6	13.7
Four	23.0	26.2	18.5	17.1	21.6
Five	18.3	21.6	18.7	23.4	19.1
Six or more	30.4	23.9	34.3	31.3	31.0
Number of children (<18)					
No children	33.8	38.0	42.9	38.5	36.5
One child	24.9	27.3	20.9	19.3	23.6
Two children	28.4	24.2	26.8	31.2	28.1
Three or more children	12.9	10.5	9.4	11.0	11.8
Number of elderly (>64)					
No elderly	63.4	62.2	38.9	51.9	56.7
One elderly	26.6	27.6	41.0	32.8	30.5
Two or more elderly	10.0	10.1	20.1	15.4	12.8

Source: Authors' calculations.
Note: Individual weights applied.

Most individuals are living in a household headed by a man (72 percent). Female-headed households are slightly more prevalent among IDP and disabled households, but considerably less in high mountain areas. Confirming the observation based on individual characteristics above, disabled households are headed more frequently by an elderly person. On the other hand, individuals living in IDP households have a considerably larger likelihood of living in a household headed by a working-age adult. Most heads have completed general education or even have a higher educational level. The average education level is slightly lower in high mountain areas, where especially the share with higher education is considerably below the country average. Average household size in Georgia is 3.6 household members. 31 percent of the population lives in a

household with six or more members. Single households are very infrequent with only four percent of the total. More than one third of the population lives in a household without children. This share is slightly larger among disabled households. Disabled households and high mountain households are more often with an elderly person.

The quantitative analysis is supplemented with findings from qualitative research, which was implemented during two stages of the project. At the beginning of the research, in-depth interviews with key stakeholders were held to inform the design of the additional modules to be attached to the HBS. After the initial analysis of the quantitative data, FGD were held with participants from the three target groups for a better understanding of the barriers and obstacles faced by these groups. The discussions aimed to provide insights with respect to the biggest economic and social risks households of the three target groups have to face and whether and how they can protect themselves.

FGDs were held separately with participants from the three target groups. The sampling of FGD participants took place along the lines of these characteristics to create groups that are as homogenous as possible and similar in terms of their experience with respect to social and economic vulnerabilities. The 'snowball' method was used to find potential participants. Twice as many respondents were sampled for each group after which they were screened and the final selection for participation was made. The specific subdivision and number of FGDs is illustrated in Table 16. Each focus group had between six and eight participants. Since it proved to be impossible to compose a focus group of disabled persons in rural areas due to mobility restrictions, it was decided to replace this focus group with individual in-depth interviews with disabled persons living in rural areas.

Table 16. Focus Group Discussions

	IDP		Disabled		High mountain		Total
	Collective center	Non-collective	urban	rural	poor	non-poor	
FGDs	1	1	1	*	1	1	5
Total participants	8	8	6	5	8	8	43
Men	4	4	3	3	4	4	22
Women	4	4	3	2	4	4	21

Source: Authors' calculations.
Note: In rural areas in-depth interviews were held with disabled individuals instead of a FGD.

Methodology

The methodology for this study follows a step-wise approach. The purpose is to assess economic and social vulnerability for different groups in Georgia. Based on the conceptual framework, indicators and thresholds for household resources and exchange opportunities are defined in order to develop a profile of household resilience. First, each indicator is analyzed separately using descriptive statistics. This will provide a map of most common deprivations as well as differences between groups of the population. The descriptive analysis is complemented with a multivariate analysis of selected indicators. Secondly, we search for patterns of overlapping deprivations within and between resources and access. For that purpose, two multi-dimensional vulnerability indices are created. Personal and household characteristics, local context, as well as barriers to access are mainly used as explanatory variables in the analysis. Finally, exposure to shocks and coping strategies are analyzed separately.

Indicators, thresholds and unit of analysis

The indicators identified in the conceptual framework above are further defined and adapted to the country-specific situation. An advantage of single-country studies is the possibility to tailor the definition of indicators and thresholds to the local economic and social situation and prevalent norms and values (Roelen et al., 2009). The definition of indicators and thresholds for the analysis of social and economic vulnerability is based on the available survey data and draws on existing studies on poverty and well-being in Georgia, findings from the initial qualitative assessment (in-depth interviews with key stakeholders) and discussions with UNDP. While most indicators are a direct and straightforward measure of the underlying concept, two indicators are constructed based on a series of questions measuring a certain social construct. This applies to the level of social connectedness and support from the social network. The detailed methodology for these two indicators is described in the annex (p. 96).

All indicators are established and measured at the household level. However, the analysis assesses social and economic vulnerability at the individual level. This means that all individuals living in a household identified as vulnerable with respect to a certain indicator are considered to be vulnerable. The presented results measure population-weighted vulnerability rates for each indicator separately.

Multidimensional vulnerability

Secondly, we generate two multidimensional indices measuring vulnerability for each dimension, i.e. household resources and the ability to use the resources. The development of the indices follows the standard methodology developed by Alkire and Foster (2011) for the multidimensional poverty index. The number of indicators for each dimension is reduced to the core indicators for each domain (Table 18) in order to balance the different domains as good as possible. A household, and all the individuals in this household, is considered to be multidimensionally vulnerable if the weighted combination of indicators is equal to or exceeds 30 percent of the total. Consider a household with (1) consumption below the MSL, (2) does not own the house, (3) less than 50 percent of working-age adults employed, and (4) no friends or relatives with a higher status. The total sum of the indicator weights is 0.38 (0.08+0.08+0.11+0.11), which is 38 percent. Since this value exceeds the threshold of 30 percent, this household is classified as multidimensionally vulnerable with respect to resources.

Each domain is assigned equal weight. On the one hand this facilitates the interpretation (Atkinson et al. 2002), but also asserts that each dimension is considered of equal importance. In principal, weights can be determined in various ways, such as through participatory processes, based on expert opinion or derived from survey data. The choice to assign equal weights to the domains and the indicators within the domains reflects the variance in preferences among IDP, disabled and high mountain households as elicited during the FGDs. Since the groups put different importance to the various domains, using equal weights seems to be the least biased approach.

Setting the cut-off identifying multidimensionally vulnerable households is an arbitrary choice. The higher the cut-off, the lower the

Table 17. Definition of indicators and thresholds

Domains and indicators	Thresholds identifying vulnerable households
HOUSEHOLD RESOURCES	
Financial resources	
Income	Household consumption per adult equivalent below MSL
Savings	Household cannot save or lend
Debts	Household owes money to bank or has debts with others
Stable income	Household has income from wage or old-age pension
Physical resources	
Land ownership	Household does not own land
House ownership	Household does not own house/apartment
Livestock ownership	Household has no livestock
Durable goods: Household appliances	Household owns less than two out of six household appliances
Durable goods: Electronic devices	Household owns less than 3 out of 10 electronic devices
Quality of housing: living space	Living space is less than 12 m² per person
Quality of housing: walls, floor, roof	Inappropriate is defined as: floors made from stone, brick, concrete, or dirt; roofs made from wood or metal tiles; walls made from wood, slabs, mud or mixed. Appropriate housing requires all three indicators to be met.
Quality of housing: water and toilet	Unsafe water: not from in-house tap; unsafe hygienic sanitation: not having a private flush toilet connected to sewage in urban areas, not having a pit latrine in rural. Both indicators need to be met.
Human resources	
Educational attainment	Highest degree of education in household is less than secondary special
Employment	Less than 50% of working-age household members are employed
Employment	Share of employed household members (all) is below national average
Quality of employment	No one in household has formal work
Objective health status	One or more person in household with chronic disease
Subjective health status	One or more person in household considers his/her health as bad or very bad
Social resources	
Status	No friends or relatives with higher status in social network
Connection	Lack of connectedness
Source of information	Households does not use TV, newspapers or online media as primary source of information
Means of communication/information	Household without internet connection
Means of communication	Household has no mobile or fixed phone
Availability of associations in community	No association, club or similar available in community
Variety of associations in community	Less than two associations, clubs or similar available in community
ABILITY TO USE RESOURCES	
Access to markets	
Access to bank account	No household member with bank account
Access to loans	Household cannot raise 1000 GEL in emergency
Transport	Household has no means of transportation
Job vacancies	Difficult to find a job (subjective assessment)
Access to services	
Affordability of health services	Not all household members have health insurance
Distance to health facility	Policlinic or medical center not within 30 minutes distance
Social services	Household did not apply for SA, despite being in need
Access to social resources	
Availability of support from social network	Household has no one to get support in case of need
Participation in community	No one in household participates in an association

Source: Authors' compilation.

Table 18. Dimensions, indicators and weights for the multidimensional indices

Indicators	Weights
INDEX 1: HOUSEHOLD RESOURCES	
Material resources	**0.33**
Household consumption per adult equivalent below MSL	0.08
No house ownership	0.08
Insufficient living space	0.08
No access to safe water and hygienic toilet	0.08
Human resources	**0.33**
Highest degree of education in household is less than secondary special	0.11
Less than 50% of working-age household members are employed	0.11
One or more person in household considers his/her health as bad or very bad	0.11
Social resources	**0.33**
No friends or relatives with higher status in social network	0.11
Households does not use TV, newspapers or online media as primary source of information	0.11
No association, club or similar available in community	0.11
INDEX 2: ABILITY TO USE RESOURCES	
Access to markets	**0.33**
Household cannot raise 1000 GEL in emergency	0.11
Household has no means of transportation	0.11
Difficulty with finding a job	0.11
Access to services	**0.33**
Policlinic or medical center not within 30 minutes distance	0.17
Household did not apply for SA, despite being in need	0.17
Access to social resources	**0.33**
Household has no one to get support in case of need	0.17
No one in household participates in an association	0.17

Source: Authors' compilation.

number of vulnerable households, but the higher the average intensity of vulnerability, i.e. those identified as vulnerable with respect to the higher cut-off will be vulnerable with respect to more indicators on average. The decision to set the cut-off at 30 percent of the indicators is in line with the cut-off used for the multidimensional poverty index (Alkire & Foster, 2011). For our study this means, that a household is vulnerable if the weighted sum of the indicators is equal or higher than 0.3.

In establishing the multidimensional vulnerability indices, two steps need to be made. First, all households (individuals) are identified that are vulnerable in any indicator (see above). A household is assigned the indicator weight if it is identified as vulnerable, and zero otherwise. Secondly, a household is considered vulnerable if the sum of the weighted indicators is equal or higher than the cut-off value, which is set at 0.3 in our study. Vulnerable households are then assigned

a value of one, and all other households are assigned zero. Finally, the incidence (or headcount rate) of multidimensional vulnerability is the percentage of vulnerable individuals as a total of the population.

Two other measures supplement the multidimensional headcount rate. First, the average intensity of vulnerability measures the depth of vulnerability. It is the fraction of indicators a household is vulnerable.[5] Secondly, multiplying the incidence with the average intensity gives the so-called adjusted multidimensional vulnerability incidence, summarizing the incidence of vulnerability and its intensity (Alkire & Santos, 2010). This measure has the property that if a person becomes vulnerable in an additional indicator, it will increase, while the simple incidence measure might not change.[6]

Since we establish two multidimensional indices, one for resources and the second for the ability to use resources, we further analyze the overlap between the two dimensions, whereby each household is classified as either only resource vulnerable, only access vulnerable, vulnerable in both dimensions, or not vulnerable at all.

Analysis

The first step of the analysis assesses vulnerability with respect to each indicator. Individuals living in IDP, disabled or high mountain households are compared with each other and with regular households. Descriptive statistics compare the incidence of vulnerability for each indicator across groups testing for the level of independence of the results using a Chi-square test of association. However, since vulnerability is not only a matter of belonging to a specific group, multivariate analysis is applied in order to identify other correlates determining vulnerability, such as personal characteristics of the household head (e.g., age, gender, marital status) and household characteristics. Separate binary outcome models are estimated for selected indicators using standard probit models:

$$\Pr(y_i = 1 \mid x_i) = \Phi(x_i\beta), \text{ with i = 1, ... , N}$$

where y_i is the binary outcome variable, Φ is the standard normal distribution function, $\boldsymbol{x}_i$ is a vector of explanatory variables, and $\boldsymbol{\beta}$ is a vector of coefficients to be estimated. In our case the dependent variable is the probability that an individual is vulnerable with respect to a specific indicator. The models are estimated with robust standard errors and results are presented as average marginal effects.

The same approach is used for the analysis of multidimensional vulnerability. After the binary analysis, multivariate models test for the importance of other explanatory variables. Finally, the analysis of multidimensional vulnerability is completed with an estimation of the relative risk for a household to be only resource vulnerable, only access vulnerable, or vulnerable in both dimensions compared to being not vulnerable at all. For this purpose, we estimate a multinomial logit model since there is no obvious order in the outcomes[7] (Cameron & Trivedi, 2005):

$$p_{ij} = \Pr(y_i = j) = F_j(x_i\theta) = \frac{\exp(x_i\beta_j)}{\sum_{l=1}^{m}\exp(x_i\beta_l)},$$

with j = 1, ... , m and i = 1, ... , N

where subscript *j* refers to belonging to one of the above identified vulnerability categories, y_i is the outcome variable, F_j the logistic distribution function, $\boldsymbol{x}_i$ a vector of explanatory variables and $\boldsymbol{\beta}_j$ a vector of coefficients to be estimated.

The analysis of exposure to risks and coping strategies follows a similar approach. Descriptive statistics compare the prevalence of various risk and coping strategy variables across IDP, disabled and high mountain households. The analysis is complemented with binary and ordered outcome models using standard probit and ordered probit models.

5 We count the number of vulnerabilities and divide by the total number of indicators.

6 Note that this property is similar to the difference between the poverty headcount and the poverty gap rate.

7 Notably, this is the case with respect to resource vulnerability vs. access vulnerability. It is impossible to assign a priori which status is worse.

IV. THE EXTENT AND NATURE OF SOCIAL AND ECONOMIC VULNERABILITY

4.1 Household resources

The availability of resources is an important aspect determining the resilience of households against shocks, and as such their economic and social vulnerability. Household resources can be of different forms, ranging from financial, physical and human to social resources. Each resource dimension protects the household in different ways. The availability of sufficient financial and physical resources allows households to smooth consumption over time and reduce the risk of falling into monetary poverty in the event of a shock that impacts the earning power of the household. Physical resources go beyond the purely financial protection of households. They also provide an indication of the living condition of a household. Good housing conditions, the possession of durable goods as well as access to water and utilities are also important for achievements in other dimensions, such as education, health and social relations, now and in the future. The availability of human resources determines current and future earning power of a household. Well-educated household members in general have better and more secure jobs and earn a higher income (see, e.g. Badescu et al., 2011; Psacharopoulos & Patrinos, 2004). The more employed adult household members, the less the vulnerability of the household against unemployment of one member. Finally, good health has positive effects on learning abilities of children and increases the chance of having work for adults. At the same time, a household with disabled or chronically ill members may be confronted with catastrophic health expenditures thereby jeopardizing the sustainability of their financial living standard. Lastly, social resources are important for social inclusion and the participation in family and community life. Access to a broad social network is beneficial in the event of a shock. It can facilitate finding (new) work, providing access to informal financial support, or simply be a source of information.

Financial resources

In this study financial vulnerability (lack of sufficient monetary resources) is measured by the current income level, the ability to save, and the presence of debts. The income level of the household is proxied by total household consumption expenditures. This choice is guided by the premise that consumption better reflects the permanent income situation of the household.[1] Household consumption includes consumption expenditures in cash and consumption of goods from own production (in kind), as measured by GEOSTAT. Following GEOSTAT's methodology, the demographic composition of the household and economies of scale are taken into account to derive average monthly household consumption per individual.[2] In order to determine whether a household is vulnerable from a purely monetary perspective, a minimum threshold has to be defined. Although vulnerability is often associated with poverty, it is not identical to poverty (Makoka & Kaplan, 2005). However, poverty is a major contributor to economic and social vulnerability. Poor households have fewer resources to cope with a shock and are more vulnerable to social and economic hazards. Since we argue that vulnerability is more than poverty, using the poverty line would exclude those households on the brink of falling into poverty.[3] Frequently, vulnerability to poverty is measured by the likelihood of falling into poverty in the future (see, e.g. Haughton & Khandker, 2009). The estimated variance of current consumption is used to predict next year's consumption and the probability that a household falls below the poverty line (ibid, p. 239).

Georgia does not have an official poverty line. Currently, poverty rates published by GEOSTAT are based on the number of subsistence allowance beneficiaries. Furthermore, relative poverty rates are

1 Income data from household surveys often underestimate the actual household income due to underreporting and/or seasonal effects.

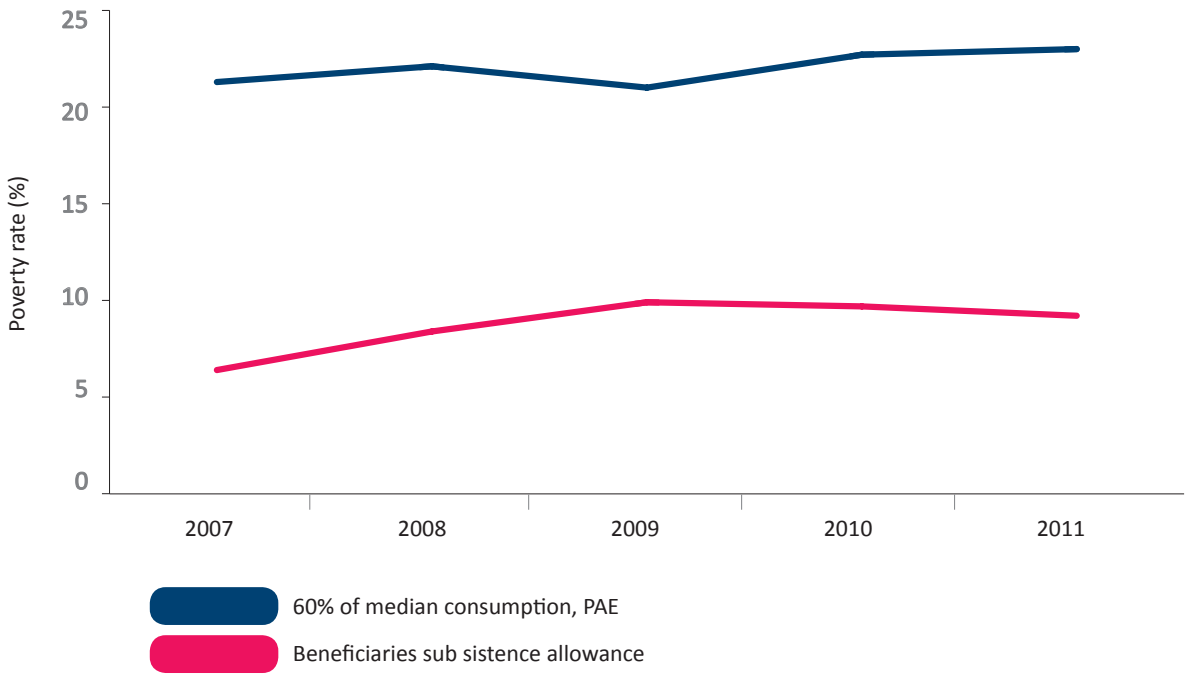
2 Total household consumption is divided by the number of adult equivalents adjusted by economies of scale. Coefficients vary between 0.64 (children 0-7), 1 (children 8-15, men 16-64), 0.84 (female 16-59), 0.88 (male 65+) and 0.76 (female 60+). The sum of equivalent adults is set to the power of 0.8 to reflect economies of scale effects (GEOSTAT).

3 Obviously, this statement hinges on the definition of the poverty line. We refer to empirically derived absolute poverty lines covering a minimum consumption of food and other goods and services.

published where poor individuals are those with adult equivalent income below 60 or 40 percent of median consumption expenditures.[4] In 2011, 9.2 percent of the population was benefiting from subsistence allowance and as such was classified as poor (Social Service Agency data published by GEOSTAT). Based on the relative poverty measure, 23 percent of the population had less than 60 percent of median consumption expenditures per adult equivalent (GEOSTAT) (Figure 7). Poverty indicators vary between urban and rural areas and different groups of the population. Poverty rates are higher in rural areas. This applies to the percentage of people living in poverty, the depth of poverty and the poverty severity (World Bank, 2009b). Overall, and especially in rural areas, households headed by women with children are particularly vulnerable to poverty. Poverty weighs heavily on women. In Georgia, women are traditionally considered homemakers. They contribute to household income by processing agricultural and dairy products. In cities they generally have fewer employment opportunities and comparatively lower wage levels (IFAD, 2012).

4 See for more details: http://geostat.ge/index.php?action=page&p_id=176&lang=eng

FIGURE 7. POVERTY RATES FOR GEORGIA, 2007-2011 (GEOSTAT, 2012)



In order to determine vulnerability to poverty we use the Minimum Subsistence Level (MSL) as threshold. The MSL is defined and established by the Ministry of Labor, Health and Social Affairs.[5] The food component is based on a minimum diet of 2,300 kcal per working age men. The value of the food basket is regularly calculated by GEOSTAT based on average prices. The full MSL is extrapolated from the minimum food basket, which accounts for 70 percent of the MSL. The MSL is a normative threshold indicating a minimum living standard for every Georgian. We assume that households with consumption above this threshold are not vulnerable from a monetary perspective.

On average, 36 percent of the Georgian population has average monthly consumption expenditures per adult equivalent lower than the MSL (Table 19). Vulnerability to monetary poverty differs significantly for individuals from specific groups of households. IDP households have the highest risk of living with less than the MSL (42 percent), while in high mountain households only 26 percent of the population is vulnerable to poverty.[6] Disaggregated by location, households in rural areas are more prone to be vulnerable to poverty compared to urban households (see Table A 13 in the appendix).[7] Several reasons may explain the relatively high level of vulnerability to poverty in rural areas: lack of investments in agriculture and low productivity, low level of education among farmers, insufficient income support, inflation and rising prices on food products. Another important reason is that development reforms in Georgia, including privatization, failed to stimulate employment and reduce unemployment. The closure of the Russian market in autumn 2006 for wine, mineral water and other agricultural products, as well as natural calamities further harmed rural households (UNDP, 2008:36-37).

The resilience of a household against financial shocks also depends on its ability to save. Households that have not reported any savings (or lending to others) during the survey month are classified as vulnerable. Overall, 61 percent of the population lives in a household with no opportunities to save (Table 19). Households in high mountain areas have the least ability to save, but the difference with other groups is not statistically significant. The main difference is observed between poor and non-poor households. Poor households clearly have less potential to save money at the end of the month.

The presence of formal and/or informal debts may further increase the financial vulnerability of households. Prior to the financial crisis in 2008, Georgian households increasingly borrowed money from banks as credit became more easily accessible.[8] Between 2007 and 2008, the gross loan portfolio increased by 42 percent. Household loans accounted for 38 percent (National Bank of Georgia in World Bank, 2010:10). Debt repayment became increasingly difficult during the financial crisis due to higher interest rates, higher foreign exchange rates[9] and lower household income (World Bank, 2010:10). According to information from the National Bank, 175,000 contracts were registered as bad debt at the beginning of 2012, of which households account for more than half of overdue loans in national currency and one fifth of overdue loans in foreign currency (National Bank of Georgia, 2012). Based on our study, 22 percent of the population lives in a household that currently owes money either to banks, other institutions or relatives and friends. IDP and disabled households are most vulnerable with 30 and 28 percent of the population living in a household with debts. Poor households also have a higher probability to have debts compared to non-poor households.

Having sufficient monetary resources may indeed protect households against certain shocks. Yet, some shocks may directly affect the earning power of households, for example, if a household member gets unemployed. Having income from a stable source may also offer more protection than working in informal or otherwise uncertain jobs. Therefore, measures of the quantity of financial resources should be complemented with measures of quality.

The source of income provides an indication for its reliability. This indicator defines those

5 Decree No. 111/N from 8 May 2003 "On Approving Norms for Physiological Requirements of Food Substance and Energy Determining Composition of Minimum Food Basket for Calculation of Subsistence Minimum".

6 Note, that the multivariate analysis below does not confirm the lower vulnerability to poverty for high mountain households.

7 For the remainder of this study, the poverty indicator is also used as an additional breakdown to analyze differences in vulnerability between poor and non-poor households.

8 Loans include mortgage, credit card debts and other consumer credits (World Bank, 2010:10).

9 A large share of new loans was denominated in foreign currency (World Bank, 2010:10).

Table 19. Vulnerability with respect to financial resources, percentage

	Regular	IDP	Disabled	High alt	Sign	Poor	Non-poor	Sign	Total
Consumption expenditures per adult equivalent below MSL	36.1	41.9	38.4	25.7	*				36.0
Household cannot save/lend	59.6	62.6	61.0	66.4	ns	66.8	56.2	***	60.8
Owes money to bank and has debts with others	19.6	29.8	27.7	21.8	***	27.3	19.4	***	22.2
Has no income from wage or old-age pension	22.9	25.1	16.2	26.7	***	25.8	19.6	***	21.9
Has no income from wage, old-age or disability pension, or IDP benefits	22.7	0.1	5.0	21.9	***	20.1	15.8	***	17.3

Source: Authors' calculation.
Note: Significance levels based on chi2 test for independence: ***p-value<0.01; **p-value<0.05; *p-value<0.10.

households as vulnerable that have no stable income source. The decision as to which income source should be declared stable is partly data-driven and also takes into account that eligibility rules and pension amounts are subject to policy changes. The first definition of regular income is more conservative in the sense that only formal wage income and old-age pensions are considered as stable income sources. Since Georgia has a universal pension scheme, all individuals of pension age are classified as pension recipients.[10] As a result, all households with pensioners are by definition not vulnerable with respect to this indicator. Incomes from self-employment, agricultural production or property (e.g. lease) as well as informal transfers (remittances, transfers from relatives and friends) are considered to be less reliable. The same applies to disability pensions or pension for IDPs. Policy changes can occur with regard to these types of transfers, e.g. a re-evaluation of the depth of disability that would result in a sudden change of the pension situation, or change from status-based IDP pensions to need-based IDP pensions. Overall, 22 percent of the population has to do without income from wage or old-age pension (Table 19), but only 16 percent of the disabled households are vulnerable in this respect. High mountain and IDP households have the highest likelihood of living without a stable income source.

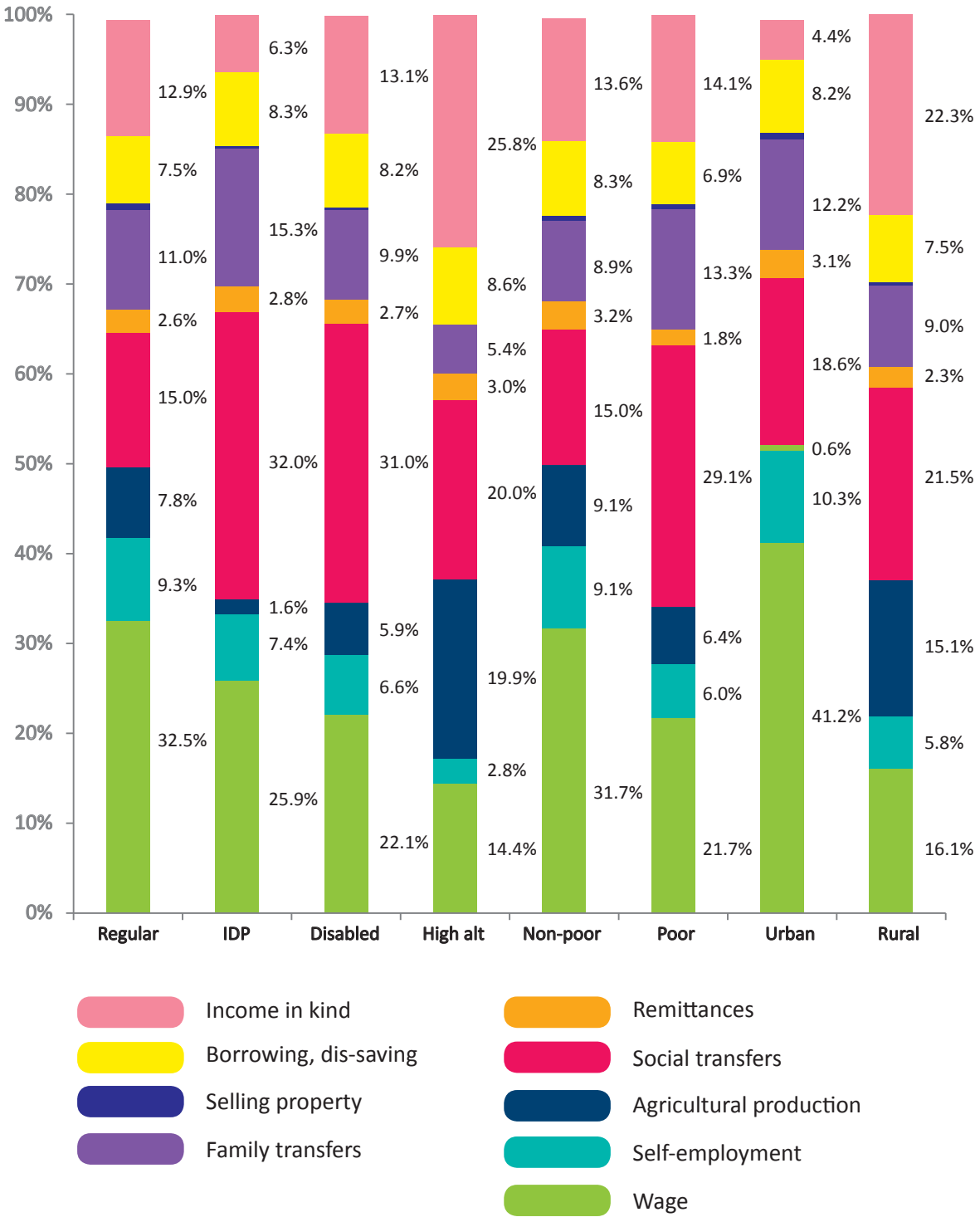
The second definition of regular income is less rigid and also includes income from disability pension and IDP benefits, thereby reflecting eligibility criteria at present. People with disabilities that fall in category I or II should receive disability pensions, and officially recognized IDPs are considered to get IDP benefits. Applying this definition, virtually none of the IDP households, 5 percent of the disabled households and 22 percent of the population in high mountain regions would be identified as vulnerable. But as outlined above, this definition might not reflect the complete extent of vulnerability of special groups since it is questionable how stable these types of transfers might be in the long run.

The composition of household income for the different population groups (Figure 8) shows that income from social transfers is most important for IDP households and households with disabled members. One third of their income is from social transfers. For regular households, income from wage is most important and contributes one third to total household income. In high mountain households and rural households in general, income in kind contributes the highest share to total income, followed by social transfers and income from agricultural production. The relative importance of income in kind reflects the fact that the majority of rural households depend on subsistence farming (GEOSTAT, 2010:19).

The bivariate analysis of financial resource vulnerability above indicated statistically significant differences between the groups of households (Table 19). The subsequent multivariate analysis elaborates on these findings by including more explanatory variables and applying an additional distinction

10 Individuals of pension age (for women 60 years and for men 65 years) are entitled to a flat-rate pension (UNICEF, 2011:16).

FIGURE 8: COMPOSITION OF INCOME, PERCENTAGE OF TOTAL



Source: Authors' calculations.
Note: See Table A 12 for all figures.

between IDPs who are living in collective centers and those with accommodation in the private sector. The latter refinement results from the fact that anecdotal evidence and findings from the FGDs strongly suggest that those groups of IDPs differ substantially in terms of physical and social resources.

The relevance of belonging to a particular group almost disappears when more

explanatory variables are included in the analysis (Table 20). Individuals living in disabled households have a five percent higher likelihood of being in debt compared to regular households. With respect to regular income, both disabled and IDP households in the private sector also have a significantly lower probability of having no regular income compared to regular households, all else being equal. For the group of disabled and given their demographic composition, this result is in line with expectations considering that pension entitlements are defined as a stable income source. While the gender of the household head does not matter at all, age plays a role with respect to the ability to save and have a regular income. With respect to the former, the older the household head, the higher the likelihood that no savings can be put aside. With respect to regular income, the likelihood increases with increasing age, which is evidently a result of the universal old-age pension. Monetary poor households are more vulnerable with respect to all three financial resource indicators.

Other factors better explain the likelihood of being vulnerable with respect to financial resources.[11] The size of the household, especially with respect to children and working-age adults, the share of employed household members, and the type of income are significant determinants for most of the indicators. The likelihood of being poor increases with the number of adults and

11 SeeTable A 20 for the full model.

Table 20. Determinants of vulnerability to financial resources, selected indicators

	Lack of monetary resources	Not able to save	In debt	No regular income[a]
	dy/dx	dy/dx	dy/dx	dy/dx
IDP in collective center	0.014	0.033	-0.001	-0.058
	(0.06)	(0.06)	(0.05)	(0.04)
IDP in private sector	-0.083	-0.003	0.024	-0.126***
	(0.04)	(0.04)	(0.04)	(0.03)
Disabled	-0.036	0.002	0.052*	-0.056**
	(0.02)	(0.03)	(0.02)	(0.02)
High mountain	-0.110	0.086	0.024	0.023
	(0.06)	(0.08)	(0.04)	(0.03)
Female head	-0.026	0.018	-0.001	0.038
	(0.03)	(0.03)	(0.03)	(0.03)
Age of head	0.000	0.004***	0.000	-0.009***
	(0.00)	(0.00)	(0.00)	(0.00)
Poor		0.110***	0.056**	0.061***
		(0.02)	(0.02)	(0.01)
Urban area	-0.072*	-0.057	0.016	-0.066**
	(0.03)	(0.04)	(0.04)	(0.02)
	Other control variables not reported			
F statistic	11.55	6.69	7.10	19.08
Prob>F	0.000	0.000	0.000	0.000
Observations	4301	4301	4301	4301

Source: Authors' calculations.

Note: Standard error in parentheses; * p<0.05, ** p<0.01, *** p<0.001. Full model in annex, Table A 20.

[a]: Based on the more rigid definition of regular income that only identifies income from wage and old-age pensions as stable sources of income.

children, and with having income from social transfers other than pensions. The probability of living in poverty is lower for individuals where a larger share of household members is employed, or the household has income from wage, self-employment or agriculture. The number of children and working-age adults as well as the share of employed household members has a positive effect on the ability to save. The latter is most probably linked to the better financial position of these households, while the presence of children may change household preferences towards saving for the future, for example, to finance the education of the child. Also, households having income from wage or from informal transfers (including remittances) are more likely to save some money, all else being equal. However, being able to save does not imply that the same households are not in debt. The determinants for being in debt are often similar, but with opposite signs. This result could be driven by mortgage debts. Households with a mortgage could still be able to save. It could also be linked to the fact that households that possess collaterals/ other resources can more easily get loans.

Summarizing, the three focus groups of this report, IDPs, households with persons with disabilities, and households in high mountain areas are not particularly at risk with respect to financial resources compared to 'regular' households. Although the poverty incidence is highest among IDP households at first sight, the location of the household and other factors are much stronger determinants for monetary poverty and financial vulnerability in general. Moreover, IDPs living in the private sector more often have income from a regular source and as such are less vulnerable in this respect. Households with disabled persons have a five percent higher likelihood of being in debt compared to regular households, but they are less vulnerable with respect to the regularity of their income. Given that disabled households have more elderly household members, they more often benefit from an old-age pension compared to regular households. Even though households in high mountain areas mainly live from agriculture, they are not more vulnerable than an average household in this domain. The size of a household and its composition, type of income, and the economic status of the household are more important determinants of vulnerability to financial resources.

Physical resources

Indicators for the availability of physical resources focus on land, livestock, durable goods and housing (Table 21). Lack of physical resources contributes to the vulnerability of households as no assets are available that could be exchanged or utilized in case of need. Although the market for land titles is still small and under development (USAID, 2011), land ownership is still considered to be an important asset. For agricultural households, it matters whether they own the land they work or whether they have to lease the land. A lease could always be terminated. The same applies to households involved in subsistence agriculture. Overall, 40 percent of the Georgian population does not own land. The differences between specific groups of households are large. Less than 15 percent of IDPs own land, whereas only 7 percent of the high mountain population does not have land. As expected, land ownership is more prevalent in rural areas, still one quarter of urban households are also possessing land (Table 22). Except for IDPs, more than 90 percent of the population living in rural areas owes land. In urban areas, land ownership rates vary between 25 percent for regular households and 54 percent of high mountain areas, while only 8 percent of IDPs in urban areas own land. They have a clear disadvantage in this respect.

The size of agricultural land, defined as land used for cultivation, is generally larger in rural areas, except for regular households where urban landowners have more land on average than rural residents. Overall, the size of cultivated land has been steadily decreasing over the past two decades. While in 1990 more than 700 thousand ha were used for crop production, in 2010 the total cultivated area was only 275,000 ha (GEOSTAT, 2011:14). As outlined above, small farms are dominating the agricultural sector. The average farm size is 0.88 ha arable land and productivity is low. In total, the sector contributes less than ten percent to GDP. In 2010, the agriculture sector produced only 146 GEL per capita value added per month, which is 12 percent less than the MSL for a working age men (GEOSTAT, 2011). Alongside other factors, poor infrastructure and bad utilization and cultivation of the land are responsible for the meager performance of the sector. The economic vulnerability of households in high mountain and rural areas is as such just a reflection of this situation.

Table 21. Vulnerability with respect to physical resources and housing, percentage

	Regular	IDP	Disabled	High alt	Sign	Poor	Non-poor	Sign	Total
Household owns no land	41.7	84.8	36.1	6.9	***	37.0	41.2	ns	39.7
Household has no livestock	52.0	80.2	48.2	13.0	***	45.9	50.9	*	49.1
Household has at most one household durable	29.8	33.5	32.2	43.9	***	47.4	23.2	***	31.9
Household has at most at most two electronic appliances	30.6	36.1	37.6	21.8	***	48.0	22.5	***	31.6
Household does not own the house/apartment	5.9	63.5	3.3	6.9	***	10.3	7.9	*	8.8
Less than 12m^2 per person living space	28.2	53.1	25.4	16.4	***	36.8	23.0	***	27.9
Inappropriate walls, roof and floor	41.7	67.1	39.4	31.8	***	43.2	40.9	ns	41.7
Inappropriate access to water and sanitation	51.7	34.2	56.6	70.0	***	62.3	48.6	***	53.5

Source: Authors' calculations.

Note: Significance levels based on chi2 test for independence: ***p-value<0.01; **p-value<0.05; *p-value<0.10.

Table 22. Land ownership and size of agricultural land, urban-rural areas

	Land ownership (%)			
	Regular	IDP	Disabled	High alt
Urban	24.5	7.7	30.3	53.9
Rural	93.1	49.0	95.3	96.5
	Size of agricultural land available (ha)			
Urban	0.84	0.22	0.35	0.18
Rural	0.60	0.62	0.57	0.66

Source: Authors' calculations.

Note: Size of land is average per household (household level weights used).

Table 23. Livestock possession (any type) in urban versus rural areas, percentage

	Regular	IDP	Disabled	High alt	Not poor	Poor
Urban	12.6	9.1	15.8	31.5	12.3	15.3
Rural	84.5	67.7	85.4	91.7	88.3	81.5

Source: Authors' calculations.

Livestock is another important asset especially in rural areas. 50 percent of the population is identified as vulnerable, i.e. they do not own any kind of livestock. Livestock possession is highest in high mountain areas and lowest for IDP households. As expected, only few households in urban areas possess livestock (13 percent), compared to 85 percent in rural areas (Table A 13). Although 68 percent of IDPs living in rural areas own livestock, this is considerably less than other types of households (Table 23).

The possession of durable goods is frequently used as alternative welfare indicator. Generally, poor households own less durable goods. Within a household, different durable goods serve different purposes. We separate all durable goods into two categories: (i) durable goods that facilitate housekeeping (e.g. refrigerator, vacuum cleaner, washing machine, stove) or add comfort (e.g. heater, air conditioner), and (ii), electronic appliances (see Table A 14 in appendix). Among household durables, refrigerator and stove are the most prevalent goods (70 percent of households). A washing machine is available in 48 percent of households. The variance in household durable possession is less an issue across specific household groups, but runs along the lines of monetary well-being and location. Poor households as well as households living in rural or high mountain areas report fewer household durables. One should note that there is obviously an overlap between these groups as the vulnerability to poverty is clearly higher in rural and high mountain areas. With respect to electronic appliances, having a TV or a mobile phone are the most widespread items. 97 percent of Georgians own a TV and 86 percent of household report having at least one mobile phone. Personal computers are available in one third of all households, but are clearly less common in poor, rural or high mountain areas. On the other hand, satellite dishes are more common in high mountain areas (63 percent) and rural areas (30 percent) compared to the national average of 20 percent.

In order to determine whether a household can be considered vulnerable with respect to the possession of durable goods, we created two indicators. A household should have at least two household durables and three electronic appliances in order not to be vulnerable. The thresholds are derived from the empirical analysis of household durable possession. The median possession is two for household durables and three for electronic appliances. Based on this definition, 32 percent of the population is vulnerable with respect to these two indicators (Table 21). The share of the population living in a household with at most one household durable is clearly higher in high mountain areas with 44 percent. With respect to electronic appliances, high mountain households are less vulnerable. IDPs and disabled have higher vulnerability rates based on this indicator with 36 and 38 percent, respectively, having at most two different electronic appliances.

Housing is another crucial area for the well-being of the population. A house is an asset that could be sold or leased in case of need. However, much more important is the protective function of the house. It provides shelter, which is a basic need. The better the quality of housing is, the higher its protective function. We identified four indicators measuring vulnerability with respect to housing: house ownership, overcrowding, the quality of walls, roof and floors, and access to safe water and sanitation. House ownership is very common in Georgia. Less than ten percent of the population does not live in a house or apartment owned by the household. However, this does not apply to IDP households. 64 percent of the IDP population does not own the place they live in, which makes them vulnerable to potential evictions, reduces the feeling of security and also may result in feeling less at home. Poor households are also slightly more vulnerable than non-poor households as are households in urban areas. In the latter case this can be explained by more apartments available for rent in urban areas.

The size of the available living space per person also serves as an indicator for the quality of housing. Since there are no scientific standards as to what constitutes a minimum living space, our indicator is based on the old Soviet standard of 12 m^2 per person. As can be expected, overcrowding is less a problem in rural or high mountain areas, and is higher in poor households. However, overcrowding affects 53 percent of the IDP population (Table 21). This is twice as high as the national average. More accurately, additional multivariate analyses reveal that this is a problem that only applies to IDPs in collective centers (see Table A 22). This is an important concern since overcrowding for

instance can create tensions (UNHCR, 2009b). In terms of the quality of the houses, IDPs are also disadvantaged. 67 percent live in a place where either the material of the floors, walls or of the roof is of inferior quality.[12] Once again, there are differences depending on the type of accommodation, and only IDPs in the private sector are more likely to be disadvantaged in this respect, as are people in high mountain regions (see Table A 22). IDP participants of the FGDs also reported on the bad quality of roofs and walls in their apartments. Relatively better off compared to the national average are high mountain areas where only 32 percent of the population lives in inferior housing. The same applies to rural areas. However, once additional explanatory variables are included in the analysis (see below), these effects disappear.

Access to safe water and sanitation is important in several respects. It contributes to the overall health status of the population by lowering the incidence of diseases caused by contaminated water or unhygienic toilet facilities. Furthermore, it also serves an environmental aspect if wastewater is caught by a sewage system and does not enter surface water. The indicator used to identify vulnerable households is a combination of having both access to safe water and hygienic toilet facilities.[13] More than half of the population lacks either one or both (Table 21). The rate is especially high in high mountain areas where 70 percent of the population is exposed to inappropriate water and sanitation facilities. Contrary to the previous housing indicators, IDPs are in a better position in this area. Only 34 percent have to live without access to safe water and toilets. The multivariate analysis reveals that IDPs in the private sector are less likely to be vulnerable with respect to water and sanitation than regular households, everything else being equal (Table A 22). This result is surprising in light of the fact that a 2009 Unicef report highlights that safe and reliable water supply is a major issue in new IDP settlements (UNICEF, 2009a). The problem is especially prevalent in rural areas where four out five persons do not have proper access. Overall, inappropriate access to water and sanitation is 7 percent less likely in urban areas compared to rural parts of the country. The poor also have a significantly higher risk of lacking access compared to the non-poor (Table A 22). Based on a subjective assessment of the quality of housing, 53 percent indicate to live in a house that needs major repairs. This rate is slightly higher for IDP and disabled households, and lower for high mountain households. Poor households also tend to live in a house requiring major repairs relatively more often than non-poor households.

Additional multivariate analyses that include more explanatory variables and distinguish between IDPs in collective centers and the private sector are also carried out regarding ownership of a house, livestock, or land (Table 24). They confirm the high vulnerability of IPD households with respect to land and house ownership. The probability of not having land compared to regular households is 11 percent higher for IDPs living in private accommodation, and even 39 percent for those in collective centers. Evidently, none of the IDPs in collective centers own land so that they are all vulnerable regarding this indicator. As a consequence, they cannot be included in the multivariate analysis due to perfect collinearity. But lack of house ownership is also 14 percent more likely for IDPs in the private sector than for regular households. High mountain households equally have a slightly higher probability of not owning their house compared to a regular household. Land and livestock matter especially in rural areas. It is therefore not surprising that urban households are less likely to own land or livestock, confirming the results above. From a gender perspective, female-headed households are less likely to own land compared to male-headed households, all else being equal. The education level of the household head is also correlated with livestock and house ownership, but with opposite signs (see Table A 21). While a higher level of education increases the likelihood of not having livestock, it reduces the vulnerability with respect to house ownership. Better educated households are generally in better financial conditions and are less likely to engage in agricultural activities. A higher level of education is associated with an increased likelihood of working in the formal sector (see section below on human resources) and living in urban areas, where livestock ownership is much less prevalent.

12 Inappropriate materials are defined as: floors made from stone, brick, concrete, or dirt; roofs made from wood or metal tiles; walls made from wood, slabs, mud or mixed. Appropriate housing requires all three indicators to be positive.

13 Unsafe water is defined as water not coming from the in-house tap; unsafe hygienic sanitation is defined as not having a private flush toilet connected to sewage in urban areas, whereas having a pit latrine is considered as appropriate in rural areas as well.

Table 24. Determinants of vulnerability to physical resources, selected indicators

	No land	No livestock	No house
	dy/dx	dy/dx	dy/dx
IDP in collective center	0.389***	-0.012	
	(0.08)	(0.03)	
IDP in private sector	0.114**	0.002	0.136***
	(0.04)	(0.02)	(0.02)
Disabled	-0.006	0.011	0.015
	(0.02)	(0.01)	(0.01)
High mountain	-0.006	-0.069***	0.057**
	(0.03)	(0.02)	(0.02)
Female head	0.055**	0.029	0.016
	(0.02)	(0.02)	(0.01)
Age of head	-0.001	-0.001	-0.003***
	(0.00)	(0.00)	(0.00)
Poor	0.017	0.013	0.009
	(0.02)	(0.01)	(0.01)
Urban area	0.183***	0.135***	0.024
	(0.02)	(0.01)	(0.02)
	Other control variables not reported		
F statistic	21.96	24.50	7.85
Prob>F	0.000	0.000	0.000
Observations	4301	4301	4035

Source: Authors' calculations.
Note: Standard error in parentheses; * p<0.05, ** p<0.01, *** p<0.001. Full model in annex, Table A 21.

The share of employed household members has a positive effect on land and livestock ownership. The more employed members, the lower the chance that a household does not own land or livestock. The argument clearly goes both ways. In farming households usually most able-bodied household members work on the farm and as such are considered employed. Not owning a house or not owning livestock is positively correlated with not owning land. Likewise, not owning land is positively related with not owning a house. With respect to income source, having income from agriculture or from a pension increases the likelihood of owning land or livestock, but it has no measurable effect on house ownership. This result is also evident as either land or livestock ownership is a prerequisite to generate income from agriculture.

Overall, vulnerability to physical resources is particularly pronounced among IDP households who are less likely to own land, livestock or a house. More than 60 percent do not own their place of residence and more than 80 percent do not own land or livestock. While livestock looses its relevance when including more factors in the analysis, the

difference remains significant for land and house ownership. IDPs have lost their houses in the course of the displacement and only a minority managed to become home owners again. Compared to regular households, IDPs living in the private sector have a 14 percent lower probability of owning the place of residence. High mountain households are also less likely to own a house, but at the same time, the probability of owning livestock is seven percent higher. With respect to the quality of housing, the analysis confirms that the IDP housing in the private sector is of inferior quality. They more frequently live in houses with inappropriate floors, walls and roofs. As for the IPDs living in collective centers, overcrowding is a particular problem. Compared to regular households, the risk of living in an overpopulated apartment is 24 percent higher for IDPs in collective centers. Disabled households are not particularly vulnerable in this domain. Further important determinants of vulnerability to physical resources include the urban/rural divide, the level of education, and the share of employed household members.

Human resources

Education is an important human resource that can protect households from (monetary) poverty. A higher level of education generally has a positive effect on wages and household income (see, e.g., Psacharopoulos & Patrinos, 2004; Badescu et al., 2011). People with higher education have more opportunities to find jobs and to earn higher incomes thus making their families less vulnerable. We use highest degree of education in the household as an education indicator in this study. In particular we consider that if the highest degree of education in the household is below secondary special (professional), the household is vulnerable. The divide is especially large between urban and rural households, with only 16 percent of individuals in urban areas living in a household with a low level of education compared to 44 percent in rural parts of the country. IDP households appear to be least vulnerable (21 percent), while households living in high mountains are the most vulnerable (49 percent) in this respect (Table 25).

The link between skills and knowledge gained in formal educational and production methods employed in rural and high mountain areas in particular is weak. Traditional ways of producing agricultural goods, which passes from generation to generation and the inefficient use of manual labor is widespread in mountain areas. On the other hand, benefits from education can be gained mainly in urban areas, which forces educated young people to stay in cities rather than to return to their home places. This is also reported in FDGs with people from high mountain regions, who stressed that finding a job was much easier in the city, whereas engaging in agricultural activities is just sufficient to make ends meet. Moreover, in high mountains and rural areas the quality of education, including the qualification of teachers, and access to educational infrastructure lags behind urban areas. At present 40 percent of the schools in Tbilisi are private and in both private and public schools more than 20 percent of the teachers are certified by the Ministry of Education and Science of Georgia. In the mountain regions Svaneti, Racha-lechkhumi, and Samtkshe-Javakheti, almost all schools are public and only 8 to 12 percent of the teachers are certified (Ministry of Education, 2012). As a result, school graduates from rural areas are less competitive in getting access to universities and other higher education institutions. Furthermore, the lack of high-skilled employment opportunities in rural areas prevents those with a good education to apply their skills locally.

The situation in regular and disabled households is not as dramatic as in case of high mountains. Around thirty percent of these households are below the threshold. The negative correlation between level of education and poverty is also confirmed with the current analysis. The share of individuals living in households with highest degree of education below secondary special (professional) level is substantially higher among the poor (see Table 25).

Another important human resource dimension is health. Healthy people have better opportunities to find a job, to take a higher workload and as a consequence to have higher incomes. On the contrary, households with at least one person with a chronic disease have not only less opportunities to earn a living but also often face high medical expenses, making them economically more vulnerable. In this study we use two indicators to measure health-related vulnerability. First, we identify households with at least one

person with a chronic disease. Secondly, households are considered vulnerable if at least one person in the household assesses his health as bad or very bad. Overall, vulnerability rates are high for these two indicators. More than half of the population is living in a health-vulnerable household. Disabled households, obviously, have the highest rates for both indicators while regular households are the least vulnerable in this respect (Table 25). IDP households are more vulnerable in terms of health as compared to regular and high mountain households. This is especially true with respect to the objective measure of health. There are many factors affecting the health status of IDPs, including their socioeconomic background. As indicated above, IDP households more often live in unhealthy living environments and suffer from overcrowding. The uncertainty about the future and the traumas caused by the war have a negative effect on the health conditions of IDPS.[14] Studies further list lack of access to quality medical services and deplorable living conditions that have had negative effects on the health of IDPs (Dershem et al., 2002; UNHCR, 2009b).

Poor households have a higher incidence of chronic disease and worse self-estimation of health, confirming the negative correlation between bad health and economic vulnerability (see Table A 13). The difference between households located in urban and rural areas is not statistically significant with regard to objective health measure, while rural households are characterized by inferior self-estimation of health compared to urban areas.

A crucial factor, which directly affects income generation capacity as well as socio-economic sustainability of households, is employment. The results of a survey in 2009 are indicative in that respect. Having unemployed family

14 Interview with E. Gvalia, executive director of the Charity Humanitarian Centre Abhkazeti (CHCA), 5 July 2011.

Table 25. Vulnerability with respect to human resources, percentage

	Regular	IDP	Disabled	High alt	Sign	Poor	Non-poor	Sign	Total
The highest degree of education in household is less than secondary special (professional)	29.1	21.0	29.2	48.9	***	41.3	24.5	***	30.5
There is at least one person with chronic disease in the household	45.1	66.0	90.9	55.7	***	61.0	55.8	**	57.6
At least one person in the household who estimates his health condition as bad or very bad	38.2	55.9	86.0	54.5	***	57.7	48.1	***	51.5
Less than 50% of working-age household members are employed	34.7	55.2	41.5	19.2	***	46.1	30.2	***	36.0
Share of employed household members is below national average	53.2	74.2	61.1	36.2	***	65.4	48.5	***	54.6
There is no formally employed person in the household	47.6	51.3	56.4	66.7	***	63.0	45.2	***	51.6

Source: Authors' calculations.

Note: Significance levels based on chi2 test for independence: ***p-value<0.01; **p-value<0.05; *p-value<0.10.

members was reported by respondents as one of the main problems causing economic hardship (UNICEF, 2010:29). In this study we distinguish between employment (which includes self-employment) and hired employment. The overwhelming majority of employees in Georgia are self-employed (including self-subsistence agricultural workers), whose earnings are both substantially lower and less sustainable as compared to those of hired employees. We consider three indicators to assess the quality and quantity of the labor force in a household. The first indicator considers the share of working-age adults that are currently employed.[15] Employment in this case can be any form of work. A household is considered vulnerable if less than half of the working-age members are currently not working. This means for example, a household with a couple where only one partner is working is not considered to be vulnerable, however a household consisting of three working-age adults of which only one is working, is considered to be vulnerable. Overall, 36 percent of the population lives in a household where less than half of the working-age adults is employed (Table 25). Individuals living in IDP or disabled households are more vulnerable in this respect. As expected, the relation between the monetary vulnerability and the share of employed adults is negative. More surprising is the fact that households in urban areas are more vulnerable in this respect. It could be related to the fact that wages are generally higher in urban areas, therefore reducing the necessity to work for adult co-habitants. On the other hand, the unemployment rate is considerably higher in urban areas and activity rates are lower.[16] The result could also be driven by the situation in rural areas where it is quite common that all family members are working on the farm.

The second labor indicator reflects the household dependency rate. It is measured by the number of employed household members as a share of total household size. Since there is no objective method to define the vulnerability threshold, we use an empirically derived threshold, whereby households with a share of employed household members lower than the national average are identified as vulnerable. The results are similar to the previous labor indicator, but overall vulnerability rates are higher.

Finally, an indicator assessing the quality of employment completes the picture. Having a formal job with a contract and a fixed salary is in general the most secure type of employment. We therefore identify households where no one has formal employment as vulnerable. It is not surprising considering the high rate of self-employed work and subsistence farming in Georgia, that more than half of the population is living in a household where no member has a formal job. The incidence rates for the different groups indicate that especially households in rural and high mountain areas are most likely to be without a formal worker (67 percent). Again, the correlation between the quality of work and monetary poverty is negative.

The choice of the indicator matters for the identification of the most vulnerable group. According to the first and second employment indicators, which measure the quantity of employment, households in high mountains are least vulnerable while IDP households are most vulnerable in Georgia. Generally, regular households also perform better than disabled households in terms of these variables. This reflects the high unemployment rates for the disabled, with the rate of employment among people with disabilities merely amounting to 7.5 percent (ISSA & IRC, 2007).

The situation changes when we consider the indicator measuring the quality of employment. First, regular households are least vulnerable (48 percent with no hired employee), while the number of households without hired employee is highest for households in high mountain and rural areas. With regard to the formal work indicator, IDP households are less vulnerable than disabled households.

The difference in outcomes for poor and non-poor households is greater with regard to the hired employee indicator than for the share of employed household members. The analysis of employment indicators in urban-rural context shows mixed results. Rural households are less vulnerable in the context of quantity-related employment indicators. However, the situation is drastically reversed if we consider the quality indicator related to hired employment. The main explanation of

15 Working-age adults are women between 16 and 60 and men between 16 and 65, following the official definition of Georgia.

16 In 2011, the unemployment rate for Tbilisi was 29.3 percent, and the activity rate 55.4 percent compared to the country average of 64.2 percent (GEOSTAT, 2012).

the discrepant results received for different employment variables is that self-employment (including self-subsistence employment in agriculture) as it was mentioned above has the highest share in total employment. In turn, these self-employed are mainly concentrated in rural areas (including high mountain regions). At the same time, opportunities for hired employment are lowest in rural areas and high mountains regions.

Despite the fact that self-employed on average is characterized by lower starting earnings and lower growth rates of earnings, the role of self-employment is important for Georgia. Self-employment represents an important means of subsistence for large segments of the population. The reasons are manifold. It is much easier to operate your own business, it does not necessarily require any specific skills or experience, and it is often the only alternative for those having failed to find a paid job (see also access to job market below). Self-employment increases income opportunities for low-income individuals and improves their access to labor market. Though self-employment should be considered as a feasible way to manage income generation problems for all reviewed groups, the lack of material, human and financial resources and support hamper their efforts to create and develop self-employment workplaces. For instance, limited skills, due to lack of work experience, and poor knowledge of funding sources and possibilities for start-up grants makes it difficult for disabled persons to become self-employed. These issues are less pertinent for regular households or households in rural and mountains areas. Self- employment allows people to make

Table 26. Determinants of vulnerability to human resources, selected indicators

	Low level of education	Bad health (subjective)	No hired employee
	dy/dx	dy/dx	dy/dx
IDP in collective center	-0.128**	0.104*	-0.039
	(0.05)	(0.05)	(0.04)
IDP in private sector	-0.041	0.149***	0.041*
	(0.04)	(0.04)	(0.02)
Disabled	0.014	0.263***	-0.003
	(0.02)	(0.02)	(0.01)
High mountain	0.047	0.110***	0.007
	(0.04)	(0.03)	(0.02)
Female head	0.005	0.020	0.015
	(0.02)	(0.03)	(0.01)
Age of head	-0.003***	0.003**	0.000
	(0.00)	(0.00)	(0.00)
Poor	0.107***	0.022	0.038***
	(0.02)	(0.02)	(0.01)
Urban area	-0.143***	-0.077*	-0.074***
	(0.02)	(0.03)	(0.01)
	Other control variables not reported		
F statistic	18.28	22.49	28.46
Prob>F	0.000	0.000	0.000
Observations	4301	4301	4301

Source: Authors' calculations.

Note: Standard error in parentheses; * p<0.05, ** p<0.01, *** p<0.001. Full model in annex, Table A 23.

ends meet and eventually escape from poverty. Thus, enhancing self-employment opportunities for disabled persons is badly needed.

The multivariate analysis of vulnerability to human resources confirms that individuals in IDP, disabled and high mountain households have a higher likelihood of living in a household where at least one member considers his/her health as being bad or very bad (Table 26). Belonging to a high mountain or disabled household does not make a significant difference with respect to education and type of work. However, IDPs living in collective centers seem to be better educated on average than regular households. For IDPs in the private sector, the probability of having no hired employee is four percent higher than for regular households. 'Old' IDPs living in the private sector have relatively more opportunities for developing their own business and more often rely on self-employment, such as small trade. The poverty status of the household and the location are more important in explaining low levels of education in the household or the fact that a household has no member with formal work. Regarding the former, this is in line with findings by Loughna et al. (2010), which state that the disadvantage of children in the educational system is not related to the IDP status but rather to the economic status of the household. Being poor increases the probability of being vulnerable, while living in urban areas reduces the vulnerability risk. The age of the household head plays a small but significant role with respect to education and health. With increasing age of the head, the probability of being a household with low education decreases. On the other hand, older heads are more likely to govern a household with at least one member with bad health. The larger the share of employed household members, the higher the chance that at least one member has a formal job. The gender of the household head is not of relevance for any of the three analyzed indicators.

With regard to vulnerability to human resources, bad health is a major concern among all three special groups. IPD households, disabled households and high mountain households are more likely than regular households to suffer from bad health. Considering other household characteristics, the older the head of the household, the higher is the likelihood of assessing the health status negatively. Employment and education related human resource indicators are less sensitive to group membership. The place of residence (urban/rural) and the monetary poverty status are the main determinants for low levels of education and the absence of hired employees in the household. Households in urban areas are on average better educated than those in rural areas and the likelihood of having at least one person in the household with a formal job is also significantly higher. Living with limited financial resources is strongly associated with a lower education level and the absence of formally employed household members.

Social resources

Unlike personal resources that include such variables as gender, race, age, religion, education, occupation, income and household property and other, social resources include social networks and social ties that play an important role in the interaction of individuals with social communities. Social resources determine an individual's access and use of social interactions necessary to maintain and promote self-interest and well-being, to maximize benefits from friendship, neighbors or relatives, and to ensure social support in minimizing economic and social risks. Social resources facilitate gaining access to other resources, such as finding a job, or getting financial, physical or emotional support from neighbors or friends. Social resources such as social networks and family relationships, connectedness with people, community and associations, information and communication represent important dimensions of social inclusion. The availability of social resources may provide the leverage to overcome poverty and diminish vulnerability.

A social network comprises the set of all daily interactions of individuals with friends, relatives, community in order to share social and economic values and ensure mutual support. Generally, social networks are developed among social groups and individuals with similar social, cultural and economic conditions. Physical neighborhood in communities plays an essential role for mutual help and the exchange of values. Connectivity and interaction among social network members is determined by the trust factor, which in turn depends on cultural norms, the institutional, economic and

political environment, moral and ethical rules, the closeness of people and other factors (Enriquez, 2001).

Social networks in rural and urban areas, as well as the network of IDPs and disabled people differ from each other. When IDPs were displaced to other regions of Georgia, establishing relationship with local neighbors was not always an easy task: "There are serious obstacles to the integration of IDP children into the society. The attitudes of the local people are negative to the development of social ties with IDPs. For instance, parents are unwilling to send their children to birthday parties of IDPs or to be on friendly terms with them. Even at school there is lack of attention from the teachers to this problem. In some classes lectures are delivered separately to local pupils and IDPs, to avoid a conflict among them."[17] In a recent qualitative study among young people, IDP status was mentioned as one of the reasons for conflict in the society, family or school. Being an IDP is considered to be of inferior status, a perception which may result in an inferiority complex among IDP children, further isolating them from their 'regular' peers.[18] Findings from our FGDs partly contradict this view on discrimination, but they are also more diverse. For example, one respondent states that she has never experienced any kind of discrimination. Another one reports that she faced discrimination at school back in the 90s. As one respondent remembered during the FGD, "the teacher sat me separately from other schoolmates in the class because I was an IDP." She also remembered that when they lived in a collective center in Tbilisi, IDPs were always blamed when something went wrong.[19] The perception that discrimination at school was more an issue in the 90s than at present is also confirmed by Loughna et al. (2010).

Within this domain, we investigate the strength of the social network, the use of various information and communication channels, and the opportunities to participate in community activities. The first two indicators provide an indication for the social connectedness of a household and the relative status of friends and relatives. Having friends or relatives with a higher social status (e.g. influential politician or businessman) may increase the opportunities for a person to find a (better) job, start a business or solve a family problem. Especially in case of a shock, having friends in influential positions may provide access to resources otherwise not available, thereby reducing the economic and social vulnerability of the household. According to Table 27, over 85 percent of the population lives in a household where at least someone has a friend or relative with a higher status. Higher status can be someone that is much richer, holds a PhD, is in an influential business position, has political power or emigrated to another country. Households in high mountain areas and disabled household appear to be less vulnerable than regular or IDP households in this sense. However, this difference is statistically significant only at the ten percent level. Urban household also seems to be less vulnerable in this context than households living in rural areas. Among poor households, the share of households without friends or relatives with a higher social status is significantly higher compared to non-poor households.

The psychological feeling of connectedness with people represents another instrument to measure social inclusion. When an individual feels more connected with other people and less empty, he or she has a better chance to manage difficult situations and thus reduce his or her social vulnerability. People are more vulnerable when relationships are fragile. The indicator representing the level of connectedness of people is based on six statements which measure feelings of connectedness with other people and feelings of emptiness.[20] Using factor analysis (principal components method) we constructed two underlying factor from responses to the psychological statements, lack of connectedness and feeling of emptiness.[21] Based on these components household are classified into two groups, one uniting people who are well connected and do not feel empty, and another incorporating those respondents who feel empty and are poorly connected with other people. We do not find statistically significant differences between special household groups and urban and

17 Personal interview with T. Dagargulia, Save the Children, 7 July 2011.

18 Idem ditto.

19 FGD with IDP from Abkhazia, October 15, 2012.

20 Respondents were asked about whether or not they agree with the following statements: 1) there are many people I can trust completely; 2) I experience a general feeling of emptiness; 3) there are enough people to whom I feel close; 4) there are plenty of people I can rely on when I have problems; 5) I often feel rejected; 6) I don't have real friends, just acquaintances.

21 For more details on the methodology, see annex.

Table 27. Vulnerability with respect to social resources, percentage

	Regular	IDP	Disabled	High alt	Sign	Poor	Non-poor	Sign	Total
No one with higher status among relatives and friends	16.0	15.1	11.7	10.6	*	18.4	12.3	***	14.5
Lack of connectedness	19.3	15.5	22.7	19.9	ns	26.4	16.3	***	19.9
Don't use TV, newspapers or online media as primary source of information	26.5	19.4	20.0	8.4	***	21.7	23.6	ns	22.9
No internet at home	72.0	68.4	75.3	94.2	***	87.1	67.5	***	74.6
No fixed or mobile phone	10.3	10.3	14.1	13.1	**	19.6	6.8	***	11.4
No association in community	23.4	11.9	18.8	26.0	ns	24.8	20.7	**	21.9
Less than two associations in community	40.1	25.6	42.0	46.3	ns	45.8	37.2	***	40.3

Source: Authors' calculations.
Note: Significance levels based on chi2 test for independence: ***p-value<0.01; **p-value<0.05; *p-value<0.10.

rural areas (Table 27). About one fifth of the population are poorly connected and having feelings of emptiness. Poor households are more vulnerable to be socially excluded than non-poor households. 26 percent experience lack of connectedness with other people and feelings of emptiness. Indeed, the level of perceived material well-being is negatively correlated with feelings of trust and closeness to other people, as confirmed by data from the Caucasus Barometer (Mestvirishvili, 2012).

Information and communication (technologies) represent a different set of social resources. Modern technologies, such as mobile phones or internet can be powerful tools to build human capital, improve the functioning of the household, and facilitate access to markets and the social environment. There are substantial differences in access and levels of development of the infrastructure that enable access to informational networks between the rural and urban population, as well as differences in the levels of capacity to use them. In this sense differences in usage of general communication sources serve as indicator and as a potential source for social vulnerability. When information flows poorly and communication is difficult, the efficiency of any kind of activity is negatively affected.

There are some differences in the demand on these sources between the disabled population, IDP and mountain households. Disabled persons, for instance, give high priority to new information sources (internet, mobile etc.) along with traditional tools (TV, newspapers), which often are the only means to have contact and interact with other people and integrate into the society. Hence, the need of special groups for information and communication technologies differs from each other. The nature of social vulnerability is closely related to low-income levels and to the lack of access to communication technologies. These factors determine to what extent special groups lack necessary information that could help them overcome problems, be productive and to have opportunities to improve their livelihood. Moreover, the opportunity and means of getting useful information vary across special groups. The rural and especially mountainous population spend lower amount of resources on communication and have limited access

to media and internet networks, which could potentially increase their efficiency and economize time and work. In IDP communities and villages the exchange of information more often takes place through direct communication with nearby dwellers.

In this study we focus on primary sources of information that are essential for everybody. A household is considered less vulnerable if members use TV, newspapers or online media as primary source of information. Households in high mountain areas are substantially less vulnerable than other types of households with regard to this social dimension (only 8 percent do not use TV, newspapers or online media as a primary source of information). Regular households are least likely to use the above-mentioned media as a primary source of information. Similarly, rural households have advantage over urban ones in this respect, while the difference between poor and non-poor household is statistically not significant.

Internet, mobile and fixed (landline) phones are important means for communication and the exchange of information and can thus be considered as another social resource affecting the social vulnerability of people. Overall, about ten percent of the population is not connected by mobile or fixed phone. The share is highest among disabled (14 percent) and high mountain households (13 percent). As expected, a substantially lower share of poor and rural households appears to have either a mobile or conventional telephone. In poor households, 20 percent of the population does not have access to a phone. Internet is significantly less widespread in Georgia. Three quarters of the population does not have an internet connection at home. In high mountain (and rural) areas, this share is as high as 94 percent (96 percent in rural areas in general). Among the special groups, IDPs have the highest internet prevalence, followed by regular households. As we would expect, internet is also more common among non-poor households.

Finally, the availability and variety of associations in the community could potentially facilitate social inclusion and reduce the risk of social exclusion and vulnerability for people. Associations consist of a range of local groups (e.g. voluntary associations, charities, nonprofits, foundations, community groups, women's organizations, faith-based organizations, professional associations, trade unions, self-help groups, social movements, business associations, coalitions and advocacy groups, and other non-governmental organizations) that potentially provide participants with influence to reach common goals and interests and maximize the production of public goods. They also reflect a social interaction process between the households, civil society and self-governance. The connections within associations amplify the collective voice of civil society in the process of improving the local environment. Participation in associations makes households more active. It is the process which takes into the account the concerns, needs, values, expectations, and problems of households in the decision-making process, and which contributes to the well-being of the population. Participation in associations stimulates collective action and involvement of population in public environment design and local management processes.

According to Table 27 only 22 percent of the population lives in a community without any association, while 40 percent lack variety of associations. However, neither the availability nor the variety of association discriminates statistically between special household groups. At the same time and in line with our expectations, non-poor households and households located in urban areas have better chances to participate in associations and enjoy a higher variety of associations.

The extended multivariate models reveal that group membership is not completely irrelevant for status and connectedness, but it is necessary to take into account the heterogeneity of IDPs (Table 28). Notably, IDPs in collective centers are 13 percent more likely not to have relatives or friends with higher status than regular households. This could be explained by their relative isolation from society and the rather homogenous composition of the people living in these centers. At the same time, IDPs in the private sector have a lower probability of experiencing lack of connectedness. These results confirm the findings from FDGs that especially old IDPs who live in the private sector have a better social network. The multivariate analysis further confirms that the poverty status of the household is more important in explaining the lack of connectedness. Overall, the models only poorly explain the outcomes.

Table 28. Determinants of vulnerability to social resources, selected indicators

	No relatives or friends with higher status	No use of TV, newspaper or online media	Lack of connectedness
	dy/dx	dy/dx	dy/dx
IDP in collective center	0.125**	-0.074	-0.047
	(0.05)	(0.05)	(0.06)
IDP in private sector	-0.021	-0.094*	-0.076*
	(0.03)	(0.04)	(0.04)
Disabled household	-0.026	-0.010	-0.003
	(0.02)	(0.02)	(0.02)
High mountain	-0.002	-0.172***	0.029
	(0.05)	(0.05)	(0.05)
Female	-0.015	-0.021	0.032
	(0.02)	(0.03)	(0.03)
Age	0.000	-0.001	0.001
	(0.00)	(0.00)	(0.00)
Poor	0.032	-0.021	0.083***
	(0.02)	(0.02)	(0.02)
Urban area	-0.009	0.007	0.041
	(0.03)	(0.04)	(0.03)
	Other control variables not reported		
F statistic	4.69	3.12	6.50
Prob>F	0.000	0.000	0.000
Observations	4301	4301	4301

Source: Authors' calculations.
Note: Standard error in parentheses; * p<0.05, ** p<0.01, *** p<0.001. Full model in annex, Table A 24.

In general, vulnerability to social resources is only weakly associated with any of the three special groups considered. However, the analysis highlights some notable exceptions. IDPs living in collective centers have a higher chance that they have no one with a higher social status among their social network. This is not surprising taking into account the relative isolation from society and the rather homogenous composition of the people living in these centers. Poor households are more likely to feel disconnected from the society and to suffer from feelings of emptiness than other households. Not only do these household suffer from financial distress, but the chance of being socially excluded is also higher. Having more family members, either adults or children, has a positive effect on the level of connectedness.

4.2 Ability to use resources

Having resources is an important aspect in reducing the social and economic vulnerability of households. However, resources are only meaningful if they can be used. The ability to use the available resources, increase them or substitute for other resources largely depends on access to markets, public services and social networks.

Access to markets

Access to financial markets can help households to smooth consumption over time. Money can either be saved for later or a loan can be taken in order to bridge a monetary shortfall. During the financial crisis (mid-2008 to mid-2009), 36 percent of households took up new loans. 41 percent of the new loans were borrowed from banks or pawn shops and 31 percent from relatives or friends (UNICEF, 2010:65). Since households can use both formal and informal financial channels, we consider both access to a bank and the possibility to borrow money from family, relatives and friends. 52 percent of all individuals 15 years or older have an individual bank account.[22] The rates are higher in urban areas (58 percent) and among non-poor households (55 percent). With regard to special groups, the highest share is observed among IDPs. 89 percent of all individuals 15 years or older living in IDP households have their own account. Of those without a bank account, 94 percent state that they do not need one. Three percent indicate as reason for not having an account that they lack the proper documentation, while less than one percent says not to trust banks (authors' calculation).

Most Georgians live in a household where at least one member has a bank account. Only 17 percent are as such not connected to the formal financial system (Table 29). In IDP and disabled households, the share of persons without access to a bank account is as small as 1 and 8 percent, respectively.

22 Note that this does not automatically imply that these households can use other financial services, such as getting credit.

Table 29. Vulnerability with respect to access to markets, services, and social resources percentage

	Regular	IDP	Disabled	High alt	Sign	Poor	Non-poor	Sign	Total
ACCESS TO MARKETS									
No household member has bank account	21.3	1.3	7.5	22.0	***	21.9	14.4	***	17.1
Household could not raise 1000 GEL in emergency	22.0	28.9	27.4	14.6	***	31.4	18.2	***	22.9
Household has no vehicle	64.3	81.6	68.6	62.8	***	80.7	57.9	***	66.1
It is very difficult to find a job	55.9	60.7	51.2	51.8	ns	58.4	52.6	**	54.7
ACCESS TO SERVICES									
Not all household members have proper health insurance	86.6	68.1	76.2	73.2	***	69.8	88.7	***	81.9
Policlinic or medical center not within 30min distance	8.0	4.0	5.5	39.6	***	9.4	10.6	ns	10.2
Did not apply for SA although needed	42.2	33.4	32.1	30.1	* **	24.7	45.9	***	38.3
ACCESS TO SOCIAL RESOURCES									
No participation in any of associations	14.0	9.2	15.9	25.9	***	11.8	17.2	***	15.3
No one to get support	2.6	2.2	2.3	1.4	ns	3.5	1.7	***	2.4

Source: Authors' calculations.

Note: Significance levels based on chi2 test for independence: ***p-value<0.01; **p-value<0.05; *p-value<0.10.

Access to banks is higher in urban areas and among non-poor households (Table A 15 in appendix). Secondly, access to informal credit is used as an alternative indicator for financial market access. Respondents were asked whether they could quickly raise 1,000 GEL in case of an emergency. Overall, 23 percent indicated that they have nobody to turn to in such a case. IPDs and disabled households are more vulnerable in this respect, while only 15 percent of the high mountain individuals stated that they could not raise such an amount of money. Poor households are most vulnerable with 31 percent not having this possibility. Raising money quickly from people inside the households or from the wider social network seems also to be more difficult in urban areas (see Table A 15 in appendix). The reasons for not being able to quickly raise such a sum of money are not clear. Only a minority (2 percent) claims to have no one nearby they could rely on in this situation, or that they simply do not want to ask anybody for help. 10 percent say that the people they know are in the same situation and as such cannot help (authors' calculations).

For households with agricultural products or other home-made goods for sale, access to product markets is essential in order to maintain their well-being. 31 percent of the Georgians is living in households that are either currently selling products or used to sell in the past, but the majority (67 percent) has no products to sell. Clearly, rural households have a higher likelihood of being sellers (56 percent), and the same applies to high mountain households (62 percent) (Table 30). Urban households and IDPs are less likely to have experience as product sellers, which is linked to the fact that they are also less likely to own land or be engaged in agriculture. Among the sellers, or potential sellers, 50 percent state that there are no obstacles for people that want to sell their produce. If there are problems, access to the market is most frequently mentioned (26 percent) (authors' calculation).[23] This is especially the case in high mountain areas, where access problems are mentioned as most important obstacle by 63 percent of those who either sell or would like to sell their products. Financial obstacles, such as taxes, rent or unofficial payments are only for 4 percent the most important obstacle, but they are mentioned as second most important obstacles by 17 percent of the (potential) sellers.

Whether or not a household has a means of transportation will serve as vulnerability indicator for access to product markets, in the absence of other indicators available for all households in the sample. At the same time, this indicator is an important measure for accessibility of services, especially if they are not available in the community. Means of transport have been generously defined, including everything from bicycle to car and tractor (see Table A 18 in the annex). However, two-thirds of the Georgians live in a household with no means of transportation at all. Among IDPs, this share is even four out of five (Table

23 Access problems are defined as: market is too far away, insufficient means of transportation, too few roads.

Table 30. Experience with selling products, percentage

	Regular	IDP	Disabled	High alt	Poor	Not poor	Urban	Rural	Total
Current or previous sellers	27.8	14.5	31.2	62.3	30.5	31.3	3.7	56.2	31.0
Considered selling, but never did	2.2	0.2	2.6	2.0	2.7	1.9	0.4	3.8	2.2
Has no products to sell	70.0	85.4	66.2	35.7	66.8	66.8	95.9	40.1	66.8

Source: Authors' calculations.

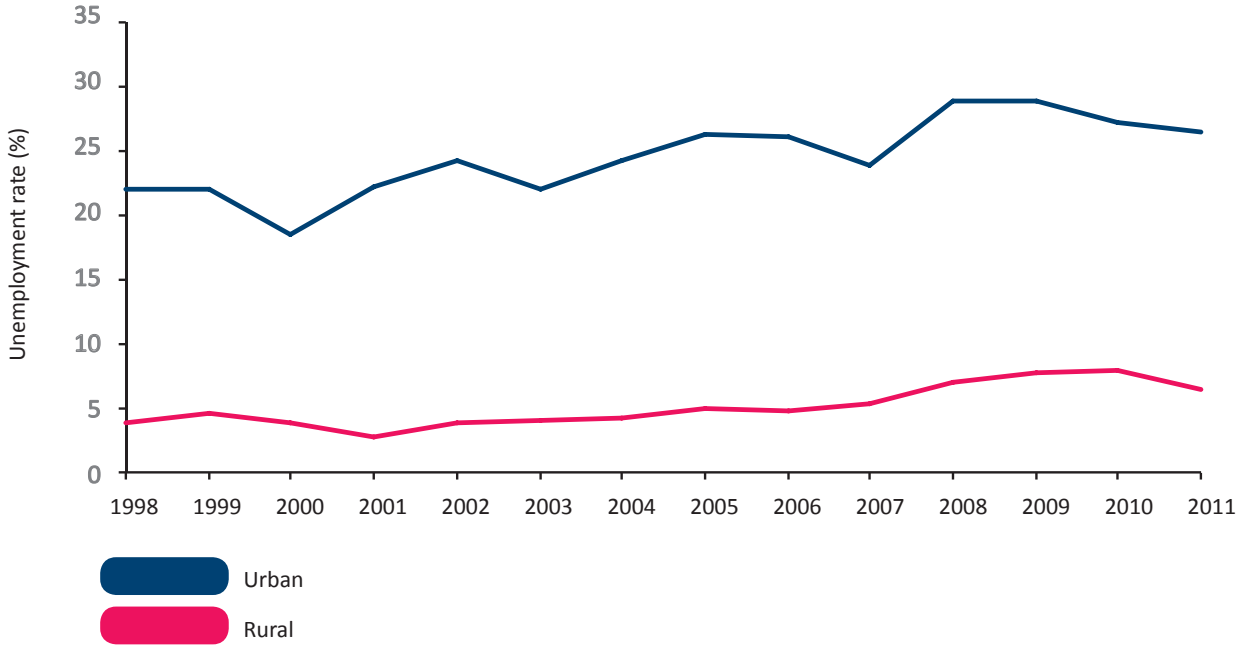
29). The same applies to poor households, while we do not find any difference between urban and rural households.

Especially for households in rural (and high mountain) areas, lack of access to financial markets and underdeveloped rural infrastructure are a big problem. The latter reduces accessibility of services in remote areas. The lack of irrigation systems, appropriate agricultural equipment (especially to work the steep land in the mountains) and access to high quality fertilizers limits the potential of farmers to increase their production and sell their produce on local markets. The inaccessibility of formal credits forms another obstacle to increase the agricultural efficiency. According to the National Bank of Georgia (2012), less than two percent of total bank loans are allocated to the agricultural sector. The domestic banking system seems unwilling to provide long-term credits to the agricultural sector because of stagnating markets, lack of collateral, high sector risks and low profitability of farms.

Even if a household has plenty of human capital resources, it is the actual access to labor markets which determines an individual's opportunity to find a job and thus to reduce the vulnerability of the household. The main indicator used in this study to measure ability of households to use labor market resources is the difficulty of finding a job. This is based on the subjective assessment of respondents. Overall, 55 percent of respondents claim that it is very difficult to find a job. The observed differences between the three groups are statistically not significant. The difference between poor and non-poor household matters. Poor households evaluate the difficulty of finding a job even worse (Table 29).

The lack of job vacancies is especially problematic for households in high mountain areas and among regular households. The lack of job vacancies is indeed considered to be a major obstacle in finding a job for 38 percent of the respondents. Among disabled households and households in high mountain

FIGURE 9. UNEMPLOYMENT RATE, URBAN-RURAL AREAS, (GEOSTAT, 2012)



areas the share is lower (30 percent), compared to regular households, where 43 percent see the lack of vacancies as the biggest obstacle (authors' calculations).

High unemployment contributes to economic and social vulnerability. It is one of the most important factors leading to monetary poverty and it is a critical social problem in Georgia. For the majority of families employment remains the only means of existence having no other alternative. The risk of households to fall below the poverty line increases in line with the number of unemployed members.[24] In 2011, the official unemployment rate was 15.1 percent (GEOSTAT). The unemployment rate in urban areas is four times the rate in rural areas (Figure 9), but this indicator does not fully reflect the situation in rural areas where the majority of the population has land and such is not considered to be unemployed.[25] In mountain areas the self-employment rate (70 percent) among the active population is above the country average (52 percent). Nevertheless, it is illusive to say that high self-employment rate makes them less vulnerable to poverty in comparison with cities, because revenues from self-employment in rural areas are considerable lower than in cities. The high unemployment rate is also an indication for the under-developed labor market in Georgia. There are simply not enough jobs to provide people with qualifications and skills with work. As a result, many jobless citizens leave Georgia seeking to find better employment opportunities abroad.

The relevance of group membership in explaining the outcomes with respect to access to markets vanishes completely when extending the model with more explanatory factors (Table 31). It however confirms that belonging to an IDP household decreases the probability that no household member has a bank account, and the effect is significantly stronger for IDPs in collective centers than for those in the private sector. Moreover, IDPs in collective centers are nearly 12 percent more likely not to be able to raise money in an emergency than regular households, whereas this effect is not significant for IDPs in the private sector. Conceivably, this could be linked to the previous finding that the probability of not having friends or relatives is also higher for IDPs in collective centers. Contradicting existing studies, disabled households are six percent less likely to report difficulties with finding a job, compared to regular households. Possibly, this could result from the fact that many people with disabilities have already given up their job search due to their frustration, as was reported in FDGs. In addition, neither IDPs nor high-mountain households experience more difficulty finding a job than regular households, everything else being equal. But related to this, FGDs emphasize the social kinship factor that is considered of paramount importance in order to find a job: "The IDP status doesn't matter at all. The main concern in finding a job is whether you are 'somebody's' person". Regarding lack of means of transportation, none of the special groups is more likely to be vulnerable. This result might be surprising for high mountain households, but also people with disabilities, since the issue of transportation was mentioned in all of these FDGs. Overall, being monetary poor is a much stronger determinant for vulnerability to access to markets. This applies to all four indicators included in the model. The model also shows that living in a female-headed household increases the likelihood of not being able to raise money in case of an emergency or to live without any means of transportation.

Summarizing, vulnerability to access to markets is more pronounced among poor households, whereas belonging to IDP, disabled or high mountain households does not contribute to vulnerability in this domain. These three groups are not more likely to be deprived from market access than any regular household. IDPs, both in collective centers and the private sector, seem to be better connected to the financial market. However, IDPs in collective center are less likely to be able to raise an instant sum of money in case of an emergency than other households. Being monetary poor, on the other hand, is a much stronger determinant for vulnerability to access to markets. Female-headed households are also at a disadvantage in this domain. They are less likely to be able to raise cash in an emergency situation and are also more often without any means of transport, making access to all kinds of markets and services more difficult.

24 In the beginning 2007, the unemployment allowances as well as other social support programs were replaced by the program of unified social support program.

25 A person is not considered to be unemployed if he/she has been working for one hour during the last week, or if he owns more than 0.8 ha or arable land.

Table 31. Determinants of vulnerability to access to markets

	No bank account	No money in emergency	No means of transportation	Difficulty finding a job
	dy/dx	dy/dx	dy/dx	dy/dx
IDP in collective center	-0.334***	0.119*	-0.107	-0.046
	(0.06)	(0.05)	(0.06)	(0.09)
IDP in private sector	-0.158*	-0.015	-0.021	-0.038
	(0.07)	(0.04)	(0.04)	(0.06)
Disabled	-0.039	0.011	-0.018	-0.064*
	(0.02)	(0.02)	(0.02)	(0.03)
High mountain	-0.007	-0.076	0.039	0.095
	(0.03)	(0.04)	(0.04)	(0.06)
Female head	0.022	0.084**	0.083**	0.059
	(0.02)	(0.03)	(0.03)	(0.03)
Age of head	0.000	0.002	0.000	0.002
	(0.00)	(0.00)	(0.00)	(0.00)
Poor	0.072***	0.101***	0.199***	0.049*
	(0.02)	(0.02)	(0.02)	(0.02)
Urban area	-0.036	0.085*	-0.038	-0.037
	(0.02)	(0.04)	(0.03)	(0.05)
	Other control variables not reported			
F statistic	12.25	5.49	11.67	3.14
Prob>F	0.000	0.000	0.000	0.000
Observations	4301	4301	4301	4301

Source: Authors' calculations.
Note: Standard error in parentheses; * p<0.05, ** p<0.01, *** p<0.001. Full model in annex, Table A 25.

Access to services

Access to health services is important to maintain the available human capital in the household. Accessibility is determined by the distance to health care facilities, availability of treatments, and whether they are affordable. Two access indicators have been defined for measuring vulnerability with respect to access to health care: not having a policlinic or medical center within 30 minutes, and not having health insurance (Table 29). Access to health care services is clearly a problem in high mountain areas, where 40 percent of the population does not have a health care facility in the vicinity. During FGDs with high mountain households, issues with regard to poor infrastructure and transportation were raised. Rural households also have slightly higher likelihood of not having a health care center within reach. Lack of transport further exacerbates the problem in case a doctor is needed.

In terms of affordability, the only indicator available for all households is whether or not someone has health insurance. A household is considered vulnerable if not all household members are covered with health insurance. Although this might seem to be strict, health expenditures can quickly turn out to become catastrophic in case of a serious illness or accident. Out-of-pocket payments for health services in Georgia are among the highest in Europe. In three out of ten households, they account for more than 25 percent of total non-food household expenditures (UNICEF, 2010:52). Based on our study, only 23 percent of the Georgians have a proper health insurance.[26] This is slightly less compared to 2009 (UNICEF, 2010:53). Therefore, it is not surprising that 82 percent of the population lives in a household where not all members have health insurance. Vulnerability rates are lowest for IDP households and highest for regular households. Also interesting is the fact that individuals living in rural areas or belonging to poor households have a higher probability of having health insurance, even though we excluded the 'cheap (GEL 5) insurance program' as an appropriate type of health insurance. Eligibility for the health insurance for vulnerable families, which is part of the targeted social assistance program, may explain this outcome. In general, our results are in line with findings from the Unicef study for 2009 (UNICEF, 2010).

As Table 32 indicates, about one fifth of the population suffers from a chronic illness or disability. This rate is evidently higher among persons living in disabled household, but also among IDP households. Less than one in ten persons was ill during the three months prior to the survey, but four out of ten Georgians need dental care. However, not everybody seeks treatment. The most important reason for not seeking treatment is lack of money (see Figure 10 – Figure 12). 78 percent of the chronically ill or disabled who would need treatment do not ask for it because of financial reasons. In the case of short-term illnesses, 54 percent of sick who refrained from seeking treatment did if for monetary reasons, while having no doctor nearby is hardly a reason for not seeking treatment. Dental care presents the direst situation. Although almost half of the population would need to see a dentist, almost nine out of ten do not visit the dentist due to lack of money.

Finally, we consider access to social protection as an indicator for access to services. 38 percent did not apply for social assistance, although they indicated the need for this type of support (Table 29). It seems that mainly regular households refrain from applying in case of need. Of those that applied, 20 percent received social assistance. The success rate is highest among IDPs (36 percent) and high mountain households (32 percent). The main obstacles for applying for social assistance as perceived by the respondents are the complex eligibility rules and the perception that the process is not fair (authors' calculations).

26 This includes health insurance for disabled, employer-sponsored programs, and insurance from own resources.

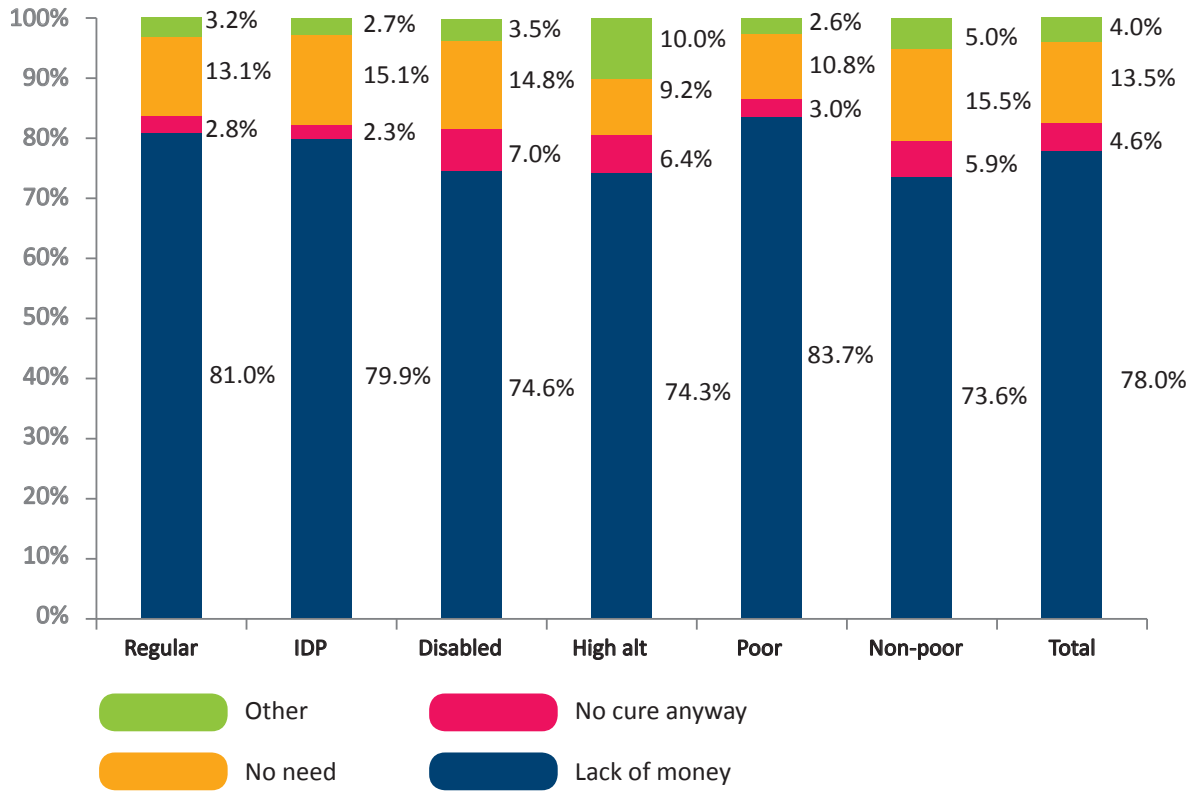
Table 32. Incidence of (chronic) illness and need for dental care, percentage of the population

	Regular	IDP	Disabled	High alt	Sign	Poor	Non-poor	Sign	Total
Chronic illness/disability	16.8	25.1	37.0	20.0	***	22.0	22.2	ns	22.2
Ill during last 3 months	11.2	2.3	7.1	4.2	***	8.1	9.6	***	9.1
In need of dental care	49.5	12.1	33.8	24.0	***	43.2	40.3	ns	41.3

Source: Authors' calculations.

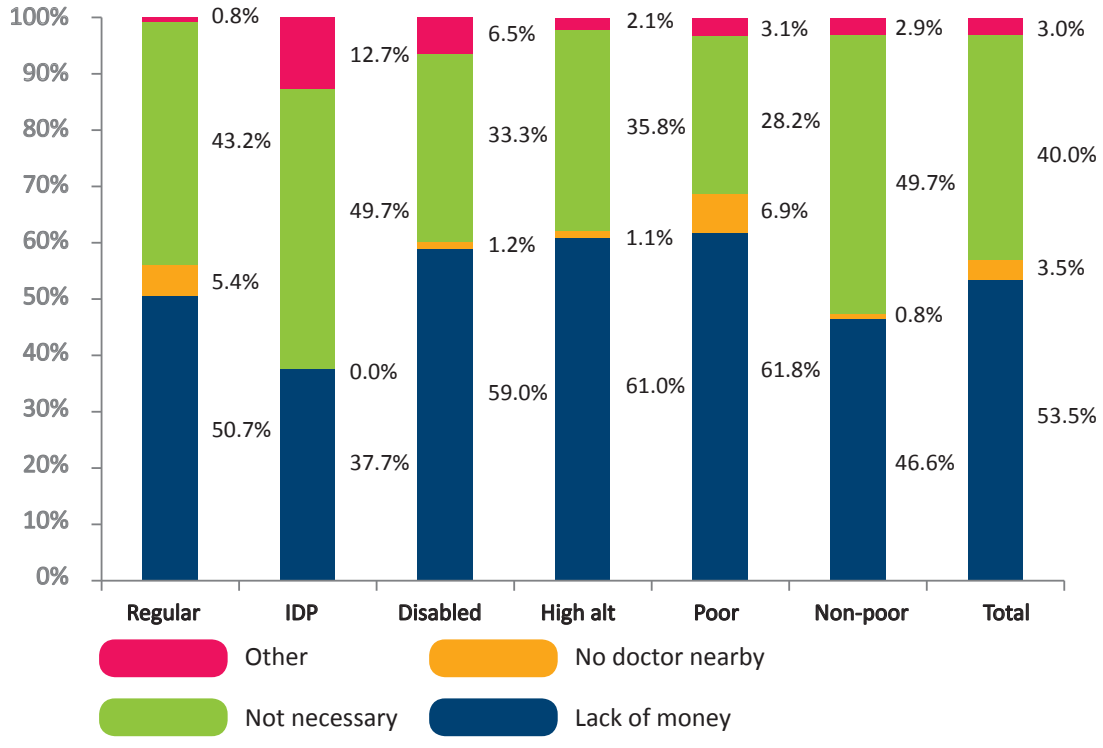
Note: Significance levels based on chi2 test for independence: ***p-value<0.01; **p-value<0.05; *p-value<0.10.

FIGURE 10. REASONS FOR NOT SEEKING TREATMENT IF CHRONICALLY ILL, PERCENTAGE OF ILL PERSONS NOT SEEKING TREATMENT



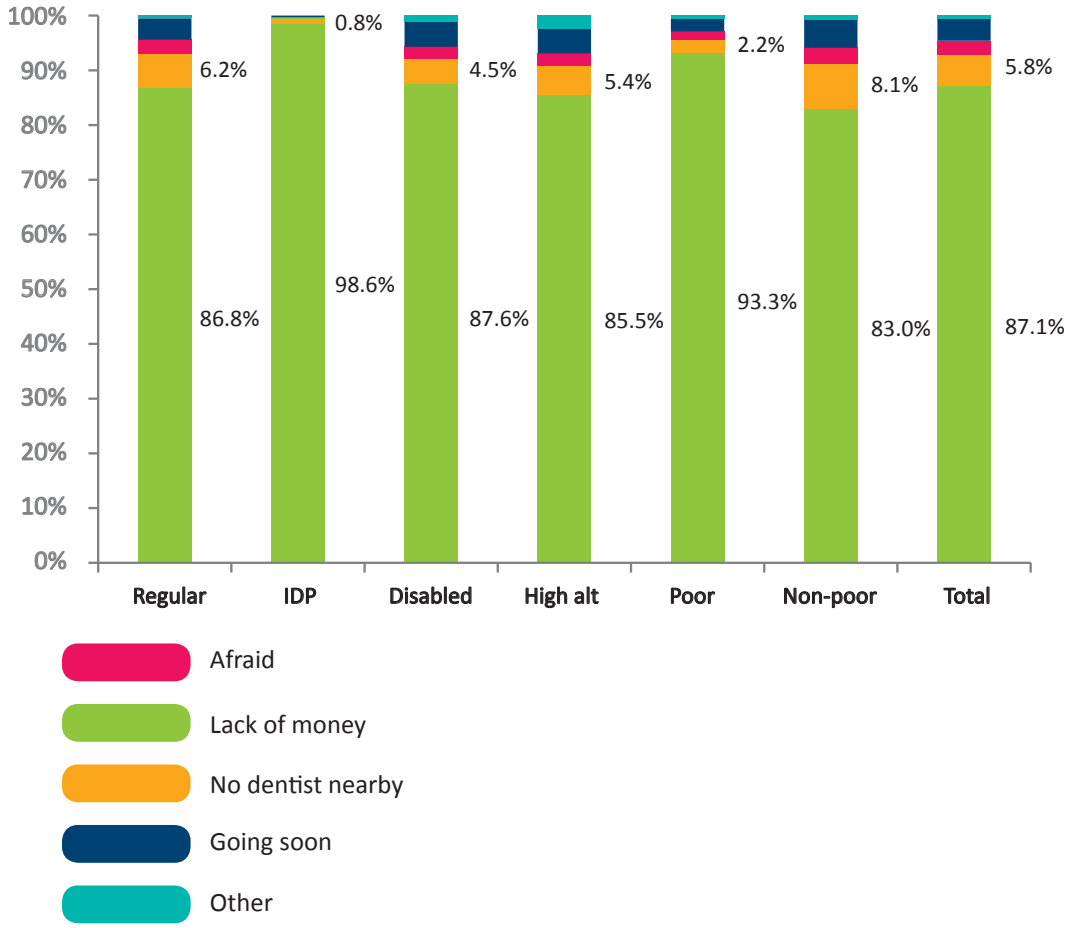
Source: Authors' calculations.

FIGURE 11. REASONS FOR NOT SEEKING TREATMENT IF ILL DURING LAST 3 MONTHS, PERCENTAGE OF ILL PERSONS NOT SEEKING TREATMENT



Source: Authors' calculations.

FIGURE 12. REASONS FOR NOT SEEKING TREATMENT IF IN NEED OF DENTAL CARE, PERCENTAGE OF ILL PERSONS NOT SEEKING TREATMENT



Source: Authors' calculations.
Note: See Table A 16 for all figures.

Extending the analysis and incorporating other explanatory variables confirms the different situation of high mountain households. The likelihood that they are without proper health insurance or do not apply for social assistance in case of need is significantly lower (Table 33). Still, high mountain households mentioned problems related to merely partial coverage of the insurance package and lack of financial resources in FGDs. Poor households and IDPs in collective centers are also less likely to lack proper health insurance. Very notably, however, IDPs in the private sector are 10 percent more likely to suffer from lack of social assistance in case it is needed, i.e. the effect is directly opposite to the one observed for IDPs in collective centers. Among the other explanatory variables, the results are somewhat contradictory or unexpected. Households with income from wage or self-employment have a higher probability of not having health insurance for all household members. The opposite is the case for households with income from social transfers, other than pensions. In the context of an underdeveloped health insurance market (UNICEF, 2010:52), being not insured may be a rational choice, especially for the self-employed. Furthermore, not all employers sponsor health insurance for their employees.

Overall, vulnerability to access to services is lower among high mountain and poor households, whereas disabled households do not differ from regular households in this respect. Although health care facilities are available, coverage with health insurance that would facilitate the use of health care services is still very low. In more than 80 percent of the households not all members have health

Table 33. Determinants of vulnerability to access to services

	No health insurance	No social assistance
	dy/dx	dy/dx
IDP in collective center	-0.113**	-0.155*
	(0.04)	(0.06)
IDP in private sector	-0.027	0.104**
	(0.03)	(0.04)
Disabled household	-0.029	-0.009
	(0.02)	(0.03)
High mountain	-0.109***	-0.123**
	(0.03)	(0.04)
Female head	0.006	-0.063*
	(0.02)	(0.03)
Age of head	0.001	0.000
	(0.00)	(0.00)
Poor	-0.113***	-0.162***
	(0.01)	(0.02)
Urban area	0.023	0.045
	(0.02)	(0.03)
	Other control variables not reported	
F statistic	12.99	8.42
Prob>F	0.000	0.000
Observations	4301	4301

Source: Authors' calculations.
Note: Standard error in parentheses; * p<0.05, ** p<0.01, *** p<0.001. Full model in annex, Table A 26.

insurance. The likelihood that high mountain households have no health insurance and do not apply for social assistance is significantly lower than for regular households or the other groups. The same applies to poor households and to IDPs living in collective centers. IDPs in the private sector are less likely to apply for social assistance in case of need. Having children has a positive effect on the use of services. Households with children are more likely to be health insured and they also apply for social assistance when needed.

Access to social resources

To evaluate the ability of households to use social resources we employ two indicators in this study, which reflect to what extent households are participating in community associations and whether households can get support if needed (Table 29). Overall, 15 percent of the population lives in a household where no one is actively engaged in a community association. The share is highest among people living in high mountain areas (26 percent) and lowest for IDP households (9 percent). Interestingly, non-poor households have higher non-participation rates (17 percent) than poor households (12 percent) (Table A 15). Participation is also lower in rural areas in general. The lower participation rates in high mountain and rural areas are partly explained by the lower incidence of associations in these regions.

The second indicator reflects the availability of support from relatives and friends. Respondents were asked from whom they would get support in each of the following

Table 34. Contacts with family, neighbors, friends and colleagues, percentage

	Regular	IDP	Disabled	High alt	Sign	Poor	Non-poor	Sign	Total
Never or few spending time and contacts with family	18.0	19.4	18.1	14.9	ns	27.60	12.28	***	17.8
Never or few spending time and contacts with neighbors	18.5	14.3	18.7	9.5	**	17.28	17.54	ns	17.5
Never or few spending time and contacts with friends	25.1	20.8	26.2	26.3	ns	35.90	19.24	***	25.2
Never or few spending time and contacts with colleagues	14.6	14.3	13.4	10.8	***	12.69	14.62	***	13.9

Source: Authors' calculations.
Note: Significance levels based on chi2 test for independence: ***p-value<0.01; **p-value<0.05; *p-value<0.10.

situation: 1) if you needed help around the house when ill; 2) if you needed advice about a serious personal or family matter; 3) if you needed help when looking for a job; and 4), if you were feeling a bit depressed and wanting someone to talk to. The analysis of the four questions revealed that questions 1, 2 and 4 are strongly correlated and can be used to generate the underlying social construct of support. Using factor analysis, households were classified into two categories, distinguishing between people for whom support is available and for whom support is not available.[27] A household is considered vulnerable if there is nobody to help in each of the above-mentioned situations.

Generally, only a very small proportion of Georgian households can be considered vulnerable. More than 97 percent of the population can get support if they need it. The differences between the special groups are statistically not significant (Table 29). The only measurable difference is observed between poor and non-poor households. For the poor it seems to be slightly more difficult to get support (3.5 percent).

Another indication for a household's ability to use its social network is the frequency of contact with family, neighbors and friends. Households with few contacts may be excluded from important information and material and emotional support. We do not find any statistically significant difference among the special groups with respect to contacts with either family or friends (Table 34). Overall, 18 percent of the population has never or only few contact with family and relatives. 25 percent has hardly any contact with friends. With respect to contacts with neighbors or colleagues, households in high mountain areas are least vulnerable. Poor households have fewer contacts with all reference groups, except for neighbors. Rural households are more vulnerable with respect to contacts with families (20 percent) and friends (32 percent), but they score better with respect to neighbors and colleagues (Table A 17).

While the results from the bivariate analysis above suggest that group membership matters with respect to participation in associations, but not with respect to support, the multivariate analysis shows slightly different results. The relevance of the special groups disappears for the former indicator, but instead becomes weakly significant when analyzing support from social networks. IDPs in the private sector and disabled households are less likely to lack support from social networks compared to regular households. However, people with disabilities stressed in

27 See annex (p. 96) for more details on the methodology.

Table 35. Determinants of vulnerability to access to social resources

	No participation in association	No support from social networks
	dy/dx	dy/dx
IDP in collective center	0.000	-0.026
	(0.04)	(0.01)
IDP in private sector	-0.027	-0.027*
	(0.02)	(0.01)
Disabled	0.013	-0.014*
	(0.02)	(0.01)
High mountain	0.031	-0.017
	(0.04)	(0.01)
Female head	0.012	-0.014*
	(0.01)	(0.01)
Age of head	0.000	0.001*
	(0.00)	(0.00)
Poor	-0.041**	0.017**
	(0.01)	(0.01)
Urban area	-0.063**	0.006
	(0.02)	(0.01)
	Other control variables not reported	
F statistic	8.67	8.93
Prob>F	0.000	0.000
Observations	4301	4301

Source: Authors' calculations.
Note: Standard error in parentheses; * p<0.05, ** p<0.01, *** p<0.001. Full model in the annex, Table A 27.

FGDs that they experience a lack of societal awareness and feel insufficiently integrated. According to them, their needs and interests are not properly taken into consideration. They get their main support from family members, friends or neighbors. Regarding other characteristics of the household head, female-headed households are also in a better situation when it comes to social support. Poor households and households in urban areas are more likely to participate in associations, while poor households are more vulnerable in terms of access to social support compared to non-poor households.

With regard to vulnerability to social resources, overall vulnerability rates are low. Only 15 percent of the population does not participate in any kind of association at community level, and only 2 percent have no one that could support them emotionally. IDPs in the private sector and disabled households are less likely to lack support from social networks, though the size of these marginal effects only ranges between one and three percent. Moreover, being poor increases the probability of lacking this kind of support, whereas it makes it at the same time more likely to participate in an association.

4.3 Who is vulnerable with respect to what?

The analysis above considered each indicator separately. It raises the question whether a specific pattern emerged as to which groups are most likely to be vulnerable. Table 36 and Table 37 summarize the results of the multivariate analyses presented above. Overall, group membership is a stronger predictor for household resource indicators

than for indicators measuring the ability to use resources. IDP households are clearly at a disadvantage with respect to land and house ownership. This also came out strongly in the qualitative study. On the other hand, IDP households are more likely to have a regular income from wage or pensions compared to a regular household. The latter also applies to disabled households. Households in high mountain areas more frequently own livestock, which is also expected since animal husbandry is one of the main livelihood strategies in mountain areas. With respect to human resources, the findings indicate that all three groups are significantly more vulnerable to health-related deprivations. They assess their health status more frequently as bad or very bad. The traumas experienced in the past as well as their current housing situation have a negative impact on the health of many IDPs (Dershem et al., 2002; UNHCR, 2009b). Difficulties in accessing health care facilities, either caused by lack of financial resources, insufficient health insurance coverage or simply the lack of high-quality health care in the community further increase the vulnerability with respect to health. It is also one of the issues frequently raised in the FGD.

Finally, the tables below unmistakably indicate that the monetary living standard of the household is a much stronger indicator of economic and social vulnerability. Individuals living in poor households are significantly more likely to be vulnerable with respect to human resources and the ability to use the resources. Compared to non-poor households, the poor are less likely to save money at the end of a month and at the same time have a higher probability of living in debt. Their financial situation is also more precarious as they are less likely to have a regular income. The monetary poverty status of a household is less relevant for asset ownership for which we did not find significant differences compared to non-poor households. With respect to human resources, monetary poverty is positively correlated with a lower

Table 36. Summary table of multivariate analyses – vulnerability with respect to household resources

	Lack of monetary resources	Not able to save	In debt	No regular income[a]	No land	No livestock	No house	Low level of education	Bad health (sub-jective)	No hired employee	No relatives or friends with higher status	No use of TV, new-spaper or online media	Lack of connec-tedness
IDP in collective center					+++		na	--	+		+++		
IDP in private sector				---	+++		+++		+++	+		-	-
Disabled			+	--					+++				
High mountain						---	++		+++			---	
Female head					++								
Age of head		+++		---			---	---	++				
Poor	na	+++	++	+++				+++		+++			+++
Urban	-			--	+++	+++		---	-	---			

Source: Authors' calculations.

Note: Other control variables omitted. + significant positive correlation, - significant negative correlation; na=not included.

[a]: Based on the more rigid definition of income that only identifies income from wage and old-age pensions as stable sources of income.

educational status of the household and the lack of formal work. Both aspects directly impact the earning potential of households if we assume that a higher education translates into better employment opportunities and higher wages. Socially, poor households are also more vulnerable as they are less likely to have friends or relatives with a higher social status. Furthermore, being poor contributes to increased feelings of isolation and emptiness. The monetary poverty status of a household is also strongly correlated with the ability to use resources, especially in terms of access to markets. Although the availability of private transport is low for Georgia in general, the poor are even less likely to have their own means of transport, further depriving them from access to jobs, education and health care services. On a positive note, the poor seem to have better access to services, such as health insurance and social assistance. However, when it comes to physical and emotional support from the social network, the poor more often have to do without.

Table 37. Summary table of multivariate analyses – vulnerability with respect to ability to use resources

	No bank account	No money in emergency	No means of transportation	Difficulty finding a job	No health insurance	No social assistance	No participation in association	No support from social networks
IDP in collective center	---	+			--	-		
IDP in private sector	-					++		-
Disabled				-				-
High mountain					---	--		
Female head		++	++			-		-
Age of head								+
Poor	+++	+++	+++	+	---	---	--	++
Urban		+					--	

Source: Authors' calculations.

Note: Other control variables omitted. + significant positive correlation, - significant negative correlation.

4.4 Multidimensional vulnerability

Multidimensional vulnerability is measured separately for household resources and access to resources. For each dimension, an index has been established based on ten and seven indicators respectively. Table 38 presents three different measures of multidimensional vulnerability: incidence, intensity and adjusted incidence. Incidence measures the percentage of the population vulnerable in at least 30 percent of the weighted indicators. This measure can be interpreted like a poverty headcount rate. Intensity measures the average percentage of indicators a household is vulnerable in. On average, individuals are vulnerable in 4.2 out of ten resource indicators and 3.3 out of seven access indicators. Note that intensity is only measured for those individuals that are classified as multidimensionally vulnerable, meaning that they are vulnerable in at least 30 percent of the indicators. The adjusted incidence is the combined measure of the incidence and the intensity. It takes into account the depth of vulnerability and is the product of incidence times intensity. Vulnerability with respect to resources is more prevalent than with respect to exchange opportunities (ability to use resources). Overall, 54 percent of the population is resource vulnerable and 36 percent is access vulnerable. The average intensity is 42 percent for resources and 47 percent for access. This means, for example, that on average individuals are vulnerable in 4.2 out of ten resource indicators.

The differences between the groups are statistically significant for resources. IDP and disabled households are most vulnerable,

Table 38. Multi-dimensional vulnerability in resources and access

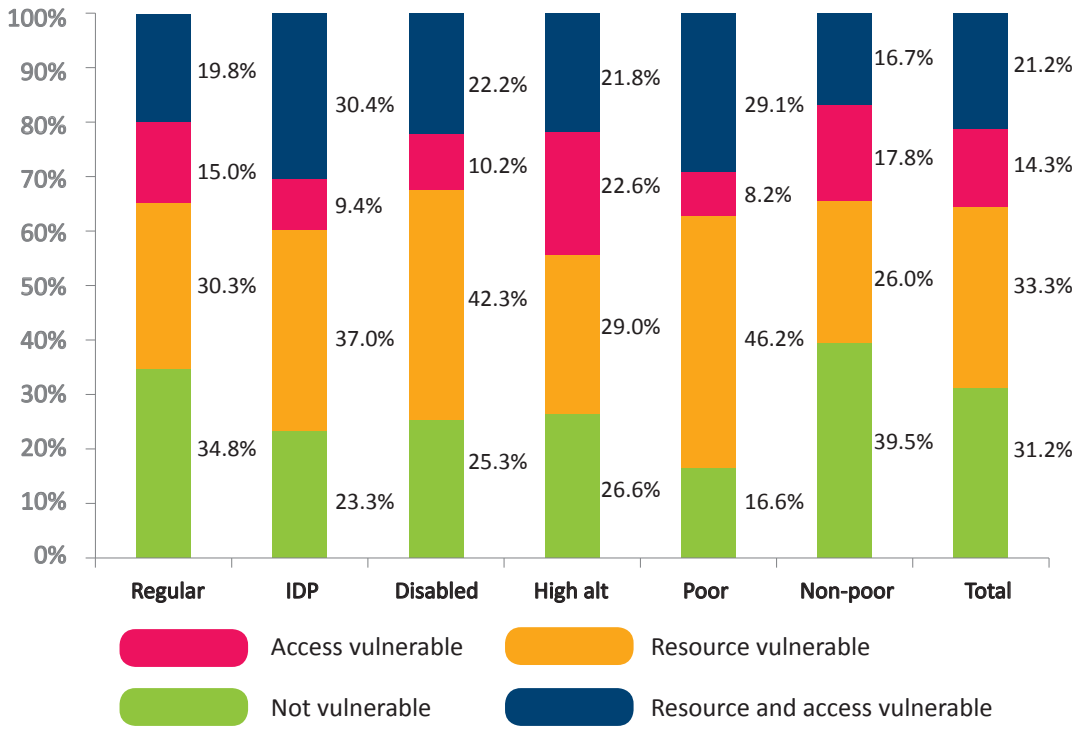
	Resources			Access		
	Incidence (%)	Intensity (%)	Adjusted Incidence Index	Incidence (%)	Intensity (%)	Adjusted Incidence Index
Regular	50.1	42.6	21.3	34.9	47.1	16.4
IDP	67.4	47.0	31.6	39.8	45.1	17.9
Disabled	64.5	41.3	26.6	32.4	46.8	15.2
High mountain	50.8	39.2	19.9	44.4	46.8	20.8
Significance	***			**		
Not poor	42.7	37.1	15.9	34.5	46.5	16.0
Poor	75.2	47.4	35.7	37.2	47.6	17.7
Significance	***			ns		
Urban	45.7	40.4	18.4	36.7	47.5	17.4
Rural	62.5	43.5	27.2	34.4	46.3	15.9
Significance	***			ns		
Total	54.4	42.3	23.0	35.5	46.9	16.6

Source: Authors' calculations.
Note: Significance levels based on chi2 test for independence: ***p-value<0.01; **p-value<0.05; *p-value<0.10.

both in terms of incidence and adjusted incidence. As expected, monetary poor households are significantly more vulnerable than non-poor households. The same applies to rural households. The story is less clear-cut when considering multidimensional access vulnerability. Households in high mountain areas have a significantly higher vulnerability rate, followed by IDP households. However, in terms of intensity the differences are negligible. No statistically significant differences are found when comparing poor and non-poor and urban and rural households.

Finally, Figure 13 looks at the overlap between resource and access vulnerability. Based on the multidimensional indices, households are identified as being only vulnerable with respect to resources, to access, to both, or not at all. Being vulnerable in both dimensions can be considered the worst situation. Such a household not only has insufficient resources, but it has no ability to use the existing ones. Overall, 21 percent of Georgians are vulnerable in both dimensions. The share is highest among IDP households with 30 percent. Resource vulnerability is clearly a bigger issue than vulnerability with respect to the ability to use resources. While 33 percent are only resource vulnerable, 14 percent would have sufficient resources but are constrained in using them. Lacking sufficient resources is especially a problem for disabled and IDP households, while their access opportunities are considerably better. High mountain areas are disadvantaged with respect to exchange opportunities.

FIGURE 13. VULNERABILITY OVERLAP (%)



Source: Authors' calculations.

Group membership plays a limited role as a determinant for multidimensional vulnerability once additional explanatory factors enter the model (Table 39). IDPs in collective centers are more likely to be resource vulnerable than regular households, confirming once again that it is necessary to look in more detail at the rather

Table 39. Determinants of multidimensional vulnerability, per dimension, selected indicators

	Resources dy/dx	Access dy/dx
IDP in collective center	0.118*	-0.055
	(0.05)	(0.07)
IDP in private sector	-0.031	0.019
	(0.04)	(0.05)
Disabled household	-0.029	-0.013
	(0.02)	(0.02)
High mountain	-0.042	0.105*
	(0.03)	(0.04)
Female	0.030	0.050
	(0.03)	(0.03)
Age	-0.001	0.003*
	(0.00)	(0.00)
Poor	0.160***	0.051*
	(0.02)	(0.02)
Urban	-0.127***	-0.069
	(0.03)	(0.04)
	Other control variables not reported	
F statistic	20.53	5.67
Prob>F	0.000	0.000
Observations	4301	4301

Source: Authors' calculations.

Note: Standard error in parentheses; * p<0.05, ** p<0.01, *** p<0.001. Full model in annex, Table A 28.

heterogeneous group of IDPs. With respect to access vulnerability, only high mountain households are at a disadvantage compared to regular households. The monetary poverty status of the household remains a strong determinant for multidimensional vulnerability, both with respect to resources and ability to use them, although in terms of access high mountain households have an even stronger disadvantage. Urban households are clearly less vulnerable when it comes to resources compared to rural households, but the difference disappears when considering access vulnerability. The latter seems to be a rather general problem for Georgia as only few explanatory variables are significant. With respect to resource vulnerability, secondary or higher education of the household head significantly reduces the likelihood of being vulnerable (Table A 28). The more working-age adults in the household, the higher the probability of being resource-vulnerable, while with increasing number of children, the chances of being resource-vulnerable decrease. Having a larger share of employed household members or having income from wage or self-employment also reduces the likelihood of being resource-vulnerable.

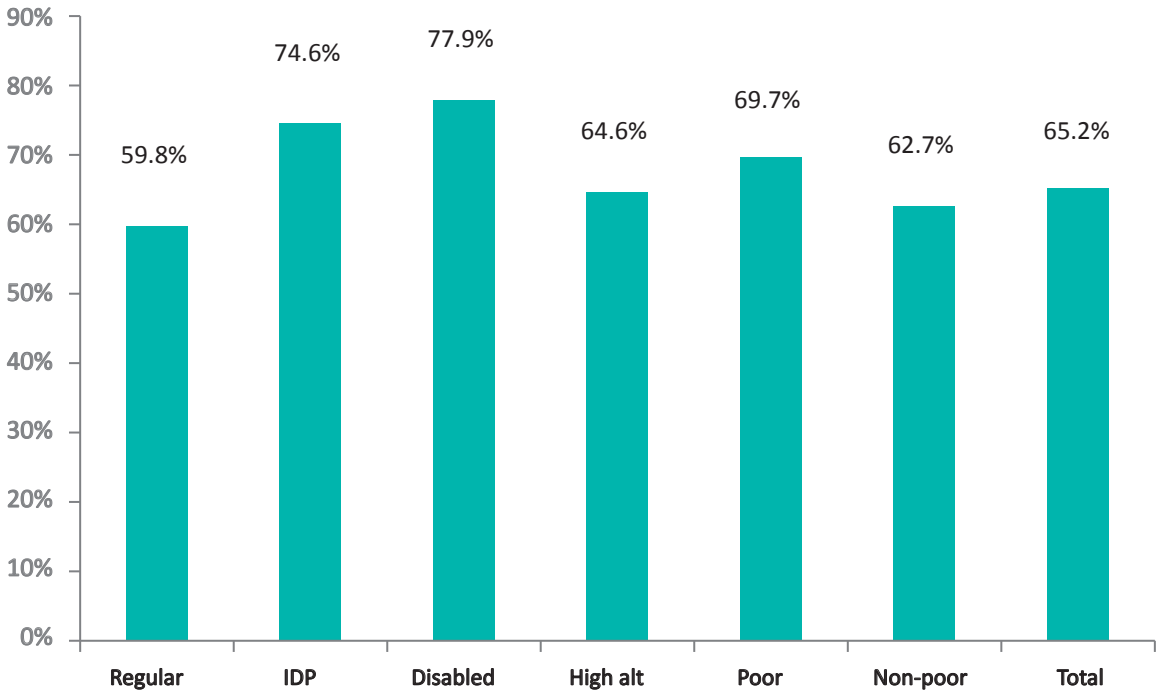
Table 40. Multinomial model of vulnerability, selected indicators

	Resource yes, access no	Access yes, resource no	Both yes
	RRR	RRR	RRR
IDP in collective center	1.619	0.362	1.462
	(0.65)	(0.20)	(0.61)
IPD in private sector	0.661	0.779	0.882
	(0.18)	(0.22)	(0.33)
Disabled	0.883	1.046	0.752
	(0.16)	(0.21)	(0.14)
High mountain	0.821	1.928**	1.100
	(0.22)	(0.46)	(0.32)
Female head	1.242	1.330	1.493
	(0.29)	(0.25)	(0.35)
Age of head	0.990	1.007	1.009
	(0.01)	(0.01)	(0.01)
Poor	2.952***	1.334	3.422***
	(0.47)	(0.26)	(0.60)
Urban area	0.480**	0.846	0.324***
	(0.11)	(0.20)	(0.09)
	Other control variables not reported		
F statistic	8.11		
Prob>F	0.000		
Observations	4301		
Base outcome: Not vulnerable.			

Source: Authors' calculations.
Note: Standard error in parentheses; * p<0.05, ** p<0.01, *** p<0.001. Full model in annex, Table A 29.

Finally, we estimate a multinomial model assessing the likelihood of being only resource-vulnerable, access-vulnerable or vulnerable with respect to both compared to the situation of not being vulnerable at all (base case). Table 40 presents relative risk ratios estimated by the model. All rates have to be interpreted with reference to the base case (i.e. not vulnerable at all). The explanatory power of the model is not very strong. This could indicate that there is a lot of variance among the different groups which the present model is not able to capture. With respect to our special groups, we notice that high mountain households have an increased risk of being access-vulnerable. Monetary poverty status and location of the household are significant predictors for the risk of being either resource-vulnerable or vulnerable with respect to both dimensions. Being poor

FIGURE 14. EXPERIENCED AT LEAST ONE SHOCK OVER PAST 5 YEARS, PERCENTAGE OF THE POPULATION



Source: Authors' calculations.
Note: Differences between groups are statistically significant at 1%-level, based on chi2 test for independence.

increases the vulnerability risk, while living in an urban household significantly reduces the risk of being vulnerable with respect to resources or resources and access.

In summary, group membership hardly plays a role as determinant for multidimensional vulnerability, but poverty status matters. Two exceptions emerge: IDPs in collective centers are more likely to be vulnerable with respect to resources, while high mountain households are more likely to be access vulnerable than regular households. Once again, the monetary poverty status of a household is a stronger determinant for multidimensional vulnerability, both with respect to resources and exchange opportunities. Moreover, higher levels of education are associated with a reduced likelihood of being vulnerable. A larger share of employed household members and having income from wage or self-employment also decreases resource vulnerability.

4.5 Exposure to shocks

Exposure to shocks contributes to the economic and social vulnerability of households. Its measurement is however difficult as it would require assessing ex-ante the probability that a shock will occur in the future. Analyzing the occurrence of shocks in the past provides an indication of the level of shock exposure of different households. The analysis of the impact of the financial crisis on household well-being revealed, for example, that the economic situation of 31 percent of the household has worsened between mid-2008 and mid-2009. The impact was even stronger for families belonging to the bottom 40 percent (UNICEF, 2010:60).

In this survey, households were asked about the occurrence of different types of shocks over the past five years. Overall, 65 percent of the population experienced at least one shock (Figure 14).[1] The incidence of shocks is higher in IDP and disabled households, and

1 Note that we did not include the occurrence of an armed conflict in the country as all households were affected. This is the perfect example of a covariate shock.

the difference among the three groups and regular households is statistically significant at the one percent level. 78 percent of individuals living in disabled households and 75 percent in IDP households were confronted with a shock during the past five years.

We further distinguish between different types of shocks (Table 41). Covariate shocks affect the total population either at the country or regional level. An armed conflict in the region, droughts, floods and earthquakes are classified as covariate shocks. Idiosyncratic shocks take place at the household level. We distinguish between family related shocks and livelihood shocks. A serious illness of a family member, the death of a household member or getting unemployed is considered to be family shocks. Livelihood shocks refer to displacement, loss of the house, a lost harvest, loss of livestock or a fire. Other shocks include events such as a car accident, a major burglary or any other shock. Family-related shocks were most prevalent over the past five years. Almost half of the population was confronted with an event seriously disrupting family life and well-being. The incidence is highest in IDP and disabled households. Covariate shocks hit 36 percent of the population. The group most affected are people living in disabled households.

Livelihood shocks occurred less frequently. Overall, 15 percent experienced a livelihood shock. The rate is slightly higher for IDPs, which is not surprising considering the specific situation of IDP households that have a higher chance of being displaced or loose their house. 16 percent of the population living in IDP households suffered from displacement during the last five years, and 10 percent lost their house. Looking at specific shocks (see Table A 19 in the appendix), a serious illness of a family member was mentioned most frequently. It affected 39 percent of the population on average. In disabled households 60 percent had to deal with a seriously ill family member. Droughts come in second place, affecting 22 percent of the population. Especially high mountain households were above proportionally exposed to droughts with 34 percent of the population affected.

When including more control variables in the analysis of exposure to shocks in the past (Table 42), and distinguishing between IDPs in collective centers and private accommodation, group membership looses its predictive power in some cases. Disabled households have a slightly higher likelihood of having experienced at least one shock. The analysis confirms, though, that disabled households have a ten percent higher probability of family-related shocks. With respect to livelihood shocks, IDP households in the private sector are clearly the most vulnerable with a 15 percent higher likelihood of having experienced such a shock over the past five years. Evidently, this does not apply to IDPs in collective centers, since these are mainly 'old' IDPs who experienced displacement in the 1990s, but not within the previous five years. With the exception of living in urban areas, which reduces the probability of being exposed to livelihood shocks, other group characteristics such as age or gender of the household head or the poverty status of the household do not seem to play a role. Other explanatory variables that are strongly correlated with shock exposure are having at least one member with a chronic disease (positive correlation), not owning land (negative correlation), and having income from informal transfers (positive correlation) (see Table A 30).

A shock does not necessarily have a negative impact on the economic situation of the household. The type of the shock, available resources and whether a household took

Table 41. Incidence and type of shocks over past 5 years, percentage of the population

	Regular	IDP	Disabled	High alt	Sign	Poor	Non-poor	Sign	Total
Experienced covariate shocks	33.6	36.1	43.6	36.6	*	38.5	35.0	ns	36.3
Experienced family shocks	42.0	56.0	65.0	45.6	***	51.0	46.9	*	48.4
Experienced livelihood shocks	15.2	20.1	15.6	12.5	ns	18.3	13.7	***	15.3
Experienced other shocks	5.0	3.4	4.6	2.7	ns	4.9	4.5	ns	4.6

Source: Authors' calculations.

Note: Significance levels based on chi2 test for independence: ***p-value<0.01; **p-value<0.05; *p-value<0.10.

Table 42. Probability of experiencing a shock, selected indicators

	At least one shock	Covariate shock	Family shock	Livelihood shock
	dy/dx	dy/dx	dy/dx	dy/dx
IDP in collective center	0.068	0.187	0.050	0.106
	(0.06)	(0.10)	(0.06)	(0.07)
IDP in private sector	0.090	0.079	0.082	0.147***
	(0.05)	(0.06)	(0.05)	(0.04)
Disabled	0.062*	0.028	0.103***	-0.011
	(0.03)	(0.03)	(0.03)	(0.02)
High mountain	-0.037	-0.075	0.004	-0.071
	(0.06)	(0.06)	(0.05)	(0.05)
Female head	-0.016	0.019	-0.011	-0.036
	(0.03)	(0.03)	(0.04)	(0.02)
Age of head	0.001	0.000	0.000	0.000
	(0.00)	(0.00)	(0.00)	(0.00)
Poor	0.023	-0.004	-0.009	0.013
	(0.02)	(0.02)	(0.02)	(0.02)
Urban area	-0.027	-0.035	-0.009	-0.139***
	(0.04)	(0.04)	(0.04)	(0.03)
	Other control variables not reported			
F statistic	8.14	5.59	7.58	7.44
Prob>F	0.000	0.000	0.000	0.000
Observations	4301	4301	4301	4301

Source: Authors' calculations.

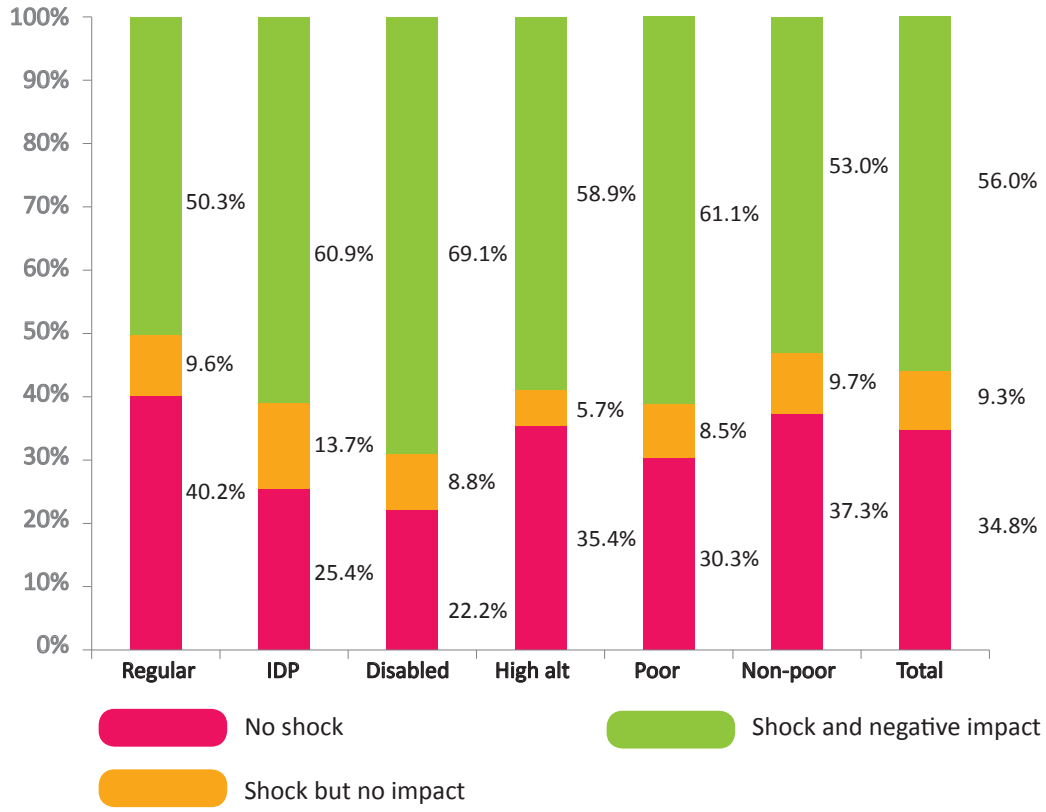
Note: Standard error in parentheses; * p<0.05, ** p<0.01, *** p<0.001. Full model in annex, Table A 30.

preventive measures determine its actual impact. As can be seen from Figure 15, 56 percent of the population suffered from a shock that affected the economic situation of the household negatively, while only 9 percent experienced a shock without negative consequences. Covariate shocks seem to be slightly less devastating for households. 58 percent of those being affected by an armed conflict in their region claim that their situation has essentially not worsened as a result of the shock. Family-related shocks, on the other hand, have mainly negative consequences for the economic situation of a household. The same applies to livelihood shocks that present a direct threat to the well-being of the affected household (seeTable A 19 in the appendix). A family member's illness or the loss of employment of a household member rank high among the reasons for a worsening economic situation of households in the Unicef study as well (UNICEF, 2010).

4.6 Coping strategies

Household resilience is essentially measured in terms of access to resources and the ability to use them. The higher the initial endowment and the better the exchange opportunities, the more likely a household can protect itself in case of a shock. However, analyzing how households dealt with shocks in the past will also provide important insights into their coping strategies. Households that indicated to have experienced a shock with negative economic consequences were asked what they have done to mitigate these consequences. Of all the households that experienced at least one shock that had a negative impact, 42 percent indicated that they did nothing. 26 percent tried to find additional resources, 22 percent reduced their expenditures and 10 percent tried both approaches (Figure 16). Especially high mountain households tend to do nothing to mitigate the shock, though differences between special groups are not statistically significant. Given a list

FIGURE 15. WHETHER OR NOT SHOCK HAD AN IMPACT, PERCENTAGE OF THE POPULATION



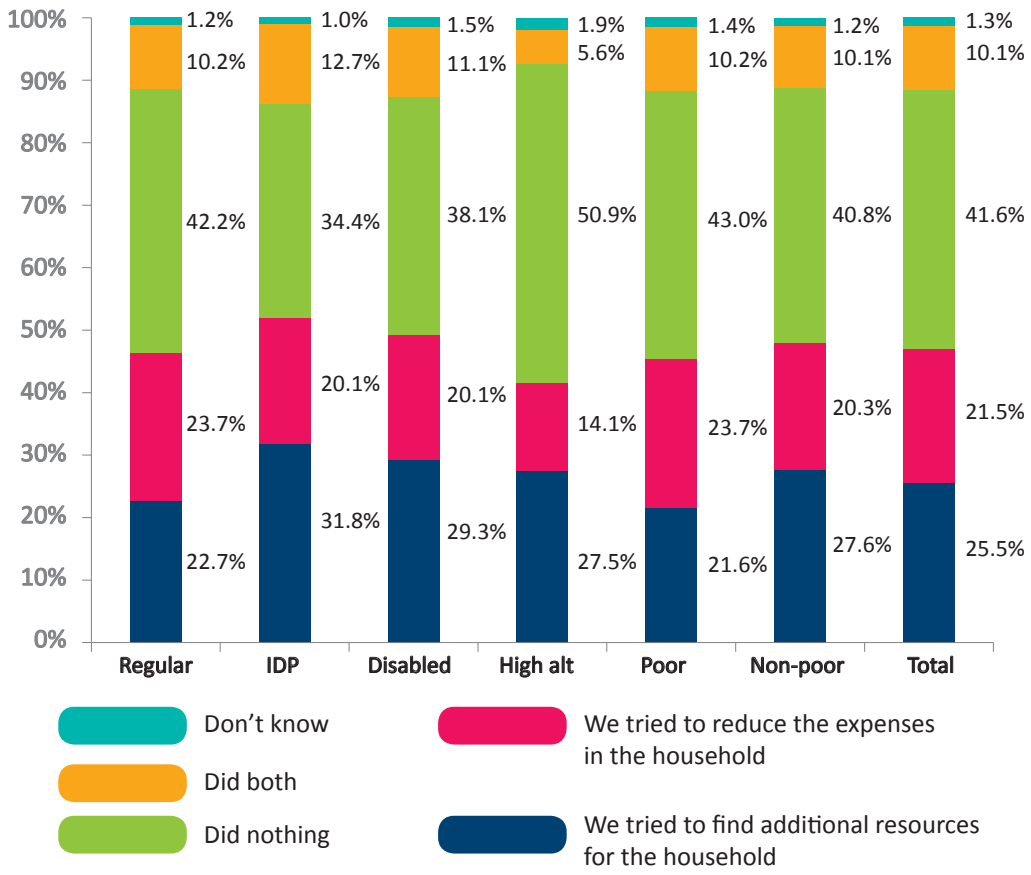
Source: Authors' calculations.
Note: Differences between groups are statistically significant at 1%-level, based on chi2 test for independence.

of options to improve their living conditions, the majority of the FGD participants chose a house in the city, motivated by better job and income generation opportunities in urban areas. Similar results were found in response to the impact of the recent global financial crisis. 62 percent of the households that experienced a worsened economic situation had no alternative means of to offset the effects (UNICEF, 2010:61).

Households apply different strategies to cope with a shock. Resource generation can go along different channels, ranging from additional income generation activities, asking families, relatives or friends for assistance, apply to public or private organizations or take up loans. Reducing expenditures, the second group of coping strategies, includes economizing on the use of goods and services, incurring debts or, in the worst case, referring to devastating measures, which may jeopardize the household's future capacity to maintain its well-being. With respect to strategies aimed at increasing household resources, borrowing money, either formally or informally, is the most prevalent strategy (24 percent), followed by asking for assistance (either in kind or in cash) from relatives, friends or other persons (23 percent) and income generation activities (22 percent) (Figure 18). Different groups apply different strategies. 31 percent of high mountain households tried first to get assistance from public or private organizations. This includes both request for social assistance from the state or the municipality or assistance from charity or religious organizations. In regular households, only 12 percent used this strategy as their first source to raise additional revenues. Disabled households have a slight preference for asking assistance from their social network first (23 percent), while IDP households prefer to borrow money (30 percent).

Among the potential strategies to reduce household expenditures, an overwhelming majority (95 percent) refers to economizing on the consumption of goods and services (Figure 19). This is in line with findings from the Unicef study, where most households responded to the financial crisis by changing

FIGURE 16. COPING STRATEGY IN RESPONSE TO A SHOCK, PERCENTAGE OF HOUSEHOLDS



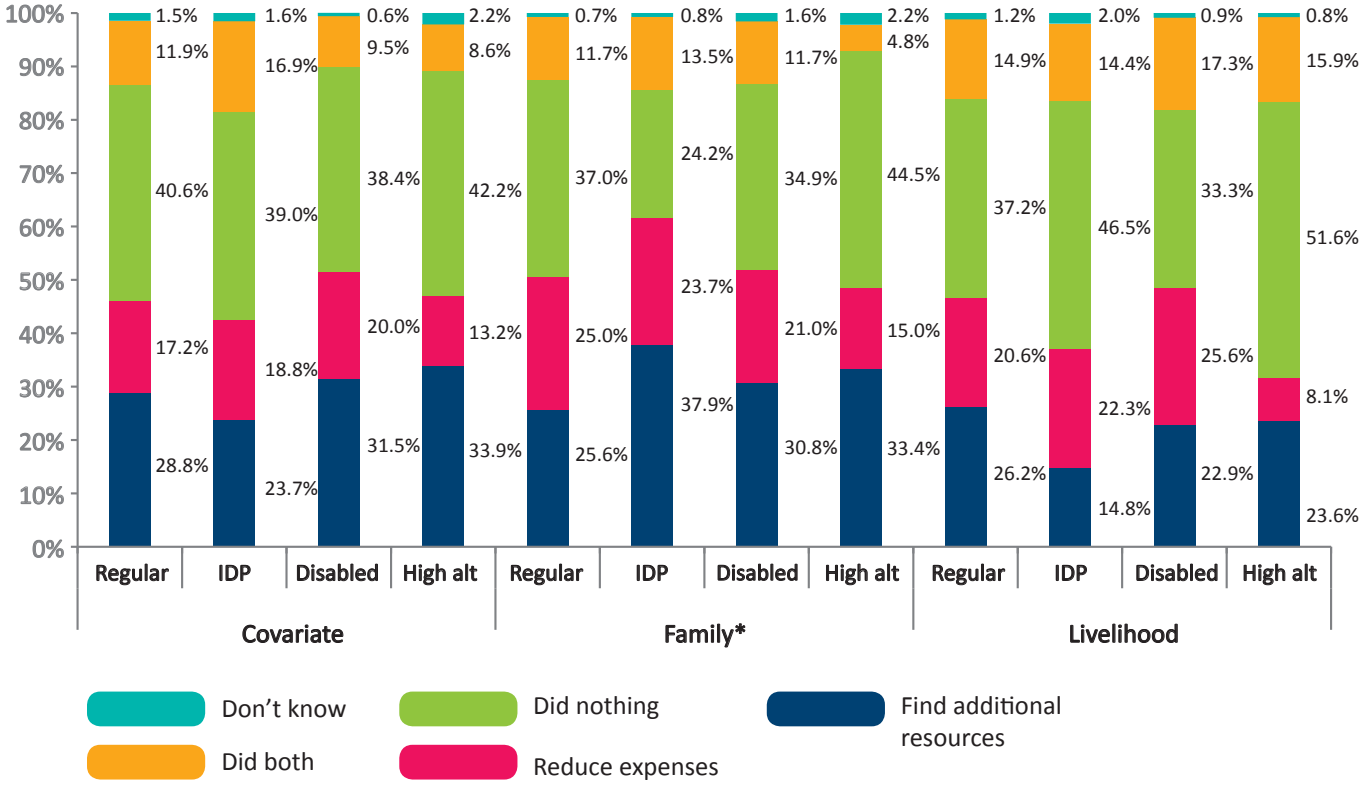
Source: Authors' calculations.
Note: Only households that experienced at least one shock which had a negative impact. Differences are statistically different for poor and non-poor households at 10%-level, based on chi2 test for independence. Differences are not statistically significant for special groups.

their consumption patterns (UNICEF, 2010: 63). Incurring debts (e.g. not paying utility bills, rent or paying back loans) is hardly used as a coping strategy. Furthermore, only 5 percent of the households referred to devastating measures, such as taking a child out of school, postponing enrolment, putting a child into an institution, reducing the use of health care services or cancelling insurances. Rather, households would reduce other expenses than jeopardize their children's education: "If there are two students in the household, the study payments are so high that almost all resources are necessary to cover these costs…", and "…I want a high quality education for my children…. I was able to put my gold as a collateral to get a loan from the Georgian Bank".[2] However, disabled households have a higher likelihood of applying such measures. Considering the high share of households referring to economizing measures, it is worthwhile to study this strategy in more detail (Figure 20). Reducing the consumption of food and non-food goods is the most prevalent options, applied both by about 40 percent of households. Reducing energy consumption (heating, gas, electricity) is done only by 17 percent of households. High mountain households are even less likely to economize on energy, though differences between special groups are not statistically different.

Asked, whether the first strategy used to mitigate the negative effects of the shock was successful, about half of the households indicated that the strategy helped at least a little (Table 43). Activities aimed at increasing household resources are clearly a better strategy than the reduction of expenditures. The creation of debts and activities to generate additional income were more likely to be successful for IDP households. In high mountain households and households with persons with disabilities, assistance from the

2 FGD with IDPs, 15 October, 2012.

FIGURE 17. COPING STRATEGIES IN RESPONSE TO DIFFERENT TYPES OF SHOCKS



Source: Authors' calculations.
Note: Significance levels based on chi2 test for independence: ***p-value<0.01; **p-value<0.05; *p-value<0.10.

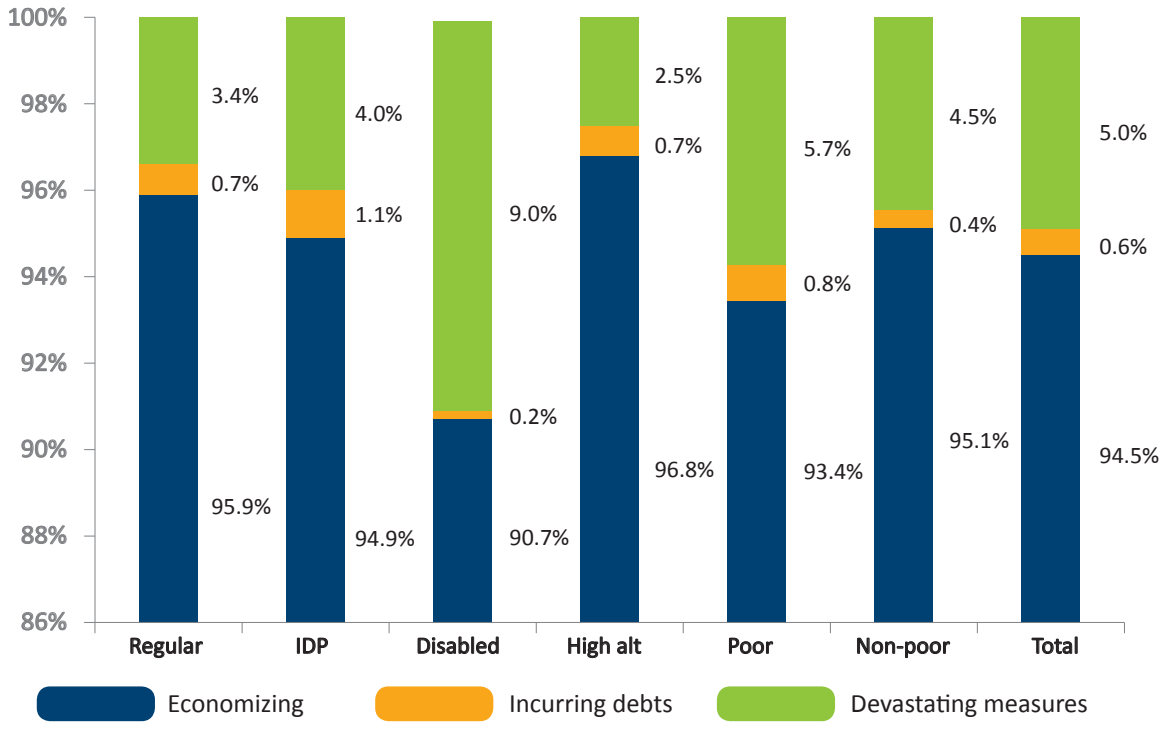
social network helped mitigate the negative impact of the shock. Overall, it seems that a pro-active strategy has a better chance of success than passively reducing expenses. Still, one should not forget that 40 percent of the households that experience a shock did nothing to mitigate the effects.

The conceptual framework of economic and social vulnerabilities posits that exposure to risks is a determinant of vulnerability as it makes the future uncertain. Not all households are equally exposed to risks and the potentially harmful consequences of a shock. The more resilient a household is, the better it may cushion the impact of a shock that threatens its livelihood. 65 percent of the total population suffered from at least one shock over the past five years. The likelihood of family-related shocks is higher among disabled households, whereas IDP households evidently are more likely to having been exposed to a livelihood shock, such as displacement. Notably, in case of shocks with negative impacts, not all households attempt to mitigate these detrimental impacts. The type of coping strategy employed serves as indication for the reliance on household resources and exchange opportunities. The search for additional resources is of particular interest in this context. The analysis above indicated that these resource-increasing strategies use both existing resources but are also guided by the abilities to use these resources. About one in five households would use the available human resources in the household, which essentially means increasing the labor market participation of household members. About the same share of households uses its social network to get assistance. Finally, a quarter of the households borrows money, and as such has access to financial resources, either formally or informally. While these outcomes are reassuring, the question remains why there is a rather large group of households that did nothing to mitigate the effects of the shock. While fatalistic feelings and lack of motivation may partly explain this rather passive attitude, reduced resilience, which is the result of both limited household resources and lack of exchange opportunities, may be another explanation.

FIGURE 18. STRATEGIES TO INCREASE RESOURCES, PERCENTAGE OF HOUSEHOLDS

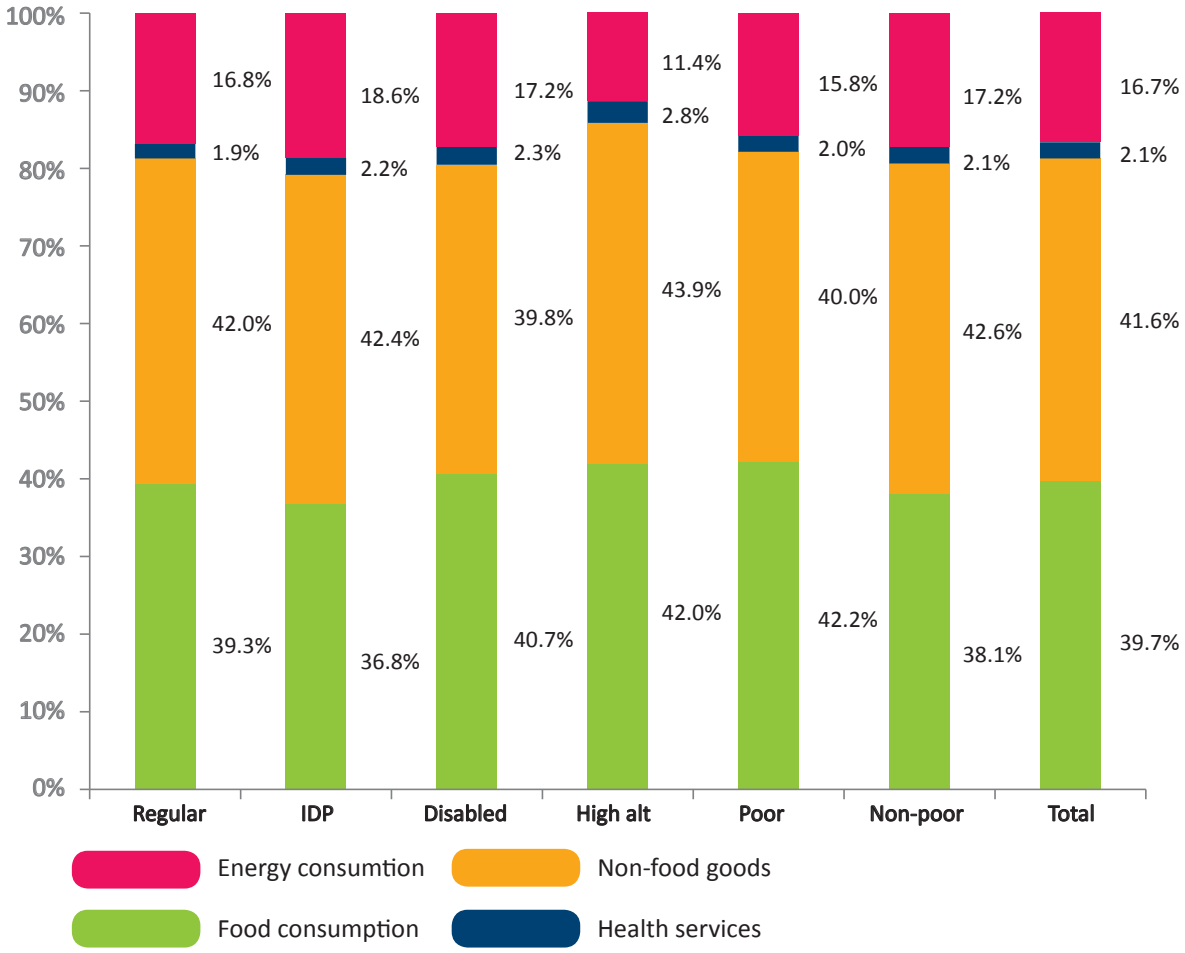
Source: Authors' calculations.
Note: Only households that tried increasing resources. Only first source. Differences are statistically significant at 5%-level for special groups and 1%-level for poor and non-poor, based on chi2 test for independence.

FIGURE 19. STRATEGIES TO REDUCE EXPENDITURES, PERCENTAGE OF HOUSEHOLDS



Source: Authors' calculations.
Note: Only households that tried reducing expenditures. Significance levels are based on chi2 test for independence. Differences between special groups are statistically significant at 1%-level, differences between poor and non-poor are not statistically significant.

FIGURE 20. PATTERNS OF ECONOMIZING CONSUMPTION, PERCENTAGE OF HOUSEHOLDS



Source: Authors' calculations.
Note: Only households that say to have economized on consumption. Differences between groups are not statistically significant, based on chi2 test for independence.

Table 43. Percentage of households for which the first strategy was successful (helped at least a little)

	Regular	IDP	Disabled	High alt	Poor	Non-poor
Income generation activities	44.6	60.1	48.7	67.9	40.1	51.1
Assistance from social network	69.6	54.6	69.9	75.5	63.5	71.2
Assistance from public/ private organizations	45.1	35.5	53.8	26.1	53.0	29.0
Creating debts	60.6	67.3	57.5	49.0	61.0	58.9
Other	59.4	75.1	51.4	79.6	60.8	59.2
Total	58.6	58.3	59.3	51.4	56.9	58.6
Economizing	28.3	21.5	23.5	43.2	18.3	33.4
Incurring debts	0.0	70.2	0.0	0.0	0.0	46.5
Devastating measures	19.9	0.0	0.0	0.0	0.0	11.3
Total	28.1	22.5	23.0	42.4	18.0	33.1

Source: Authors' calculations.
Note: Only households that experienced a shock with a negative impact and applied a particular strategy.

V. CONCLUSION

The process of political and economic modernization, accompanied by impressive and sustained economic growth, shaped the period between 2004 and mid-2008 in Georgia. Even the dual shock of the 2008 Georgian-Russian conflict and the global economic crisis only temporarily hit the economy that promptly recovered and soon returned to pre-crisis levels. Notwithstanding this track record, economic growth did not simultaneously translate into increased prosperity for all parts of the population. Depending on the chosen poverty threshold, headcount estimates range between 10 and 45 percent, and a Gini coefficient of 0.42 indicates high levels of inequality.

Lack of employment opportunities is among the most pressing issues and is on top of people's mind, as a 2012 national opinion poll revealed (Navarro & Woodward, 2010, 2012; CRRC, 2010). Anecdotal evidence further suggests that some groups are more likely to experience deprivations related to access to assets and basic services, and to encounter difficulty to fully participate in the social and political life. In particular, this refers to Internally Displaced People, people with disabilities and the high-mountain population. IDPs, people with disabilities and the high mountain population face differing problems in their daily lives. Firstly, IDPs encounter serious problems with regard to housing and living conditions. Many of the collective centers do not meet minimum shelter requirements (UNHCR, 2009b), and for those living in new IDP settlements, social infrastructure is insufficiently developed and privatization of individual housing is not an option. Limited access to formal sector employment due to lacking information, marginalization and missing networks is considered a key issue, as well as access to education, in particular higher education, and quality of education.

Secondly, people with disabilities express their desire to participate economically, but have very limited access to jobs and income generating activities. Inclusive education has not become reality yet, access to health care is problematic, and the physical infrastructure frequently ignores the special needs of people with disabilities. Finally, the high mountain population widely engages in agricultural activities that are oriented towards self-subsistence. Land plots are on average small, access to product markets is hampered, and productivity in the agricultural sector is low. Privatization and commercialization of previously commonly owned forests and meadows adversely affected poor villages since local farmers and entrepreneurs in general did not dispose of sufficient financial resources to take part in tenders. Finally, the lack of job opportunities leads to a continuous outflow of mostly young people.

This report presented a comprehensive baseline analysis of the dimensions, patterns and determinants of social and economic vulnerability in Georgia, with a particular focus on IDPs, people with disabilities and the population living in high mountain regions. It aimed at answering the question to what extent IDPs, people with disabilities and households living in high mountain regions are more vulnerable than other groups of the population. The study developed a multidimensional, country-specific approach to measure economic and social vulnerability and identified groups that suffer from single and multiple vulnerabilities. Furthermore, the report investigated the level of exposure to shocks and shed light on prevalent coping strategies.

Based on a multidimensional understanding of household well-being, vulnerability is equally conceptualized in a broader sense and economic and social vulnerability are distinguished. *Economic vulnerability* is the risk of becoming income poor, or the inability to maintain the living standard in the event of a welfare shock. *Social vulnerability* is defined as the risk of not being able to fully participate in economic, social and civic life. Economic and social vulnerability are driven by deprivations in resources (financial, physical, human, social), inability to use these resources (access to markets, public services, and social resources), personal characteristics and the probability that a shock occurs.

Overall, group membership more strongly determines vulnerability with respect to household resources than indicators that capture the ability to use resources. As expected based on previous findings, and also confirmed by the qualitative analysis, IDP households are most vulnerable with respect to land and house ownership. In contrast,

IDP and disabled households' vulnerability to financial resources is partly reduced due to the fact that they are more likely to enjoy some type of regular income. Considering vulnerability to human resources, a major concern arises from the fact that all three groups are more likely to suffer from bad health than regular households. Though, this finding probably results from different factors, such as traumatic experiences and inadequate living conditions for IDP, or the demographic structure in high mountain regions with an older than average population. Vulnerability to health is further increased by the difficulty to access health care that can be caused by financial constraints, restricted health insurance coverage, or non-availability of adequate health care facilities in the community. These issues were also frequently mentioned in the FGDs. **Despite of these effects of group membership on vulnerability, the poverty status of a household in general is a much stronger predictor of economic and social vulnerability.**

The construction of two multidimensional vulnerability indices for the resource and access dimensions respectively revealed that resource vulnerability is more widespread in Georgia than access vulnerability (54 and 42 percent respectively). One fifth of the Georgian population is vulnerable in both dimensions, with the share being highest among IDP households (30 percent). Remarkably, group membership plays a limited role as determinant of multidimensional vulnerability. The only exception emerges with regard to high mountain households that have a higher probability of being access vulnerable. Once again, the monetary poverty status of a household is a better determinant for multidimensional vulnerability, both with respect to resources and exchange opportunities.

Finally, exposure to shock contributes to the degree of social and economic vulnerability of a household. 65 percent of the total population suffered from at least one shock within the past five years. The likelihood of family-related shocks is higher among disabled households, whereas IDP households evidently are more likely to having been exposed to a livelihood shock, such as displacement. Notably, in case of shocks with negative impacts, not all households attempt to mitigate these detrimental impacts. Moreover, disabled households are more likely to employ devastating measures, though this in general is rather rare.

The overall conclusion from this study is not as straightforward as one might wish. This has all to do with the way the study was set up and analyzed. The conclusions as to which groups are most vulnerable with respect to specific indicators and dimensions get more nuanced when moving from bivariate to multivariate analyses. Clearly, levels and patterns of vulnerability differ across different groups of the population. At first sight, looking only at vulnerability incidence with respect to the different indicators and groups, we find statistically significant differences in most cases. One is tempted to conclude that group membership indeed plays a role, sometimes to the positive and sometimes to the negative, depending on the respective indicator. However, the analysis has shown that other personal and household characteristics play a much larger role in determining social and economic vulnerability. Household size, the demographic composition of the household, personal characteristics of the household members, such as the level of education or the employment status, are variables often more strongly correlated with the outcome. **In the end, one of the strongest and most consistent predictors of social vulnerability is the monetary poverty status of the household. Poor household have fewer financial, human and social resources. They have limited access to financial and product markets and are less likely to get support from their social network.**

ANNEXES

A1. Composite indicators for connectedness and support Connectedness (Question 8.2)

This study employs six indicators that measure feelings of connectedness with other people and felling of emptiness. In particular, respondents were asked whether or not the following statements describe their feelings, more or less describe their feelings, or do not describe their feelings: 1) there are many people I can trust completely; 2) I experience a general feeling of emptiness; 3) there are enough people to whom I feel close; 4) there are plenty of people I can rely on when I have problems; 5) I often feel rejected; 6) I don't have real friends, just acquaintances. Three point categorical ordinal scales were used to measure these items. To simplify analysis we decided to reduce dimensions of this multivariate data. The analysis of a correlation matrix (Table A 1.) for these variables substantiates possibility of employing factor analysis for attaining this objective.

Table A 1. Correlation matrix for questions 8.2.1-8.2.6

	How the following statement describes your feelings: there are enough people to whom I feel close	How the following statement describes your feelings: I often feel rejected	How the following statement describes your feelings: I experience a general feeling of emptiness	How the following statement describes your feelings: there are plenty of people I can rely on when I have problems	How the following statement describes your feelings: there are many people I can trust completely	How the following statement describes your feelings: I don't have real friends, just acquaintances
How the following statement describes your feelings: there are enough people to whom I feel close	1.000	-0.201	-0.195	0.589	0.452	-0.090
How the following statement describes your feelings: I often feel rejected	-0.201	1.000	0.604	-0.185	-0.148	0.293
How the following statement describes your feelings: I experience a general feeling of emptiness	-0.195	0.604	1.000	-0.209	-0.188	0.284
How the following statement describes your feelings: there are plenty of people I can rely on when I have problems	0.589	-0.185	-0.209	1.000	0.516	-0.090
How the following statement describes your feelings: there are many people I can trust completely	0.452	-0.148	-0.188	0.516	1.000	-0.126
How the following statement describes your feelings: I don't have real friends, just acquaintances	-0.090	0.293	0.284	-0.090	-0.126	1.000

Source: Authors' calculations.

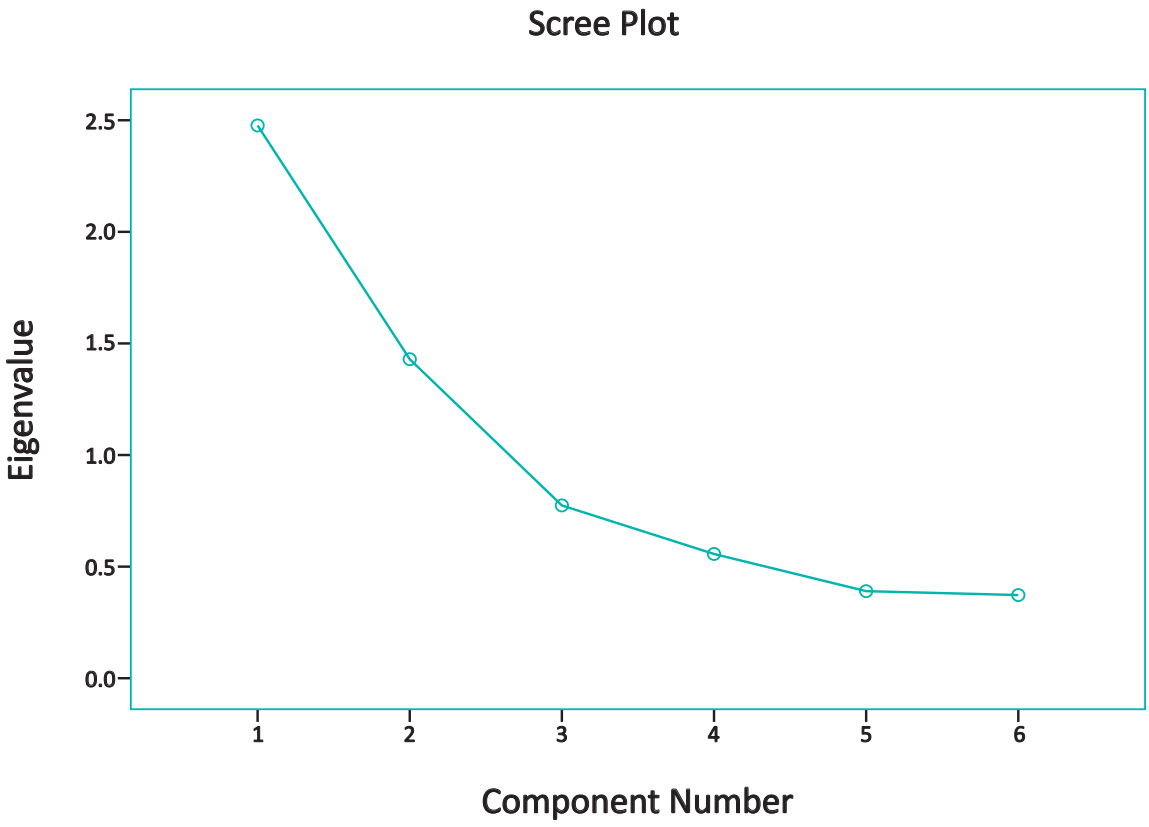
However, the linearity assumptions of the factor analysis may not be an appropriate device for dealing with the categorical scales employed in measuring feelings of connectedness and emptiness in this study. Thus we decided to employ non-linear or categorical principal component analysis (CATPCA) using the relevant Category module in SPSS (Meulman & Heiser, 1999). The output of non-linear PCA for feelings of connectedness and emptiness variables is summarized below. The main indicators of two-component solution model including total percentage of variance-accounted-for (Total PVAF or Eigenvalue) in the transformed variables and based on it Cronbach's α (Cronbach, 1951) are presented in Table A 2. The data in Table A 2 as well as the scree plot (Figure A 1) suggest appropriateness of two-component solution.

Table A 2. Model Summary

Dimension	Cronbach's Alpha	Variance Accounted For
		Total (Eigenvalue)
1	0.719	2.495
2	0.366	1.440
Total	0.895[a]	3.935

Source: Authors' calculations.
Note: a. Total Cronbach's Alpha is based on the total Eigenvalue.

FIGURE A 1. SCREE PLOT



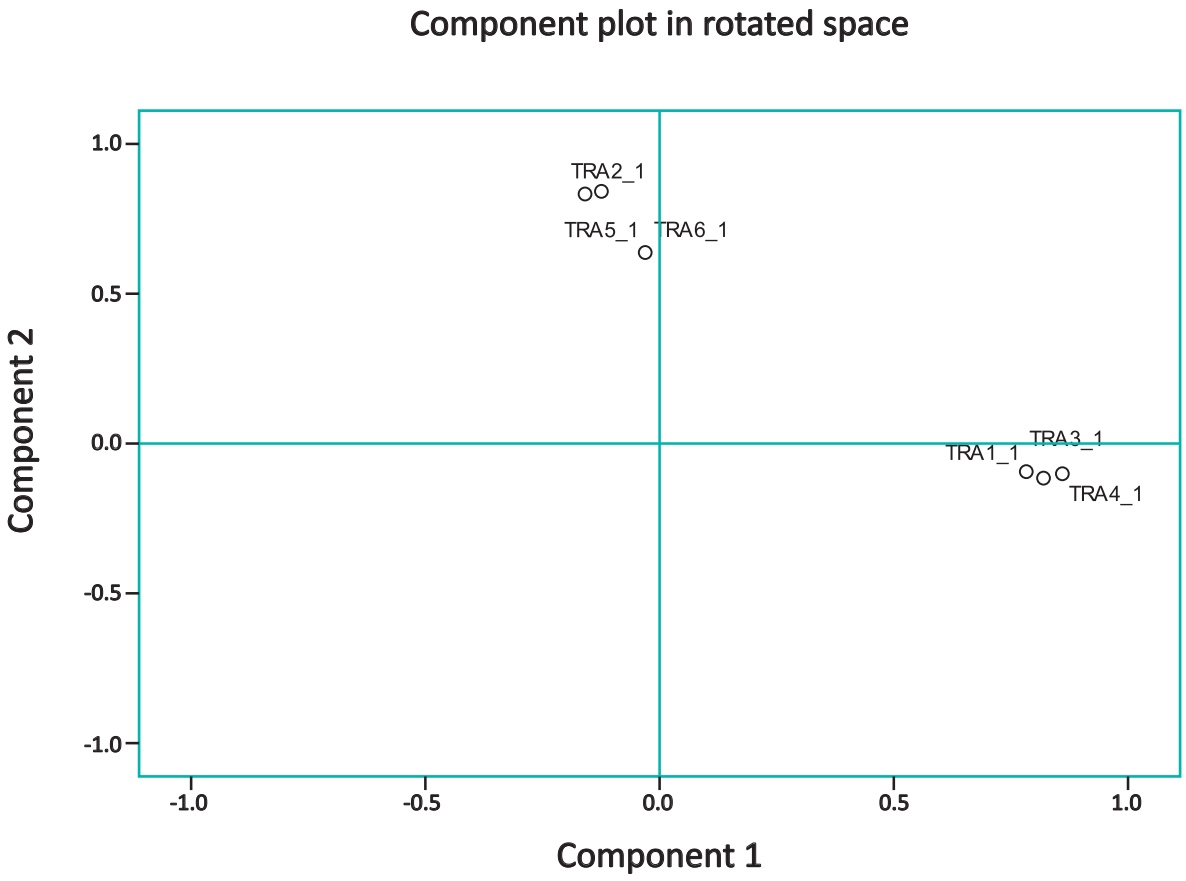
The analysis of component loadings of the rotated (Varimax rotation) matrix is presented in Table A 3. Component Loadings allow for straightforward interpretation of categorical PCA solution. In particular, the first, the third and the fourth indicators have high loadings on the first component, while the other items have high loadings on the second one. Thus we define these components correspondingly as "connectedness with people" and "feeling of emptiness". The graphical illustration of factor loadings is presented in Figure A 2 (where: TRA1_1 – There are many people I can trust completely; TRA2_1 – I experience a general feeling of emptiness; TRA3_1 – There are enough people to whom I feel close; TRA4_1 – There are plenty of people I can rely on when I have problems; TRA5_1 – I often feel rejected; TRA6_1 – I don't have real friends, just acquaintances).

Table A 3. Component Loadings

	Component	
	1	2
How the following statement describes your feelings: there are many people I can Quantification	0.784	-0.081
How the following statement describes your feelings: I experience a general feel Quantification	-0.174	0.829
How the following statement describes your feelings: there are enough people to Quantification	0.821	-0.102
How the following statement describes your feelings: there are plenty of people Quantification	0.860	-0.088
How the following statement describes your feelings: I often feel rejected Quantification	-0.139	0.839
How the following statement describes your feelings: I don't have real friends, Quantification	-0.045	0.633

Source: Authors' calculations.

FIGURE A 2. COMPONENT LOADINGS IN ROTATED SPACE



Based on the components received in the previous stage, our further task was to classify the sample in two categories. One of the categories must unite people who are well connected and do not fill empty while the other one must incorporate those respondents who fill empty and are poorly connected with other people. We employ non-hierarchical K-Means cluster analysis to attain this objective. The results of K-Means Cluster analysis are presented in Table A 4. According to the table, Cluster 1 incorporates 1047 respondents or 24.3 percent of the sample, while Cluster 2 more than 75 percent.

Table A 4. Cluster analysis results

	Frequency	Percent	Valid Percent	Cumulative Percent
Cluster 1	1047	24.3	24.3	24.3
Cluster 2	3254	75.7	75.7	100.0
Total	4301	100.0	100.0	

Source: Authors' calculations.

The analysis of correlation of cluster variable with components received from PCA and initial variables (Table A 5) allows for good interpretation of clusters. It is obvious that the Cluster 1 per se consists from people who is vulnerable in terms of social connections, while respondents in Cluster 2 are well connected to others and don't fill themselves empty.

Table A 5. Correlation analysis of cluster variables with components and initial 'connectedness' variables

		Social connectedness cluster	Connectedness with people	Feeling of emptiness	TRA1_1: There are many people I can trust completely	TRA2_1 – I experience a general feeling of emptiness	TRA3_1 – There are enough people to whom I feel close	TRA4_1 – There are plenty of people I can rely on when I have problems	TRA5_1 – I often feel rejected	TRA6_1 – I don't have real friends, just acquaintances
Social connectedness cluster	Pearson Correlation	1	-0.634**	0.571**	-0.205**	0.751**	-0.216**	-0.217**	0.812**	0.401**
	Sig. (2-tailed)		0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	N	4301	4301	4301	4189	4176	4226	4168	4188	4085
Connectedness with people	Pearson Correlation	-0.634**	1	0.001	0.659**	-0.653**	0.693**	0.714**	-0.630**	-0.430**
	Sig. (2-tailed)	0.000		0.926	0.000	0.000	0.000	0.000	0.000	0.000
	N	4301	4301	4301	4189	4176	4226	4168	4188	4085
Feeling of emptiness	Pearson Correlation	0.571**	0.001	1	0.363**	0.552**	0.377**	0.405**	0.582**	0.468**
	Sig. (2-tailed)	0.000	0.926		0.000	0.000	0.000	0.000	0.000	0.000
	N	4301	4301	4301	4189	4176	4226	4168	4188	4085
TRA1_1: There are many people I can trust completely	Pearson Correlation	-0.205**	0.659**	0.363**	1	-0.231**	0.425**	0.496**	-0.175**	-0.160**
	Sig. (2-tailed)	0.000	0.000	0.000		0.000	0.000	0.000	0.000	0.000
	N	4189	4189	4189	4189	4111	4154	4109	4116	4022
TRA2_1 – I experience a general feeling of emptiness	Pearson Correlation	0.751**	-0.653**	0.552**	-0.231**	1	-0.223**	-0.243**	0.621**	0.306**
	Sig. (2-tailed)	0.000	0.000	0.000	0.000		0.000	0.000	0.000	0.000
	N	4176	4176	4176	4111	4176	4141	4096	4117	4015
TRA3_1 – There are enough people to whom I feel close	Pearson Correlation	-0.216**	0.693**	0.377**	0.425**	-0.223**	1	0.571**	-0.234**	-0.111**
	Sig. (2-tailed)	0.000	0.000	0.000	0.000	0.000		0.000	0.000	0.000
	N	4226	4226	4226	4154	4141	4226	4143	4157	4063
TRA4_1 – There are plenty of people I can rely on	Pearson Correlation	-0.217**	0.714**	0.405**	0.496**	-0.243**	0.571**	1	-0.219**	-0.116**
	Sig. (2-tailed)	0.000	0.000	0.000	0.000	0.000	0.000		0.000	0.000
	N	4168	4168	4168	4109	4096	4143	4168	4114	4022
TRA5_1 – I often feel rejected	Pearson Correlation	0.812**	-0.630**	0.582**	-0.175**	0.621**	-0.234**	-0.219**	1	0.306**
	Sig. (2-tailed)	0.000	0.000	0.000	0.000	0.000	0.000	0.000		0.000
	N	4188	4188	4188	4116	4117	4157	4114	4188	4033
TRA6_1 – I don't have real friends, just acquaintainces	Pearson Correlation	0.401**	-0.430**	0.468**	-0.160**	0.306**	-0.111**	-0.116**	0.306**	1
	Sig. (2-tailed)	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
	N	4085	4085	4085	4022	4015	4063	4022	4033	4085

Source: Authors' calculations.

Note: **Correlation is significant at the 0.01 level (2-tailed).

Support (Question 7)

In this section we discuss the transformation of four variables that reflect availability of support from relative and friends into a single social network construct. The respondents were asked from whom they would get support in each of the following situations: 1) if you needed help around the house when ill; 2) if you needed advice about a serious personal or family matter; 3) if you needed help when looking for a job; 4) if you were feeling a bit depressed and wanting someone to talk to. The items were initially measured with a nine-point categorical scale and further recoded into binary variable where '0' indicates that there is nobody to help (item 8) and '1' otherwise. A household is considered as vulnerable if there is nobody to help in each of above-mentioned situations.

The analysis of the correlation matrix (Table A 6) reveals correlations between the first, second and fourth items. Thus we apply non-linear PCA method only to these three variables in order to reduce dimensionality of social network construct. The output of the analysis presented in Table A 7 suggests appropriateness of a one-component solution. The analysis of the component loadings matrix presented in Table A 8 shows that all variables have high loadings on the underlying construct with 'Support if needed advice in family matter' having the highest one.

Table A 6. Correlation matrix for variables 7.1-7.4

	Support if needed help around the house when ill	Support when depressed	Support when looking for job	Support if needed advice in family matter
Support if needed help around the house when ill	1.000	0.213	0.100	0.353
Support when depressed	0.213	1.000	0.202	0.296
Support when looking for job	0.100	0.202	1.000	0.184
Support if needed advice in family matter	0.353	0.296	0.184	1.000

Source: Authors' calculations.

Table A 7. Model Summary

Dimension	Cronbach's Alpha	Variance Accounted For
		Total (Eigenvalue)
1	0.600	1.667
Total	0.600[a]	1.667

Source: Authors' calculations.
Note: a. Total Cronbach's Alpha is based on the total Eigenvalue.

Table A 8. Component Loadings

	Component
	1
Support when depressed	0.697
Support if needed advice in family matter	0.790
Support if needed help around the house when ill	0.747

Source: Authors' calculations.

Based on the components identified in the previous stage, our further task was to classify the sample in two categories. These categories will distinguish between people for whom support is available and for whom support is not available. As in the previous case, non-hierarchical K-Means cluster analysis is employed to attain this objective. The results of K-Means Cluster analysis are presented in Table A 9 that shows that Cluster 1 incorporates 4123 respondents or 95.9 percent of the sample, while Cluster 2 only includes 4.1 percent of the respondents.

The analysis of the correlation of cluster variable with the initial variables (Table A 10) suggests that the Cluster 1 incorporates people who have strong support from relatives and friends while Cluster 2 consists of people who lack such a support.

Table A 9. Cluster analysis results

	Frequency	Percent	Valid Percent	Cumulative Percent
Cluster 1	4123	95.9	95.9	95.9
Cluster 2	178	4.1	4.1	100
Total	4301	100	100	

Source: Authors' calculations.

Table A 10. Correlation analysis of cluster variables with initial 'availability of support' variables

		Support if needed help around the house when ill	Support if needed advice in family matter	Support when depressed	Cluster variable for availability of support
Support if needed help around the house when ill	Pearson Correlation	1	0.353**	0.213**	-0.679**
	Sig. (2-tailed)		0.000	0.000	0.000
	N	4301	4301	4301	4301
Support if needed advice in family matter	Pearson Correlation	0.353**	1	0.296**	-0.860**
	Sig. (2-tailed)	0.000		0.000	0.000
	N	4301	4301	4301	4301
Support when depressed	Pearson Correlation	0.213**	0.296**	1	-0.292**
	Sig. (2-tailed)	0.000	0.000		0.000
	N	4301	4301	4301	4301
Cluster variable for availability of support	Pearson Correlation	-0.679**	-0.860**	-0.292**	1
	Sig. (2-tailed)	0.000	0.000	0.000	
	N	4301	4301	4301	4301

Source: Authors' calculations.

A2. Statistical annex

Table A 11. Subsistence minimum Georgia (GEL)

Subsistence minimum (Georgia, GEL) (December)	2004	2005	2006	2007	2008	2009	2010	2011
For working age male	96.2	98.3	120.3	115.9	130.7	126.1	149.6	156.9
For average consumer	85.2	87.1	106.5	102.7	115.8	111.7	132.5	139
For average family	161.4	164.9	201.7	194.4	219.3	211.5	250.9	263.3
Type of household								
Single member	85.2	87.1	106.5	102.7	115.8	111.7	132.5	139
Two member	136.3	139.3	170.4	164.2	185.2	178.7	212	222.4
Three member	153.4	156.7	191.7	184.8	208.4	201	238.5	250.2
Four member	170.4	174.1	213.1	205.3	231.6	223.4	265	278
Five member	191.7	195.9	239.7	231	260.5	251.3	298.1	312.8
Six and more member	226.7	231.6	283.4	273.1	308	297.1	352.4	369.8
Growth of subsistence minimum (for working age male, average family and average consumer) (December to December, %)	100	102.2	122.4	96.3	112.8	96.5	118.6	104.9
Inflation (December to December, %)	100	106.2	108.8	111	105.5	103	111.2	102

Source: Social Service Agency. www.ssa.gov.ge, www.geostat.ge. www.nbg.gov.ge

Table A 12: Composition of income, percentage of total

	Regular	IDP	Disabled	High alt	Not poor	Poor	Urban	Rural
Wage	32.5	25.9	22.1	14.4	31.7	21.7	41.2	16.1
Self-employment	9.3	7.4	6.6	2.8	9.1	6.0	10.3	5.8
Agricultural production	7.8	1.6	5.9	19.9	9.1	6.4	0.6	15.1
Property income	0.6	0.1	0.3	0.3	0.5	0.3	0.8	0.1
Social transfers	15.0	32.0	31.0	20.0	15.0	29.1	18.6	21.5
Remittances	2.6	2.8	2.7	3.0	3.2	1.8	3.1	2.3
Family transfers	11.0	15.3	9.9	5.4	8.9	13.3	12.2	9.0
Selling property	0.8	0.3	0.3	0.0	0.6	0.6	0.8	0.4
Borrowing, dis-saving	7.5	8.3	8.2	8.6	8.3	6.9	8.2	7.5
Income in kind	12.9	6.3	13.1	25.8	13.6	14.1	4.4	22.3
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Source: Authors'own caculations.

Table A 13. Household resources by poverty status and location, percentage of the population

	Non-poor	Poor	Sign	Urban	Rural	Sign	Total
FINANCIAL RESOURCES							
Expenditures below MSL per capita				31.0	40.6	***	36.0
Household cannot save/lend	56.2	68.8	***	59.5	61.9	ns	60.8
Household owes money to bank and has debts with others	19.4	27.3	***	22.4	22.1	ns	22.2
Household has no income from wage or old-age pension	19.6	25.8	***	19.0	24.5	***	21.9
Household as no income from wage, old-age or disability pension, or IDP benefits	15.8	20.1	***	14.1	20.3	***	17.3
PHYSICAL RESOURCES							
Household owns no land	41.2	37.0	ns	75.4	6.8	***	39.7
Household has no livestock	50.9	45.9	*	86.8	14.5	***	49.1
Household has at most one household durable	23.2	47.4	***	15.4	47.1	***	31.9
Household has at most at most two electronic appliances	22.5	48.0	***	28.2	34.8	***	31.6
Does not own the house/apartment	7.9	10.3	*	13.0	4.8	***	8.8
HOUSING							
Less than 12m2 per person living space	23.0	36.8	***	38.9	17.8	***	27.9
Inappropriate walls, roof and floor	40.9	43.2	ns	55.1	29.4	***	41.7
Inappropriate access to water and sanitation	48.6	62.3	***	21.8	82.7	***	53.5
HUMAN RESOURCES							
The highest degree of education in household is below secondary special (professional)	24.5	41.3	***	16.1	43.8	***	30.5
Less than 50% of working-age household members are employed	30.2	46.1	***	47.3	25.5	***	36.0
Share of employed household members (all) is below national average	48.5	65.4	***	66.3	43.8	***	54.6
There is no hired employed person in the household	45.2	63.0	***	35.4	66.5	***	51.6
There is at least one person with chronic disease in the household	55.8	61.0	**	57.8	57.5	ns	57.6
At least one person in the household who estimates his health condition as bad/very bad	48.1	57.7	***	45.2	57.3	***	51.5
SOCIAL RESOURCES							
No one with higher status among relatives and friends	12.3	18.4	***	11.3	17.4	***	14.5
Don't use TV, newspapers or online media as primary source of information	23.7	21.8	ns	27.0	19.2	***	22.9
No internet at home	67.5	87.2	***	51.7	95.6	***	74.6
No fixed or mobile phone	6.8	19.6	***	4.2	18.1	***	11.4
Lack of connectedness	16.3	26.4	***	20.9	19.0	ns	19.9
No association in community	20.3	24.8	**	6.7	35.9	***	21.9
Less than two association in community	37.2	45.8	***	13.2	65.2	***	40.3

Source: Authors' calculations.

Note: Significance levels based on chi2 test for independence: ***p-value<0.01; **p-value<0.05; *p-value<0.10.

Table A 14. Possession of household durables and electronic appliances, percentage of the population

	Total	Regular	IDP	Disabled	High alt	Not poor	Poor	Urban	Rural
Household durables									
Refrigerator	70.3	71.8	71.2	69.4	61.6	77.6	57.2	82.7	58.8
Washing machine	48.3	50.3	43.6	47.5	39.7	58.8	29.6	63.2	34.6
Vacuum	21.2	22.5	16.7	21.0	16.4	28.7	7.9	33.0	10.3
Sewing machine	22.3	22.8	10.4	25.6	19.3	26.4	15.2	24.9	20.0
Gas / electric stove	70.6	72.7	70.4	71.3	55.2	76.5	60.1	87.3	55.2
Air conditioner	3.3	3.6	1.5	4.5	0.1	5.0	0.3	6.2	0.6
Heater	20.7	23.1	21.9	20.6	4.2	26.2	10.9	39.5	3.4
Electronic appliances									
Radio	4.2	4.7	2.5	3.9	2.3	5.6	1.8	4.6	3.8
TV	97.0	97.0	96.1	96.7	97.7	97.5	95.9	98.1	95.9
Record player	0.3	0.4	0.0	0.2	0.5	0.5	0.0	0.2	0.5
VCR	10.1	10.7	6.2	9.9	8.8	13.9	3.2	13.2	7.2
Cassette player	8.7	9.9	4.3	8.9	3.4	10.9	4.8	10.7	6.9
Piano	22.9	24.3	10.5	28.2	8.8	28.2	13.5	32.1	14.4
Camera	12.0	13.0	6.7	13.5	5.5	17.5	2.4	17.9	6.7
PC	32.2	35.6	35.6	30.5	11.8	40.6	17.4	55.7	10.7
DVD player	18.1	18.4	15.2	17.7	18.4	22.9	9.5	18.5	17.7
Music player	10.4	11.5	7.4	9.7	6.7	13.6	4.7	14.2	6.8
Mobile phone	85.6	87.2	85.4	80.9	85.9	90.8	76.4	92.0	79.6
Phone	40.9	38.1	43.1	40.3	59.8	42.1	38.8	23.9	56.6
Videocamera	2.7	3.2	0.7	2.4	0.6	4.0	0.2	4.5	0.9
Satellite dish	20.3	17.1	9.0	14.3	63.0	23.4	14.8	9.8	29.9

Source: Authors' calculations.

Table A 15. Access to markets and services by poverty status and location, percentage of the population

	Non-poor	Poor	Sign	Urban	Rural	Sign	Total
ACCESS TO MARKETS							
No household member has bank account	14.4	21.9	***	13.6	20.2	***	17.1
Household could not raise 1000 lari in emergency	18.2	31.4	***	27.6	18.6	***	22.9
Household has no vehicle	57.9	80.7	***	66.9	65.4	ns	66.1
ACCESS TO MARKETS							
Very difficult to find a job	52.6	58.5	**	55.8	53.8	ns	54.7
Very few or none job vacancies	34.4	40.5	***	34.0	39.1	***	36.6
No job vacancies as the biggest obstacle to find a job	35.8	42.5	***	29.7	46.0	***	38.2
ACCESS TO SERVICES							
Not all hh members have proper health insurance	88.7	69.8	***	87.5	76.8	***	81.9
Policlinic or medical center not within 30min distance	10.6	9.4	ns	4.3	15.6	***	10.2
Did not apply for SA although needed	45.9	24.7	***	46.4	30.8	***	38.3
ACCESS TO SOCIAL RESOURCES							
No participation in any of associations	17.2	11.8	***	9.4	20.7	***	15.3
No one to get support	1.7	3.5	***	2.6	2.1	ns	2.4

Source: Authors' calculations.
Note: Significance levels based on chi2 test for independence: ***p-value<0.01; **p-value<0.05; *p-value<0.10.

Table A 16. Reasons for not seeking treatment if in need of dental care, percentage of ill persons not seeking treatment

	Regular	IDP	Disabled	High alt	Poor	Non-poor	Total
Chronically ill							
Lack of money	81.0	79.9	74.6	74.3	83.7	73.6	78.0
No cure anyway	2.8	2.3	7.0	6.4	3.0	5.9	4.6
No need	13.1	15.1	14.8	9.2	10.8	15.5	13.5
Other	3.2	2.7	3.5	10.0	2.6	5.0	4.0
Ill during last 3 months							
Lack of money	50.7	37.7	59.0	61.0	61.8	46.6	53.5
No doctor nearby	5.4	0.0	1.2	1.1	6.9	0.8	3.5
Not necessary	43.2	49.7	33.3	35.8	28.2	49.7	40.0
Other	0.8	12.7	6.5	2.1	3.1	2.9	3.0
In need of dental care							
Lack of money	86.8	98.6	87.6	85.5	93.3	83.0	87.1
No dentist nearby	6.2	0.8	4.5	5.4	2.2	8.1	5.8
Afraid	2.6	0.3	2.2	2.2	1.6	3.0	2.5
Going soon	3.9	0.3	4.6	4.5	2.3	5.1	4.0
Other	0.5	0.0	1.1	2.5	0.6	0.8	0.7

Source: Authors' calculations.

Table A 17. Contacts with family, neighbors, friends and colleagues, percentage

	Non-poor	Poor	Sign	Urban	Rural	Sign	Total
Never or few spending time and contacts with family	12.28	27.60	***	14.94	20.42	***	17.79
Never or few spending time and contacts with neighbors	17.54	17.28	ns	21.78	13.46	***	17.45
Never or few spending time and contacts with friends	19.24	35.90	***	17.88	32.00	***	25.23
Never or few spending time and contacts with colleagues	14.62	12.69	***	17.69	10.46	***	13.92

Source: Authors' calculations.
Note: Significance levels based on chi2 test for independence: ***p-value<0.01; **p-value<0.05; *p-value<0.10.

Table A 18. Access to means of transportation, percentage of the population

	Total	Regular	IDP	Disabled	High alt	Not poor	Poor	Urban	Rural
Bicycle	5.2	5.6	3.6	5.8	2.1	6.8	2.4	4.5	5.8
Motorcycle	0.4	0.5	0.0	0.2	0.5	0.5	0.2	0.3	0.6
Car	27.0	29.3	13.2	24.8	25.2	34.2	14.2	29.9	24.3
Truck	3.8	3.0	2.7	2.6	12.6	5.0	1.8	1.8	5.7
Mini tractor / block	2.5	2.4	0.0	2.9	4.3	3.1	1.6	0.5	4.4
Tractor	1.5	1.2	0.3	1.1	5.2	2.0	0.6	0.1	2.8

Source: Authors' calculations.

Table A 19. Type of shock experienced and impact on economic situation, percentage of the population

	Regular	IDP	Disabled	High alt	Sign	Poor	Non-poor	Sign	Total
Serious illness of a family member	30.7	42.5	59.6	40.5	***	37.7	40.8	ns	38.8
It has significantly worsened	66.2	67.7	70.6	65.4		71.4	65.5		67.7
It has somewhat worsened	20.4	16.3	20.9	25.0		19.9	21.3		20.8
It has essentially not worsened	12.7	16.0	8.2	9.2	ns	8.2	12.8	ns	11.0
Don't know	0.7	0.0	0.3	0.4		0.6	0.4		0.5
Total	100.0	100.0	100.0	100.0		100.0	100.0		100.0
Armed conflict in the region	10.5	21.8	13.2	0.7	***	12.3	10.1	ns	10.9
It has significantly worsened	22.3	53.4	16.7	3.9		31.1	19.6		24.3
It has somewhat worsened	16.1	10.7	20.1	77.4		12.6	20.0		17.0
It has essentially not worsened	60.5	35.9	63.1	18.7	*	55.5	59.9	*	58.1
Don't know	1.1	0.0	0.0	0.0		0.9	0.5		0.7
Total	100.0	100.0	100.0	100.0		100.0	100.0		100.0
Displacement	2.7	15.7	3.1	1.0	***	4.5	2.7	**	3.4
It has significantly worsened	47.1	70.9	41.5	54.8		57.4	48.2		52.6
It has somewhat worsened	26.9	11.3	15.9	34.4		11.9	28.5		20.5
It has essentially not worsened	24.0	17.9	42.6	10.8	ns	30.7	21.3	ns	25.8
Don't know	2.1	0.0	0.0	0.0		0.0	2.0		1.0
Total	100.0	100.0	100.0	100.0		100.0	100.0		100.0
Loss of house	0.8	9.6	0.8	1.2	***	1.6	1.2	ns	1.4
It has significantly worsened	93.2	100.0	100.0	74.3		100.0	91.8		95.3
It has somewhat worsened	0.0	0.0	0.0	25.7	*	0.0	3.8	ns	2.2
Don't know	6.8	0.0	0.0	0.0		0.0	4.4		2.5
Total	100.0	100.0	100.0	100.0		100.0	100.0		100.0
Drought	19.8	9.3	24.1	33.9	***	22.9	20.7	ns	21.5
It has significantly worsened	40.7	40.2	46.0	59.3		52.5	40.0		44.8
It has somewhat worsened	42.8	23.1	36.7	28.7		32.4	42.5		38.6
It has essentially not worsened	16.3	36.7	16.5	11.7	ns	15.1	16.8	**	16.2
Don't know	0.0	0.0	0.0	0.3		0.0	0.1		0.0
Total	0.3	0.0	0.9	0.1		0.0	0.6		0.4
It has significantly worsened	100.0	100.0	100.0	100.0		100.0	100.0		100.0
Flood	4.7	6.4	7.0	1.8	***	4.8	5.2	ns	5.0
It has significantly worsened	34.9	17.8	41.3	41.5		47.3	30.0		35.8
It has somewhat worsened	19.7	12.5	13.5	26.5		17.1	17.6		17.5
It has essentially not worsened	44.3	69.7	45.2	32.0	ns	35.6	51.4	ns	46.0
Don't know	1.2	0.0	0.0	0.0		0.0	1.0		0.7
Total	100.0	100.0	100.0	100.0		100.0	100.0		100.0
Lost harvest	13.0	5.1	11.5	10.3	ns	14.0	10.8	**	12.0

	Regular	IDP	Disabled	High alt	Sign	Poor	Non-poor	Sign	Total
It has significantly worsened	62.8	75.8	79.3	58.7		72.9	61.6		66.4
It has somewhat worsened	35.0	22.4	19.6	32.0		25.1	35.5		31.1
It has essentially not worsened	1.6	1.8	1.1	4.3	**	1.0	2.2	ns	1.7
Don't know	0.7	0.0	0.0	5.0		1.0	0.8		0.9
Total	100.0	100.0	100.0	100.0		100.0	100.0		100.0
Loss of job by household member(s)	11.3	17.4	10.5	5.1	***	12.3	10.1	ns	10.9
It has significantly worsened	75.3	86.2	81.6	90.1		76.1	79.9		78.4
It has somewhat worsened	23.1	11.0	18.3	9.9		23.5	18.2		20.3
It has essentially not worsened	1.1	1.6	0.2	0.0	ns	0.3	1.3	ns	0.9
Don't know	0.5	1.2	0.0	0.0		0.1	0.7		0.4
Total	100.0	100.0	100.0	100.0		100.0	100.0		100.0
Death of a household member	10.9	12.7	9.7	10.6	ns	9.4	11.5	ns	10.7
It has significantly worsened	68.7	64.9	71.6	71.7		69.9	69.0		69.3
It has somewhat worsened	18.8	18.3	13.1	7.2		19.6	15.2		16.6
It has essentially not worsened	11.7	16.8	15.3	20.9	ns	10.0	15.3	ns	13.7
Don't know	0.8	0.0	0.0	0.2		0.5	0.5		0.5
Total	100.0	100.0	100.0	100.0		100.0	100.0		100.0
Car accident	2.7	1.6	2.6	1.7	ns	2.3	2.6	ns	2.5
It has significantly worsened	67.7	66.2	80.1	91.5		78.0	69.2	ns	72.1
It has somewhat worsened	17.0	18.8	9.1	8.5		8.9	17.5	ns	14.7
It has essentially not worsened	13.3	15.0	10.8	0.0	ns	13.1	11.3	ns	11.9
Don't know	2.1	0.0	0.0	0.0		0.0	2.1	ns	1.4
Total	100.0	100.0	100.0	100.0		100.0	100.0	ns	100.0
Fire	0.4	0.6	1.1	0.6	ns	0.9	0.4	*	0.6
It has significantly worsened	84.9	100.0	56.9	56.4		79.0	60.2		70.9
It has somewhat worsened	0.0	0.0	43.1	43.6	ns	21.0	25.7	ns	23.0
Don't know	15.1	0.0	0.0	0.0		0.0	14.1		6.1
Total	100.0	100.0	100.0	100.0		100.0	100.0		100.0
Earthquake	10.0	14.7	18.0	8.7	**	11.2	12.4	ns	12.0
It has significantly worsened	5.5	0.0	3.1	35.3		7.3	5.8		6.3
It has somewhat worsened	8.2	0.0	14.8	28.7		18.4	7.6		11.2
It has essentially not worsened	85.7	100.0	82.2	35.1	***	74.3	86.0	***	82.1
Don't know	0.6	0.0	0.0	1.0		0.0	0.5		0.4
Total	100.0	100.0	100.0	100.0		100.0	100.0		100.0
Major theft or burglary	1.7	0.8	1.6	0.5	ns	1.8	1.3	ns	1.5
It has significantly worsened	75.8	39.3	62.2	80.9		66.2	75.6		71.5
It has somewhat worsened	9.7	0.0	27.4	19.1		11.7	15.8		14.0
It has essentially not worsened	11.2	60.7	10.4	0.0	ns	22.1	4.5	ns	12.3
Don't know	3.3	0.0	0.0	0.0		0.0	4.1		2.3
Total	100.0	100.0	100.0	100.0		100.0	100.0		100.0
Loss of livestock	4.5	5.6	5.4	11.1	**	5.7	5.3	ns	5.4

	Regular	IDP	Disabled	High alt	Sign	Poor	Non-poor	Sign	Total
It has significantly worsened	65.9	55.5	49.7	73.2		74.1	56.4		63.0
It has somewhat worsened	25.7	41.1	50.3	15.1		22.8	34.6		30.2
It has essentially not worsened	7.2	3.4	0.0	11.7	ns	3.1	8.1	ns	6.2
Don't know	1.2	0.0	0.0	0.0		0.0	1.0		0.6
Total	100.0	100.0	100.0	100.0		100.0	100.0		100.0

Source: Authors' calculations.
Note: Significance levels based on chi2 test for independence: ***p-value<0.01; **p-value<0.05; *p-value<0.10.

Table A 20. Determinants of vulnerability to financial resources, complete model

	Lack of monetary resources	Not able to save	In debt	No regular income[a]
	dy/dx	dy/dx	dy/dx	dy/dx
IDP in collective center	0.014	0.033	-0.001	-0.058
	(0.06)	(0.06)	(0.05)	(0.04)
IDP in private sector	-0.083	-0.003	0.024	-0.126***
	(0.04)	(0.04)	(0.04)	(0.03)
Disabled household	-0.036	0.002	0.052*	-0.056**
	(0.02)	(0.03)	(0.02)	(0.02)
High mountain	-0.110	0.086	0.024	0.023
	(0.06)	(0.08)	(0.04)	(0.03)
Female	-0.026	0.018	-0.001	0.038
	(0.03)	(0.03)	(0.03)	(0.03)
Age	-0.000	0.004***	0.000	-0.009***
	(0.00)	(0.00)	(0.00)	(0.00)
Single	0.086*	0.159**	0.010	0.007
	(0.04)	(0.05)	(0.06)	(0.03)
Divorced	0.129*	0.011	-0.045	-0.028
	(0.06)	(0.06)	(0.05)	(0.04)
Widowed	0.005	-0.036	0.037	-0.048
	(0.03)	(0.04)	(0.03)	(0.03)
Less than basic education	0.029	-0.021	-0.076*	-0.056
	(0.04)	(0.04)	(0.03)	(0.04)
Full basic education	-0.008	0.006	-0.018	-0.007
	(0.03)	(0.03)	(0.03)	(0.02)
Secondary education	-0.070**	0.011	0.042	-0.003
	(0.02)	(0.03)	(0.02)	(0.02)
Higher education	-0.229***	-0.026	-0.001	-0.011
	(0.02)	(0.03)	(0.02)	(0.02)
Armenian	-0.027	0.117	-0.112*	0.002
	(0.05)	(0.08)	(0.06)	(0.03)
Azeri	-0.082	0.139	-0.402***	0.140***
	(0.07)	(0.08)	(0.05)	(0.04)
Other nationality	0.070	0.029	-0.015	-0.056

	Lack of monetary resources	Not able to save	In debt	No regular income[a]
	dy/dx	dy/dx	dy/dx	dy/dx
	(0.04)	(0.07)	(0.06)	(0.05)
Number of working age adults	0.044***	-0.030***	0.012	0.011*
	(0.01)	(0.01)	(0.01)	(0.01)
Number of children below 18	0.030***	-0.031**	0.018*	-0.042***
	(0.01)	(0.01)	(0.01)	(0.01)
Number of elderly	-0.007	0.002	-0.042	
	(0.02)	(0.02)	(0.02)	
Share of employed household members	-0.202***	-0.190***	-0.029	-0.075**
	(0.05)	(0.05)	(0.04)	(0.03)
At least one with chronic disease	0.029	-0.018	0.078***	-0.039*
	(0.02)	(0.02)	(0.02)	(0.02)
Household has no house	0.023	-0.001	0.048	-0.010
	(0.03)	(0.04)	(0.04)	(0.03)
Household has no land	0.019	-0.009	0.030	-0.028
	(0.03)	(0.04)	(0.03)	(0.02)
Household has no livestock	0.037	-0.039	0.027	0.048*
	(0.03)	(0.03)	(0.03)	(0.02)
Household has income from wage	-0.127***	-0.090***	0.020	
	(0.02)	(0.02)	(0.02)	
Household has income from self-employment	-0.149***	-0.048	-0.012	0.190***
	(0.03)	(0.02)	(0.02)	(0.02)
Household has income from agriculture	-0.134***	-0.046	0.029	0.108***
	(0.02)	(0.03)	(0.02)	(0.02)
Household has income from pension	0.050	-0.066	-0.039	
	(0.04)	(0.04)	(0.03)	
Household has income from other social transfers	0.141***	0.035	0.000	0.208***
	(0.03)	(0.03)	(0.03)	(0.02)
Household has income from informal transfers	0.007	-0.053*	0.050**	0.032*
	(0.02)	(0.02)	(0.02)	(0.02)
Poor		0.110***	0.056**	0.061***
		(0.02)	(0.02)	(0.01)
Urban	-0.072*	-0.057	0.016	-0.066**
	(0.03)	(0.04)	(0.04)	(0.02)
Kakheti	0.180***	-0.222***	0.156***	-0.041
	(0.04)	(0.06)	(0.04)	(0.03)
Shida Kartli	0.106*	-0.178*	0.136*	-0.026
	(0.05)	(0.07)	(0.06)	(0.03)
Kvemo Kartli	0.197***	0.000	0.170***	-0.068*
	(0.04)	(0.06)	(0.05)	(0.03)
Samtskhe-javakheti	-0.050	-0.235*	0.214***	0.029
	(0.08)	(0.09)	(0.06)	(0.04)
Adjara	0.086	-0.100	0.021	-0.038
	(0.05)	(0.07)	(0.04)	(0.03)
Guria	0.093	-0.210**	0.210***	0.029
	(0.06)	(0.06)	(0.05)	(0.03)
Samelgrelo	0.064	-0.146*	0.101*	-0.022
	(0.05)	(0.06)	(0.05)	(0.03)
Imereti	0.098*	-0.142**	0.136***	-0.016
	(0.04)	(0.04)	(0.03)	(0.02)
Mtskheta-mtianeti	0.150*	-0.263**	0.231***	-0.087
	(0.07)	(0.08)	(0.05)	(0.05)
F statistic	11.55	6.82	7.24	19.59
Prob>F	0.000	0.000	0.000	0.000
Observations	4301	4301	4301	4301

Source: Authors' calculations.

Note: Standard error in parentheses; * p<0.05, ** p<0.01, *** p<0.001.

[a]: Based on the more rigid definition of regular income that only identifies income from wage and old-age pensions as stable sources of income.

Table A 21. Determinants of vulnerability to physical resources, complete model

	No land	No livestock	No house
	dy/dx	dy/dx	dy/dx
IDP in collective center	0.389***	-0.012	
	(0.08)	(0.03)	
IDP in private sector	0.114**	0.002	0.136***
	(0.04)	(0.02)	(0.02)
Disabled household	-0.006	0.011	0.015
	(0.02)	(0.01)	(0.01)
High mountain	-0.006	-0.069***	0.057**
	(0.03)	(0.02)	(0.02)
Female	0.055**	0.029	0.016
	(0.02)	(0.02)	(0.01)
Age	-0.001	-0.001	-0.003***
	(0.00)	(0.00)	(0.00)
Single	0.032	0.051	-0.007
	(0.03)	(0.03)	(0.02)
Divorced	0.018	0.067*	-0.013
	(0.03)	(0.03)	(0.03)
Widowed	-0.061**	0.029	-0.006
	(0.02)	(0.02)	(0.02)
Less than basic education	0.036	0.017	0.022
	(0.03)	(0.02)	(0.02)
Full basic education	-0.004	0.001	-0.001
	(0.02)	(0.01)	(0.02)
Secondary education	0.009	0.036**	-0.024*
	(0.02)	(0.01)	(0.01)
Higher education	-0.004	0.071***	-0.050***
	(0.02)	(0.01)	(0.01)
Armenian	0.011	-0.016	-0.075***
	(0.03)	(0.03)	(0.02)
Azeri	0.082	0.007	-0.032
	(0.05)	(0.03)	(0.02)
Other nationality	0.032	0.048	-0.037
	(0.04)	(0.02)	(0.03)
Number of working age adults	-0.013*	-0.009*	-0.007*
	(0.01)	(0.00)	(0.00)
Number of children below 18	0.005	-0.023**	0.000
	(0.01)	(0.01)	(0.01)
Number of elderly	0.019	-0.022*	0.008
	(0.02)	(0.01)	(0.01)
Share of employed household members	-0.085**	-0.132***	0.016
	(0.03)	(0.02)	(0.02)
At least one with chronic disease	0.005	0.014	0.001
	(0.01)	(0.01)	(0.01)
Household has no house	0.067*	-0.018	

	No land	No livestock	No house
	dy/dx	dy/dx	dy/dx
	(0.03)	(0.02)	
Household has no livestock	0.197***		0.003
	(0.02)		(0.02)
Household has no land		0.191***	0.043*
		(0.02)	(0.02)
Household has income from wage	0.031	0.015	0.006
	(0.02)	(0.01)	(0.01)
Household has income from self-employment	-0.005	0.005	0.021
	(0.02)	(0.02)	(0.01)
Household has income from agriculture	-0.067***	-0.088***	0.012
	(0.02)	(0.01)	(0.01)
Household has income from pension	-0.062*	-0.059**	-0.031
	(0.03)	(0.02)	(0.02)
Household has income from other social transfers	-0.004	-0.008	-0.016
	(0.02)	(0.02)	(0.01)
Household has income from informal transfers	0.014	0.002	0.021**
	(0.01)	(0.01)	(0.01)
Poor	0.017	0.013	0.009
	(0.02)	(0.01)	(0.01)
Urban	0.183***	0.135***	0.024
	(0.02)	(0.01)	(0.02)
Kakheti	-0.011	-0.171***	-0.074**
	(0.04)	(0.03)	(0.02)
Shida Kartli	-0.181***	-0.106***	-0.069**
	(0.05)	(0.03)	(0.02)
Kvemo Kartli	-0.037	-0.072*	0.031
	(0.04)	(0.03)	(0.02)
Samtskhe-javakheti	-0.089*	-0.015	-0.015
	(0.04)	(0.04)	(0.02)
Adjara	-0.019	-0.044	-0.056*
	(0.03)	(0.03)	(0.02)
Guria	-0.347***	-0.192***	-0.113**
	(0.04)	(0.03)	(0.04)
Samelgrelo	-0.169***	-0.170***	-0.062**
	(0.03)	(0.02)	(0.02)
Imereti	-0.063**	-0.166***	-0.066**
	(0.02)	(0.02)	(0.02)
Mtskheta-mtianeti	-0.113**	-0.077*	-0.066**
	(0.04)	(0.03)	(0.02)
Neither safe water nor toilet			0.052**
			(0.02)
Inappropriate wall, floor, roof			0.011
			(0.01)
Less than 12m2 per person			0.007
			(0.01)

	No land	No livestock	No house
	dy/dx	dy/dx	dy/dx
F statistic	21.96	24.50	7.85
Prob>F	0.000	0.000	0.000
Observations	4301	4301	4035

Source: Authors' calculations.
Note: Standard error in parentheses; * p<0.05, ** p<0.01, *** p<0.001.

Table A 22. Determinants of vulnerability to housing, complete model

	Less than 12m2 per person	Inappropriate access to toilet and sanitation	Inappropriate walls, roof and floor
	dy/dx	dy/dx	dy/dx
IDP in collective center	0.241***	-0.061	0.052
	(0.05)	(0.06)	(0.11)
IDP in private sector	-0.044	-0.078*	0.151**
	(0.04)	(0.03)	(0.05)
Disabled household	-0.017	-0.025	0.025
	(0.02)	(0.01)	(0.03)
High mountain	-0.047	-0.064	0.178**
	(0.04)	(0.05)	(0.07)
Female	-0.022	0.006	-0.002
	(0.03)	(0.02)	(0.03)
Age	0.001	0.000	-0.003*
	(0.00)	(0.00)	(0.00)
Single	-0.042	0.006	0.111*
	(0.06)	(0.03)	(0.04)
Divorced	0.038	0.056	0.045
	(0.06)	(0.03)	(0.07)
Widowed	-0.042	0.012	0.026
	(0.03)	(0.02)	(0.03)
Less than basic education	0.040	0.054*	0.053
	(0.04)	(0.03)	(0.04)
Full basic education	0.045	-0.003	0.046
	(0.03)	(0.02)	(0.03)
Secondary education	0.044*	-0.011	-0.049
	(0.02)	(0.02)	(0.03)
Higher education	-0.031	-0.073***	-0.055
	(0.03)	(0.02)	(0.03)
Armenian	-0.009	0.001	0.025
	(0.06)	(0.04)	(0.08)
Azeri	0.076	0.170***	-0.123
	(0.06)	(0.03)	(0.07)
Other nationality	-0.011	-0.044	-0.026
	(0.06)	(0.03)	(0.08)
Number of working age adults	0.064***	-0.002	-0.001
	(0.01)	(0.00)	(0.01)
Number of children below 18	0.084***	0.012	-0.014
	(0.01)	(0.01)	(0.01)
Number of elderly	0.015	0.014	-0.016
	(0.02)	(0.01)	(0.03)
Share of employed household members	-0.004	0.064*	-0.060
	(0.05)	(0.03)	(0.05)
At least one with chronic disease	0.008	0.022	-0.032
	(0.02)	(0.01)	(0.03)

	Less than 12m2 per person	Inappropriate access to toilet and sanitation	Inappropriate walls, roof and floor
	dy/dx	dy/dx	dy/dx
Household has no house	0.029	0.081**	0.025
	(0.03)	(0.03)	(0.04)
Household has no land	0.096**	-0.162***	0.086*
	(0.03)	(0.02)	(0.04)
Household has no livestock	0.095***	-0.099***	0.135***
	(0.03)	(0.02)	(0.03)
Household has income from wage	0.021	-0.057***	-0.028
	(0.02)	(0.01)	(0.02)
Household has income from self-employment	-0.029	-0.037*	-0.038
	(0.02)	(0.02)	(0.03)
Household has income from agriculture	-0.004	0.029	0.037
	(0.03)	(0.02)	(0.03)
Household has income from pension	0.067*	0.008	-0.043
	(0.03)	(0.02)	(0.04)
Household has income from other social transfers	0.046	0.084***	-0.096**
	(0.03)	(0.02)	(0.03)
Household has income from informal transfers	0.023	0.001	0.002
	(0.02)	(0.01)	(0.02)
Poor	0.091***	0.045***	0.053*
	(0.02)	(0.01)	(0.02)
Urban	0.094*	-0.074**	0.040
	(0.04)	(0.02)	(0.04)
Kakheti	-0.116*	0.194***	-0.229**
	(0.05)	(0.03)	(0.08)
Shida Kartli	-0.079	0.153***	-0.269***
	(0.05)	(0.04)	(0.07)
Kvemo Kartli	-0.045	0.095**	-0.137*
	(0.05)	(0.03)	(0.07)
Samtskhe-javakheti	0.099	0.154*	-0.565***
	(0.06)	(0.06)	(0.09)
Adjara	-0.051	-0.057	-0.136*
	(0.04)	(0.05)	(0.07)
Guria	-0.229***	0.142***	0.165*
	(0.06)	(0.04)	(0.08)
Samelgrelo	-0.006	0.300***	0.070
	(0.05)	(0.05)	(0.06)
Imereti	-0.067	0.201***	-0.108
	(0.04)	(0.03)	(0.06)
Mtskheta-mtianeti	0.034	0.093	-0.276**
	(0.06)	(0.05)	(0.09)
F statistic	11.80	24.32	6.70
Prob>F	0.000	0.000	0.000
Observations	4301	4301	4301

Source: Authors' calculations.
Note: Standard error in parentheses; * p<0.05, ** p<0.01, *** p<0.001.

Table A 23. Determinants of vulnerability to human resources, complete model

	Low level of education	Bad health (subjective)	No hired employee
	dy/dx	dy/dx	dy/dx
IDP in collective center	-0.128**	0.104*	-0.039
	(0.05)	(0.05)	(0.04)
IDP in private sector	-0.041	0.149***	0.041*
	(0.04)	(0.04)	(0.02)

	Low level of education	Bad health (subjective)	No hired employee
	dy/dx	dy/dx	dy/dx
Disabled household	0.014	0.263***	-0.003
	(0.02)	(0.02)	(0.01)
High mountain	0.047	0.110***	0.007
	(0.04)	(0.03)	(0.02)
Female	0.005	0.020	0.015
	(0.02)	(0.03)	(0.01)
Age	-0.003***	0.003**	0.000
	(0.00)	(0.00)	(0.00)
Single	0.004	0.000	-0.028
	(0.03)	(0.04)	(0.02)
Divorced	0.105*	0.027	-0.045
	(0.05)	(0.04)	(0.03)
Widowed	0.034	-0.001	-0.009
	(0.03)	(0.03)	(0.02)
Armenian	0.237***	0.042	0.034
	(0.04)	(0.04)	(0.03)
Azeri	0.326***	0.036	0.072**
	(0.04)	(0.06)	(0.03)
Other nationality	0.283***	0.054	0.050
	(0.06)	(0.06)	(0.03)
Number of working age adults	-0.026***	0.018**	-0.009*
	(0.01)	(0.01)	(0.00)
Number of children below 18	-0.006	0.005	-0.020***
	(0.01)	(0.01)	(0.00)
Number of elderly	0.011	0.043	-0.021
	(0.02)	(0.02)	(0.01)
Share of employed household members	-0.046	-0.017	-0.221***
	(0.04)	(0.04)	(0.03)
At least one with chronic disease	-0.038*	0.256***	0.006
	(0.02)	(0.02)	(0.01)
Household has no house	0.109**	-0.003	0.004
	(0.03)	(0.03)	(0.02)
Household has no land	-0.036	-0.003	-0.031
	(0.03)	(0.03)	(0.02)
Household has no livestock	-0.041	-0.047	-0.022
	(0.02)	(0.03)	(0.01)
Household has income from wage	-0.123***	-0.048*	-0.303***
	(0.02)	(0.02)	(0.01)
Household has income from self-employment	-0.066**	-0.016	0.039**
	(0.02)	(0.02)	(0.01)
Household has income from agriculture	-0.005	-0.030	0.010
	(0.02)	(0.03)	(0.01)
Household has income from pension	0.015	0.073*	-0.036

	Low level of education	Bad health (subjective)	No hired employee
	dy/dx	dy/dx	dy/dx
	(0.03)	(0.04)	(0.02)
Household has income from other social transfers	0.087**	0.000	0.012
	(0.03)	(0.03)	(0.01)
Household has income from informal transfers	0.031	0.018	0.007
	(0.02)	(0.02)	(0.01)
Poor	0.107***	0.022	0.038***
	(0.02)	(0.02)	(0.01)
Urban	-0.143***	-0.077*	-0.074***
	(0.02)	(0.03)	(0.01)
Kakheti	0.065	-0.033	0.040
	(0.04)	(0.05)	(0.02)
Shida Kartli	0.094*	-0.072	0.013
	(0.04)	(0.04)	(0.02)
Kvemo Kartli	0.055	-0.055	-0.012
	(0.04)	(0.05)	(0.02)
Samtskhe-javakheti	0.045	-0.207***	0.024
	(0.06)	(0.05)	(0.03)
Adjara	0.089*	-0.215***	0.037
	(0.04)	(0.04)	(0.02)
Guria	0.007	-0.087	0.033
	(0.05)	(0.06)	(0.03)
Samelgrelo	0.102*	-0.172**	0.035
	(0.04)	(0.05)	(0.02)
Imereti	0.074*	-0.074	0.024
	(0.03)	(0.04)	(0.02)
Mtskheta-mtianeti	0.030	-0.029	-0.023
	(0.07)	(0.06)	(0.02)
Less than basic education		-0.089*	0.026
		(0.04)	(0.02)
Full basic education		-0.004	0.011
		(0.03)	(0.01)
Secondary education		-0.019	-0.011
		(0.02)	(0.01)
Higher education		-0.094***	-0.040***
		(0.03)	(0.01)
F statistic	18.28	22.49	28.46
Prob>F	0.000	0.000	0.000
Observations	4301	4301	4301

Source: Authors' calculations.
Note: Standard error in parentheses; * p<0.05, ** p<0.01, *** p<0.001.

Table A 24. Determinants of vulnerability to social resources, complete model

	No friends or relatives with higher status	No use of TV, newspaper, or online media	Lack of connectedness
	dy/dx	dy/dx	dy/dx
IDP in collective center	0.125**	-0.074	-0.047
	(0.05)	(0.05)	(0.06)
IDP in private sector	-0.021	-0.094*	-0.076*
	(0.03)	(0.04)	(0.04)
Disabled household	-0.026	-0.010	-0.003
	(0.02)	(0.02)	(0.02)
High mountain	-0.002	-0.172***	0.029
	(0.05)	(0.05)	(0.05)
Female	-0.015	-0.021	0.032
	(0.02)	(0.03)	(0.03)
Age	0.000	-0.001	0.001
	(0.00)	(0.00)	(0.00)
Single	-0.003	0.081*	0.062
	(0.03)	(0.04)	(0.03)
Divorced	-0.037	0.072	0.131**
	(0.05)	(0.06)	(0.05)
Widowed	0.001	0.019	0.032
	(0.02)	(0.03)	(0.03)
Less than basic education	0.017	0.050	-0.018
	(0.03)	(0.04)	(0.03)
Full basic education	-0.024	0.015	0.056
	(0.02)	(0.03)	(0.03)
Secondary education	0.010	0.026	-0.010
	(0.02)	(0.02)	(0.02)
Higher education	-0.049*	0.039	-0.028
	(0.02)	(0.03)	(0.02)
Armenian	-0.051	0.069	0.014
	(0.04)	(0.05)	(0.05)
Azeri	0.163***	0.150*	0.026
	(0.04)	(0.06)	(0.07)
Other nationality	0.020	0.061	0.063
	(0.04)	(0.06)	(0.05)
Number of working age adults	-0.007	-0.005	-0.024***
	(0.01)	(0.01)	(0.01)
Number of children below 18	0.000	0.010	-0.020*
	(0.01)	(0.01)	(0.01)
Number of elderly	0.009	0.037	-0.016
	(0.02)	(0.02)	(0.02)
Share of employed household members	-0.003	0.053	-0.018
	(0.03)	(0.04)	(0.04)
At least one with chronic disease	-0.006	0.009	0.026
	(0.02)	(0.02)	(0.02)

	No friends or relatives with higher status	No use of TV, newspaper, or online media	Lack of connectedness
	dy/dx	dy/dx	dy/dx
Household has no house	-0.001	0.027	-0.028
	(0.03)	(0.03)	(0.04)
Household has no land	0.027	0.015	0.023
	(0.03)	(0.03)	(0.03)
Household has no livestock	-0.017	0.036	0.041
	(0.02)	(0.03)	(0.02)
Household has income from wage	-0.013	0.016	-0.004
	(0.01)	(0.02)	(0.02)
Household has income from self-employment	0.003	-0.005	0.004
	(0.02)	(0.02)	(0.02)
Household has income from agriculture	0.014	0.009	-0.035
	(0.02)	(0.03)	(0.02)
Household has income from pension	0.014	-0.018	-0.001
	(0.03)	(0.04)	(0.03)
Household has income from other social transfers	0.017	0.026	0.046
	(0.02)	(0.02)	(0.03)
Household has income from informal transfers	-0.043**	-0.010	-0.004
	(0.01)	(0.02)	(0.02)
Poor	0.032	-0.021	0.083***
	(0.02)	(0.02)	(0.02)
Urban	-0.009	0.007	0.041
	(0.03)	(0.04)	(0.03)
Kakheti	0.063	-0.053	0.139**
	(0.04)	(0.05)	(0.05)
Shida Kartli	0.027	-0.115*	0.161***
	(0.05)	(0.06)	(0.04)
Kvemo Kartli	0.043	0.099*	0.124*
	(0.04)	(0.05)	(0.06)
Samtskhe-javakheti	-0.179**	0.005	0.038
	(0.06)	(0.07)	(0.06)
Adjara	0.002	-0.075	0.267***
	(0.04)	(0.04)	(0.05)
Guria	0.070	-0.150*	0.131*
	(0.07)	(0.07)	(0.07)
Samelgrelo	-0.138***	-0.043	0.119*
	(0.04)	(0.06)	(0.06)
Imereti	-0.001	-0.211***	0.100**
	(0.03)	(0.04)	(0.04)
Mtskheta-mtianeti	0.043	-0.089	0.185***
	(0.04)	(0.05)	(0.05)
F statistic	4.69	3.12	6.50
Prob>F	0.000	0.000	0.000
Observations	4301	4301	4301

Source: Authors' calculations.
Note: Standard error in parentheses; * p<0.05, ** p<0.01, *** p<0.001.

Table A 25. Determinants of vulnerability to access to markets, complete model

	No bank account	No money in emergency	No means of transportation	Difficulty finding a job
	dy/dx	dy/dx	dy/dx	dy/dx
IDP in collective center	-0.334***	0.119*	-0.107	-0.046
	(0.06)	(0.05)	(0.06)	(0.09)
IDP in private sector	-0.158*	-0.015	-0.021	-0.038
	(0.07)	(0.04)	(0.04)	(0.06)
Disabled household	-0.039	0.011	-0.018	-0.064*
	(0.02)	(0.02)	(0.02)	(0.03)
High mountain	-0.007	-0.076	0.039	0.095
	(0.03)	(0.04)	(0.04)	(0.06)
Female	0.022	0.084**	0.083**	0.059
	(0.02)	(0.03)	(0.03)	(0.03)
Age	0.000	0.002	0.000	0.002
	(0.00)	(0.00)	(0.00)	(0.00)
Single	-0.029	-0.073	0.186**	-0.004
	(0.03)	(0.04)	(0.06)	(0.05)
Divorced	0.059	0.013	0.040	-0.034
	(0.03)	(0.05)	(0.07)	(0.06)
Widowed	-0.051*	-0.064*	0.009	-0.120**
	(0.02)	(0.03)	(0.03)	(0.04)
Less than basic education	-0.033	-0.036	0.051	-0.218***
	(0.03)	(0.04)	(0.04)	(0.05)
Full basic education	-0.009	-0.015	0.004	0.004
	(0.02)	(0.03)	(0.03)	(0.03)
Secondary education	-0.011	-0.013	-0.022	0.007
	(0.02)	(0.02)	(0.02)	(0.03)
Higher education	-0.039*	-0.035	-0.134***	0.052
	(0.02)	(0.02)	(0.02)	(0.03)
Armenian	0.097**	-0.034	0.000	-0.037
	(0.03)	(0.06)	(0.05)	(0.06)
Azeri	0.113***	-0.225**	0.110*	-0.020
	(0.03)	(0.07)	(0.05)	(0.09)
Other nationality	-0.003	0.016	-0.061	-0.009
	(0.03)	(0.05)	(0.05)	(0.08)
Number of working age adults	-0.011	-0.008	-0.040***	0.017
	(0.01)	(0.01)	(0.01)	(0.01)
Number of children below 18	-0.020**	0.001	-0.031***	0.006
	(0.01)	(0.01)	(0.01)	(0.01)
Number of elderly	-0.053**	-0.004	0.022	-0.018
	(0.02)	(0.02)	(0.02)	(0.03)
Share of employed household members	-0.092***	-0.002	-0.083	-0.014
	(0.03)	(0.04)	(0.04)	(0.05)

	No bank account	No money in emergency	No means of transportation	Difficulty finding a job
	dy/dx	dy/dx	dy/dx	dy/dx
At least one with chronic disease	0.013	0.010	0.058**	0.031
	(0.01)	(0.02)	(0.02)	(0.02)
Household has no house	0.061*	-0.094**	0.201***	0.026
	(0.02)	(0.03)	(0.04)	(0.05)
Household has no land	-0.012	0.075*	0.059*	-0.008
	(0.02)	(0.03)	(0.03)	(0.04)
Household has no livestock	-0.014	0.005	0.007	-0.002
	(0.02)	(0.03)	(0.03)	(0.03)
No means of tranportation	0.016	0.102***		0.048*
	(0.02)	(0.02)		(0.02)
Household has income from wage	-0.108***	-0.057**	0.011	-0.055*
	(0.02)	(0.02)	(0.02)	(0.02)
Household has income from self-employment	-0.010	0.017	-0.121***	0.034
	(0.02)	(0.02)	(0.02)	(0.03)
Household has income from agriculture	0.004	0.008	-0.028	-0.002
	(0.02)	(0.03)	(0.03)	(0.03)
Household has income from pension	-0.308***	-0.010	-0.051	0.048
	(0.03)	(0.03)	(0.04)	(0.04)
Household has income from other social transfers	-0.170***	-0.015	0.088**	0.038
	(0.02)	(0.03)	(0.03)	(0.03)
Household has income from informal transfers	0.007	-0.013	0.073***	-0.007
	(0.01)	(0.02)	(0.02)	(0.02)
Poor	0.072***	0.101***	0.199***	0.049*
	(0.02)	(0.02)	(0.02)	(0.02)
Urban	-0.036	0.085*	-0.038	-0.037
	(0.02)	(0.04)	(0.03)	(0.05)
Kakheti	0.050	0.126**	-0.160***	-0.154*
	(0.03)	(0.05)	(0.04)	(0.06)
Shida Kartli	-0.059*	0.059	-0.058	-0.022
	(0.03)	(0.04)	(0.04)	(0.07)
Kvemo Kartli	-0.025	-0.123*	-0.094*	-0.040
	(0.03)	(0.05)	(0.04)	(0.07)
Samtskhe-javakheti	0.060	0.031	-0.144*	-0.275***
	(0.04)	(0.07)	(0.06)	(0.08)
Adjara	-0.026	0.159***	0.023	-0.295***
	(0.03)	(0.04)	(0.04)	(0.05)
Guria	0.061	0.037	0.036	0.078
	(0.05)	(0.05)	(0.05)	(0.08)
Samelgrelo	0.027	0.057	0.006	-0.077
	(0.03)	(0.05)	(0.05)	(0.06)

	No bank account	No money in emergency	No means of transportation	Difficulty finding a job
	dy/dx	dy/dx	dy/dx	dy/dx
Imereti	0.059*	0.078	-0.050	-0.213***
	(0.03)	(0.04)	(0.04)	(0.05)
Mtskheta-mtianeti	-0.017	0.279***	-0.137	-0.015
	(0.04)	(0.05)	(0.07)	(0.07)
F statistic	12.25	5.49	11.67	3.14
Prob>F	0.000	0.000	0.000	0.000
Observations	4301	4301	4301	4301

Source: Authors' calculations.
Note: Standard error in parentheses; * p<0.05, ** p<0.01, *** p<0.001.

Table A 26. Determinants of vulnerability to access to services, complete model

	No health insurance	No social assistance
	dy/dx	dy/dx
IDP in collective center	-0.113**	-0.155*
	(0.04)	(0.06)
IDP in private sector	-0.027	0.104**
	(0.03)	(0.04)
Disabled household	-0.029	-0.009
	(0.02)	(0.03)
High mountain	-0.109***	-0.124**
	(0.03)	(0.04)
Female	0.006	-0.063*
	(0.02)	(0.03)
Age	0.001	0.000
	(0.00)	(0.00)
Single	-0.048	-0.035
	(0.03)	(0.05)
Divorced	-0.006	0.011
	(0.04)	(0.06)
Widowed	-0.015	0.038
	(0.02)	(0.03)
Less than basic education	-0.030	-0.037
	(0.02)	(0.05)
Full basic education	0.008	-0.022
	(0.02)	(0.03)
Secondary education	0.039*	0.012
	(0.02)	(0.03)
Higher education	0.074***	-0.058*
	(0.02)	(0.03)
Armenian	0.136**	0.168**
	(0.05)	(0.06)
Azeri	0.262***	0.285***

	No health insurance	No social assistance
	dy/dx	dy/dx
	(0.05)	(0.07)
Other nationality	0.085*	0.173***
	(0.03)	(0.05)
Number of working age adults	0.031***	-0.003
	(0.01)	(0.01)
Number of children below 18	-0.023***	-0.028**
	(0.01)	(0.01)
Number of elderly	-0.016	-0.045
	(0.02)	(0.02)
Share of employed household members	-0.033	-0.100*
	(0.03)	(0.04)
At least one with chronic disease	-0.008	-0.012
	(0.02)	(0.02)
Household has no house	-0.005	-0.007
	(0.03)	(0.04)
Household has no land	0.020	0.036
	(0.02)	(0.03)
Household has no livestock	0.004	-0.003
	(0.02)	(0.03)
Household has income from wage	0.090***	0.048*
	(0.01)	(0.02)
Household has income from self-employment	0.068***	0.025
	(0.02)	(0.03)
Household has income from agriculture	0.003	0.027
	(0.01)	(0.03)
Household has income from pension	-0.017	-0.056
	(0.03)	(0.04)
Household has income from other social transfers	-0.165***	-0.169***
	(0.02)	(0.03)
Household has income from informal transfers	-0.055***	-0.030
	(0.01)	(0.02)
Poor	-0.113***	-0.162***
	(0.01)	(0.02)
Urban	0.023	0.045
	(0.02)	(0.03)
Kakheti	-0.038	-0.132**
	(0.04)	(0.04)
Shida Kartli	-0.042	-0.186***
	(0.04)	(0.04)
Kvemo Kartli	-0.004	-0.149***
	(0.04)	(0.04)
Samtskhe-javakheti	0.120*	-0.017
	(0.05)	(0.06)
Adjara	-0.012	-0.099*

	No health insurance	No social assistance
	dy/dx	dy/dx
	(0.04)	(0.04)
Guria	-0.032	-0.120
	(0.04)	(0.06)
Samegrelo	-0.026	-0.122**
	(0.04)	(0.05)
Imereti	-0.064	-0.170***
	(0.03)	(0.04)
Mtskheta-Mtianeti	0.051	-0.052
	(0.04)	(0.06)
No means of transportation		-0.068***
		(0.02)
F statistic	12.99	8.42
Prob>F	0.000	0.000
Observations	4301	4301

Source: Authors' calculations.
Note: Standard error in parentheses; * p<0.05, ** p<0.01, *** p<0.001.

Table A 27. Determinants of vulnerability to access to social resources, complete model

	No participation in assocation	No support from social networks
	dy/dx	dy/dx
IDP in collective center	0.000	-0.026
	(0.04)	(0.01)
IDP in private sector	-0.027	-0.027*
	(0.02)	(0.01)
Disabled household	0.013	-0.014*
	(0.02)	(0.01)
High mountain	0.031	-0.017
	(0.04)	(0.01)
Female	0.012	-0.014*
	(0.01)	(0.01)
Age	0.000	0.001*
	(0.00)	(0.00)
Single	0.039	0.032**
	(0.02)	(0.01)
Divorced	-0.004	0.048***
	(0.03)	(0.01)
Widowed	-0.000	0.008
	(0.02)	(0.01)
Less than basic education	0.035	-0.007
	(0.02)	(0.01)
Full basic education	0.015	-0.001
	(0.02)	(0.01)
Secondary education	-0.003	0.001
	(0.01)	(0.01)

	No participation in assocation	No support from social networks
	dy/dx	dy/dx
Higher education	0.011	-0.000
	(0.01)	(0.01)
Armenian	0.026	-0.008
	(0.03)	(0.01)
Azeri	-0.023	-0.005
	(0.04)	(0.01)
Other nationality	0.008	0.002
	(0.03)	(0.01)
Number of working age adults	-0.019***	-0.011***
	(0.01)	(0.00)
Number of children below 18	-0.147***	-0.003
	(0.01)	(0.00)
Number of elderly	-0.014	0.001
	(0.01)	(0.01)
Share of employed household members	0.065**	0.002
	(0.02)	(0.01)
At least one with chronic disease	-0.036**	0.002
	(0.01)	(0.01)
Household has no house	0.009	0.022*
	(0.02)	(0.01)
Household has no land	-0.030	-0.003
	(0.02)	(0.01)
Household has no livestock	0.019	0.004
	(0.01)	(0.01)
No means of transportation	0.020	
	(0.01)	
Household has income from wage	-0.029*	0.001
	(0.01)	(0.01)
Household has income from self-employment	0.024	-0.004
	(0.02)	(0.01)
Household has income from agriculture	-0.012	-0.009
	(0.01)	(0.01)
Household has income from pension	0.001	-0.008
	(0.02)	(0.01)
Household has income from other social transfers	0.004	0.013
	(0.02)	(0.01)
Household has income from informal transfers	-0.005	-0.003
	(0.01)	(0.01)
Poor	-0.041**	0.017**
	(0.01)	(0.01)
Urban	-0.063**	0.006
	(0.02)	(0.01)
Kakheti	0.088**	0.022*
	(0.03)	(0.01)

	No participation in assocation	No support from social networks
	dy/dx	dy/dx
Shida Kartli	0.038	0.038**
	(0.04)	(0.01)
Kvemo Kartli	0.163***	-0.000
	(0.04)	(0.01)
Samtskhe-javakheti	0.073	0.013
	(0.04)	(0.01)
Adjara	0.075**	0.041***
	(0.03)	(0.01)
Guria	0.061	-0.023
	(0.05)	(0.01)
Samelgrelo	0.080*	-0.007
	(0.03)	(0.01)
Imereti	0.106***	0.007
	(0.02)	(0.01)
Mtskheta-mtianeti	0.041	0.033***
	(0.04)	(0.01)
F statistic	8.67	8.93
Prob>F	0.000	0.000
Observations	4301	4301

Source: Authors' calculations.
Note: Standard error in parentheses; * p<0.05, ** p<0.01, *** p<0.001.

Table A 28. Determinants of multidimensional vulnerability, per dimension, complete model

	Resources	Access
	dy/dx	dy/dx
IDP in collective center	0.118*	-0.055
	(0.05)	(0.07)
IDP in private sector	-0.031	0.019
	(0.04)	(0.05)
Disabled household	-0.029	-0.013
	(0.02)	(0.02)
High mountain	-0.042	0.105*
	(0.03)	(0.04)
Female	0.030	0.050
	(0.03)	(0.03)
Age	-0.001	0.003*
	(0.00)	(0.00)
Single	0.054	0.040
	(0.04)	(0.05)
Divorced	0.087	0.007
	(0.05)	(0.05)
Widowed	-0.019	-0.050

	Resources	Access
	(0.03)	(0.03)
Less than basic education	0.073	-0.060
	(0.05)	(0.04)
Full basic education	-0.006	-0.021
	(0.03)	(0.04)
Secondary education	-0.150***	0.044
	(0.02)	(0.02)
Higher education	-0.186***	-0.058*
	(0.02)	(0.03)
Armenian	0.071	0.073
	(0.07)	(0.06)
Azeri	0.266**	0.128
	(0.08)	(0.07)
Other nationality	0.109	0.101
	(0.06)	(0.07)
Number of working age adults	0.023**	-0.027*
	(0.01)	(0.01)
Number of children below 18	-0.033***	-0.068***
	(0.01)	(0.01)
Number of elderly	0.021	-0.024
	(0.02)	(0.03)
Share of employed household members	-0.435***	-0.012
	(0.04)	(0.05)
At least one with chronic disease	0.285***	-0.026
	(0.02)	(0.02)
Household has no house	0.070	0.048
	(0.04)	(0.04)
Household has no land	0.019	0.087**
	(0.03)	(0.03)
Household has no livestock	0.015	0.032
	(0.02)	(0.03)
Household has income from wage	-0.071***	-0.062**
	(0.02)	(0.02)
Household has income from self-employment	-0.070**	-0.028
	(0.02)	(0.03)
Household has income from agriculture	-0.006	-0.003
	(0.03)	(0.03)
Household has income from pension	-0.048	-0.034
	(0.03)	(0.04)
Household has income from other social transfers	0.077**	-0.031
	(0.03)	(0.03)
Household has income from informal transfers	-0.001	0.004
	(0.02)	(0.02)
Poor	0.160***	0.051*
	(0.02)	(0.02)

	Resources	Access
Urban	-0.127***	-0.069
	(0.03)	(0.04)
Kakheti	0.001	-0.136*
	(0.04)	(0.05)
Shida Kartli	-0.032	-0.074
	(0.05)	(0.05)
Kvemo Kartli	0.149***	-0.082
	(0.04)	(0.04)
Samtskhe-javakheti	-0.023	-0.057
	(0.05)	(0.08)
Adjara	0.057	-0.037
	(0.04)	(0.06)
Guria	0.089	-0.030
	(0.08)	(0.05)
Samelgrelo	0.093	-0.034
	(0.05)	(0.05)
Imereti	-0.017	-0.137***
	(0.03)	(0.04)
Mtskheta-mtianeti	-0.077	-0.015
	(0.04)	(0.06)
F statistic	20.53	5.67
Prob>F	0.000	0.000
Observations	4301	4301

Source: Authors' calculations.
Note: Standard error in parentheses; * p<0.05, ** p<0.01, *** p<0.001.

Table A 29. Multinomial model of vulnerability, complete model

	Resource yes, access no	Access yes, resource no	Both yes
	RRR	RRR	RRR
IDP in collective center	1.619	0.362	1.462
	(0.65)	(0.20)	(0.61)
IDP in private sector	0.661	0.779	0.882
	(0.18)	(0.22)	(0.33)
Disabled household	0.883	1.046	0.752
	(0.16)	(0.21)	(0.14)
High mountain	0.821	1.928**	1.100
	(0.22)	(0.46)	(0.32)
Female	1.242	1.330	1.493
	(0.29)	(0.25)	(0.35)
Age	0.990	1.007	1.009
	(0.01)	(0.01)	(0.01)
Single	1.190	1.133	1.598
	(0.41)	(0.38)	(0.64)

	Resource yes, access no	Access yes, resource no	Both yes
Divorced	1.507	0.780	1.765
	(0.75)	(0.31)	(0.70)
Widowed	0.910	0.800	0.714
	(0.24)	(0.21)	(0.17)
Less than basic education	1.574	0.560	1.144
	(0.63)	(0.27)	(0.45)
Full basic education	1.163	1.304	0.858
	(0.25)	(0.42)	(0.21)
Secondary education	0.419***	1.552*	0.465***
	(0.07)	(0.26)	(0.09)
Higher education	0.306***	0.879	0.245***
	(0.06)	(0.17)	(0.05)
Armenian	1.346	1.251	2.199
	(0.73)	(0.55)	(1.34)
Azeri	4.980*	0.991	9.332**
	(3.42)	(0.81)	(6.83)
Other nationality	2.678	2.647	3.661**
	(1.64)	(1.33)	(1.82)
Number of working age adults	1.193**	0.884	1.026
	(0.07)	(0.06)	(0.08)
Number of children below 18	0.833**	0.751***	0.594***
	(0.05)	(0.06)	(0.05)
Number of elderly	1.091	0.778	1.021
	(0.17)	(0.15)	(0.16)
Share of employed household members	0.048***	0.930	0.069***
	(0.02)	(0.28)	(0.02)
At least one with chronic disease	7.413***	0.948	5.115***
	(1.33)	(0.17)	(0.95)
Household has no house	1.910**	1.579	1.907*
	(0.52)	(0.42)	(0.59)
Household has no land	0.965	1.283	1.743*
	(0.22)	(0.30)	(0.39)
Household has no livestock	0.976	0.990	1.318
	(0.19)	(0.25)	(0.26)
Household has income from wage	0.686*	0.855	0.474***
	(0.10)	(0.15)	(0.08)
Household has income from self-employment	0.706	1.045	0.529**
	(0.13)	(0.20)	(0.11)
Household has income from agriculture	1.014	1.106	0.948
	(0.19)	(0.23)	(0.21)
Household has income from pension	0.833	1.029	0.625
	(0.22)	(0.24)	(0.16)

	Resource yes, access no	Access yes, resource no	Both yes
Household has income from other social transfers	1.841**	1.075	1.449
	(0.41)	(0.25)	(0.34)
Household has income from informal transfers	1.043	1.118	0.992
	(0.16)	(0.16)	(0.15)
Poor	2.952***	1.334	3.422***
	(0.47)	(0.26)	(0.60)
Urban	0.480**	0.846	0.324***
	(0.11)	(0.20)	(0.09)
Kakheti	0.975	0.512	0.516
	(0.30)	(0.19)	(0.19)
Shida Kartli	0.635	0.499	0.565
	(0.22)	(0.37)	(0.23)
Kvemo Kartli	2.823**	0.726*	1.792
	(0.83)	(0.19)	(0.59)
Samtskhe-javakheti	1.187	0.960	0.660
	(0.47)	(0.43)	(0.36)
Adjara	1.159	0.598	1.297
	(0.33)	(0.23)	(0.50)
Guria	1.742	0.798	1.615
	(0.90)	(0.31)	(0.95)
Samelgrelo	1.567	0.626	1.541
	(0.62)	(0.22)	(0.59)
Imereti	0.778	0.397**	0.503**
	(0.18)	(0.11)	(0.13)
Mtskheta-mtianeti	0.615	0.923	0.598
	(0.23)	(0.29)	(0.23)
Constant	1.999	0.783	1.633
	(1.02)	(0.49)	(0.85)
F statistic	8.11		
Prob>F	0.000		
Observations	4301		

Source: Authors' calculations.
Note: Standard error in parentheses; * p<0.05, ** p<0.01, *** p<0.001.

Table A 30. Probability of experiencing a shock, complete model

	At least one shock	Covariate shock	Family shock	Livelihood shock
	dy/dx	dy/dx	dy/dx	dy/dx
IDP in collective center	0.068	0.187	0.050	0.106
	(0.06)	(0.10)	(0.06)	(0.07)
IDP in private sector	0.090	0.079	0.082	0.147***
	(0.05)	(0.06)	(0.05)	(0.04)
Disabled household	0.062*	0.028	0.103***	-0.011

	At least one shock	Covariate shock	Family shock	Livelihood shock
	(0.03)	(0.03)	(0.03)	(0.02)
High mountain	-0.037	-0.075	0.004	-0.071
	(0.06)	(0.06)	(0.05)	(0.05)
Female	-0.016	0.019	-0.011	-0.036
	(0.03)	(0.03)	(0.04)	(0.02)
Age	0.001	0.000	0.000	0.000
	(0.00)	(0.00)	(0.00)	(0.00)
Single	0.022	0.014	-0.025	-0.021
	(0.04)	(0.04)	(0.04)	(0.03)
Divorced	-0.065	-0.008	-0.118	0.035
	(0.07)	(0.05)	(0.07)	(0.04)
Widowed	0.034	-0.027	0.048	0.016
	(0.04)	(0.03)	(0.04)	(0.02)
Less than basic education	-0.017	-0.026	0.000	-0.001
	(0.04)	(0.04)	(0.05)	(0.03)
Full basic education	0.046	0.064	-0.008	-0.001
	(0.04)	(0.03)	(0.03)	(0.02)
Secondary education	0.058*	0.033	0.043	0.020
	(0.03)	(0.03)	(0.03)	(0.02)
Higher education	-0.048	-0.084**	-0.032	-0.032
	(0.03)	(0.03)	(0.03)	(0.02)
Armenian	-0.057	-0.209**	-0.011	-0.096
	(0.06)	(0.07)	(0.06)	(0.06)
Azeri	-0.151	-0.252*	0.067	-0.053
	(0.09)	(0.10)	(0.09)	(0.06)
Other nationality	0.059	-0.072	0.064	-0.084*
	(0.06)	(0.05)	(0.06)	(0.04)
Number of working age adults	-0.006	-0.021**	0.013	0.002
	(0.01)	(0.01)	(0.01)	(0.01)
Number of children below 18	0.003	0.010	-0.007	-0.006
	(0.01)	(0.01)	(0.01)	(0.01)
Number of elderly	0.008	0.010	-0.008	-0.005
	(0.03)	(0.02)	(0.03)	(0.02)
Share of employed household members	-0.067	0.098*	-0.117*	0.101**
	(0.05)	(0.05)	(0.05)	(0.04)
At least one with chronic disease	0.159***	0.070**	0.194***	0.052***
	(0.02)	(0.02)	(0.02)	(0.02)
Household has no house	-0.009	-0.043	-0.035	0.069**
	(0.04)	(0.05)	(0.05)	(0.03)
Household has no land	-0.082*	-0.198***	-0.033	-0.120***

	At least one shock	Covariate shock	Family shock	Livelihood shock
	(0.04)	(0.04)	(0.03)	(0.03)
Household has no livestock	-0.046	-0.107***	0.009	-0.020
	(0.03)	(0.03)	(0.03)	(0.02)
Household has income from wage	-0.002	-0.005	-0.010	-0.007
	(0.02)	(0.02)	(0.02)	(0.02)
Household has income from self-employment	0.020	0.011	-0.024	-0.022
	(0.03)	(0.03)	(0.03)	(0.02)
Household has income from agriculture	0.050	0.053	0.021	0.002
	(0.03)	(0.03)	(0.03)	(0.02)
Household has income from pension	-0.049	-0.001	-0.009	0.012
	(0.04)	(0.04)	(0.04)	(0.03)
Household has income from other social transfers	0.102**	0.072*	0.081*	-0.005
	(0.03)	(0.03)	(0.03)	(0.02)
Household has income from informal transfers	0.117***	0.108***	0.086***	0.054**
	(0.02)	(0.02)	(0.02)	(0.02)
Poor	0.023	-0.004	-0.009	0.013
	(0.02)	(0.02)	(0.02)	(0.02)
Urban	-0.027	-0.035	-0.009	-0.139***
	(0.04)	(0.04)	(0.04)	(0.03)
East	-0.006	0.099**	-0.054	0.118***
	(0.03)	(0.04)	(0.03)	(0.03)
F statistic	8.14	5.59	7.58	7.44
Prob>F	0.000	0.000	0.000	0.000
Observations	4301	4301	4301	4301

Source: Authors' calculations.

Note: Standard error in parentheses; * p<0.05, ** p<0.01, *** p<0.001.

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