POVERTY AND SHARED PROSPERITY IN BELARUS OVER THE PAST DECADE
TRENDS, DRIVERS AND CHALLENGES

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POVERTY AND EQUITY GLOBAL PRACTICE, THE WORLD BANK
CONTENTS

Executive summary ............................................................................................................................................... 4
1. Introduction.................................................................................................................................................. 9
2. Macroeconomic context ................................................................................................................................. 11
   3.1. Poverty fell dramatically between 2003 and 2014 ................................................................................. 14
   3.2. The recession of 2015-2016 and a partial reversal of favorable trends.................................................. 21
   3.3. Evolution of the composition of the bottom 40 percent during 2003-2015.......................................... 24
   3.4. Economic growth and poverty reduction with no rising inequality .................................................... 28
   3.5. Strong Shared prosperity performance prior to the recession .............................................................. 32
4. Key factors contributing to poverty reduction and shared prosperity ......................................................... 35
   4.1. Evolution of labor income ..................................................................................................................... 38
   4.2. Contributions of Pensions to shared prosperity ................................................................................... 47
   4.3. The importance of non-contributory safety nets .................................................................................. 52
5. Emerging challenges to poverty and shared prosperity .............................................................................. 59
   5.1. Population Aging and its implications ................................................................................................. 60
   5.2. Impact of utility tariff reforms ............................................................................................................ 62
6. Concluding remarks...................................................................................................................................... 66
References......................................................................................................................................................... 68

FIGURES

Figure 0-1: Poverty trends in Belarus and the ECA region ................................................................................. 5
Figure 0-2: Shared prosperity across the ECA region (5-year ranges in the 2009-2015 period)....................... 6
Figure 1-1: Pre- and post-crisis growth performance in Belarus and comparator countries/groups .............. 9
Figure 2-1: Real GDP growth and investment, (2005-2016Q1), percent ......................................................... 11
Figure 2-2: Growth Decomposition – contributions to real GDP growth, percentage points (2006-2015).... 11
Figure 3-1: Poverty dynamics and composition, 2003-2014 ......................................................................... 14
Figure 3-2: Regional poverty dynamics in ECA (2000-2013) ...................................................................... 15
Figure 3-3: Composition of population living on US$ PPP 10/day or below in the ECA region ................. 16
Figure 3-4: Poverty dynamics by type of residence area ($5/day and $10/day thresholds) ............................ 17
Figure 3-5: Poverty dynamics by region ($5/day and $10/day thresholds) ....................................................... 17
Figure 3-6: Composition of the population below $10/day threshold by HH size......................................... 19
Figure 3-7: Poverty rate ($10/day) for different types of households................................................................. 20
Figure 3-8: Percentage points increase in the $10/day poverty headcount between 2014 and 2015 ........... 22
Figure 3-9: Distribution of per capita household expenditures ....................................................................... 22
Figure 3-10: Income and expenditure growth incidence curves (GICs), Q1 2015 – Q1 2016 ........................................23
Figure 3-11: Elasticity of hH expenditures with respect to HH income ..........................................................23
Figure 3-12: Share of adults satisfied with life, 2006-2016..................................................................................24
Figure 3-13: Share of adults satisfied with economic / political situation, 2016.................................................24
Figure 3-14: Age composition of B40 and T60 groups ......................................................................................25
Figure 3-15: Composition of B40 and T60 groups by number of children .........................................................25
Figure 3-16: Educational attainment in B40 and T60 groups over time (age 22+) .............................................26
Figure 3-17: Difference between share of Region in B40 and share of region in overall population ..........27
Figure 3-18: Geographic distribution of the B40 and t60 populations ...........................................................27
Figure 3-19: Access to public services in urban areas (B40 and T60).................................................................28
Figure 3-20: Access to public services in rural areas (B40 and T60).................................................................28
Figure 3-21: Evolution of the Gini index of per capita expenditures 2003-2015.........................................29
Figure 3-22: Quantile ratio (50/10) .............................................................................................................30
Figure 3-23: Quantile ratio (90/50) .............................................................................................................30
Figure 3-24: Share of between inequality in overall inequality ........................................................................31
Figure 3-25: Outcome and Opportunity inequality ......................................................................................32
Figure 3-26: Shared prosperity across the ECA region (5-year ranges in the 2006-2013 period) ..........33
Figure 3-27: Shared prosperity across the ECA region (5-year ranges in the 2009-2015 period) ..........33
Figure 3-28: Shared prosperity in Belarus: 5-year moving window (2001-2015) ........................................34
Figure 3-29: Mean per capita annual household expenditure for B40 and T60 groups by year ..........35
Figure 4-1: Evolution of per capita income and expenditures during 2000-2014 .........................................36
Figure 4-2: Composition of household income by source ...........................................................................36
Figure 4-3: Income composition in urban and rural areas .............................................................................37
Figure 4-4: Shapley decomposition of income changes by component 2003-2009 and 2009-2015 ........38
Figure 4-5: Activity and employment rates, 2003–2015.............................................................................39
Figure 4-6: Absolute number of working age, active and employed 2003-2015 ...........................................39
Figure 4-7: Probability of employment increases with education ..................................................................40
Figure 4-8: Probability of professional occupation increases with educational attainment .................40
Figure 4-9: Tertiary enrollment and GNI per capita across ECA countries .................................................41
Figure 4-10: Expenditures on education and pupil-teacher ratio .................................................................42
Figure 4-12: Share of wage income recipients in B40 and T60 groups .............................................................43
Figure 4-13: Share of population residing in households with wage recipients .........................................43
Figure 4-14: Employment for B40 and t60 and average wages by sectors, percent ................................44
Figure 4-15: Real wage and labor productivity growth in Belarus .............................................................45
Figure 4-16: Real wage growth rates by region .............................................................................................45
Figure 4-17: Relative earnings across sectors in 2016 (Country =100) ...........................................................45
Figure 4-18: B40 wages (% of T60 wages) ........................................................................................................46
Figure 4-19: Share of pensions in B40 and T60 incomes overtime .................................................................48
Figure 4-20: Coverage of social insurance pensions (% of households) .......................................................49
Figure 4-21: Pensions as a share of income in receiving households ............................................................49
Figure 4-22: Real growth of wages and pensions, and pension levels relative to wages ..........................50
Figure 4-23: Pension growth index (2003=100) ............................................................................................50
Figure 4-24: Redistribution effect of pensions in Belarus ...........................................................................51
Figure 4-25: GDP per capita and SA expenditures in ECA ...........................................................................52
Figure 4-26: Composition of social Assistance system in Belarus (% of GDP) .............................................53
Figure 4-27: Coverage rate, bottom quintile ..................................................................................................54
Figure 4-28: B40 and T60 coverage, subsidies ..............................................................................................54
Figure 4-29: B40 and t60 coverage, privileges ...............................................................................................54
Figure 4-30: Share of B40 and T60 population reporting receipt of privileges ...............................................55
Figure 4-31: Targeting of privileges .................................................................................................................. 56
Figure 4-32: Average size of privileges as percent of income............................................................................. 56
Figure 4-33: Targeting indicators, non-contributory transfers ............................................................................. 57
Figure 4-34: Generosity of public transfers over time (% of income among recipients)........................................ 57
Figure 4-35: Generosity of individual programs (% of income among recipients, 2015)........................................ 57
Figure 4-36: Simulated poverty impact of removing social protection benefits...................................................... 58
Figure 4-37: Poverty and inequality Efficiency indicators of social transfers ........................................................ 59
Figure 5-1: Population projections by age group .................................................................................................. 61
Figure 5-2: Old age dependency ratio projection .................................................................................................. 61
Figure 5-3: Share of wage and pension recipients over time .................................................................................. 62
Figure 5-4: Distribution of utilities subsidies across the population ....................................................................... 63
Figure 5-5: Impact of tariff increases ................................................................................................................... 64
Figure 5-6: Share of household budgets devoted to utilities, with 15/20 program .................................................... 65
Figure 5-7: Coverage and targeting of utilities support program ........................................................................... 66

TABLES

Table 3-1: Geographic decomposition of poverty changes by type of residence (2003-2008 and 2008-2015) ........ 17
Table 3-2: Geographic decomposition of poverty changes by oblast (2003-2008 and 2008-2015) ......................... 18
Table 4-1: Oaxaca-Blinder decomposition of the real wage gap .............................................................................. 46
Table 4-2: Alternative treatments of pensions (2015) ........................................................................................... 51

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EXECUTIVE SUMMARY

How has Belarus shared in terms of poverty reduction and shared prosperity over the past decade and a half? This paper has the goal of presenting the first comprehensive update of poverty, inequality and shared prosperity trends – and key drivers of these trends – since 2003 until 2015, that is starting with the end of the most recent poverty assessment published in 2004 and that covered the period 1997-2002. In addition to discussing the past trends, the paper also aims to present some emerging challenges to continued poverty reduction and inclusive growth in the near future. Relying on data from the Household Sample Survey, the paper focuses on the dynamics of the main sources of livelihood of households – labor income, pensions as well as direct transfers and indirect subsidies – as key contributors to the evolution of overall disposable incomes of households, in order to understand what lay behind the evolution of poverty and shared prosperity of the 2003-2015 period. The paper also complements the cross-sectional, but more detailed, look at the contribution of the Belarus fiscal system to poverty and inequality provided by the Commitment to Equity analysis (Bornukova, Shymanovich and Chubrik, 2017), by providing a temporal dimension.

The evolution of poverty and shared prosperity in Belarus should be viewed in the context of rapid economic growth during 2000-2008, followed by a period of slower growth, and increased volatility, ending in recession. The economy of Belarus grew rapidly between 2000 and 2008, underpinned by energy supplies from Russia, the strong economic growth among Belarus’s main trading partners, and substantial terms of trade gains. State intervention has also helped soften budget constraints and delay restructuring in the economy. High economic growth and full employment were key elements of the Belarus socioeconomic model and SOEs remained the main engine of employment. The public sector has been a source of employer of last resort, while centralized wage-setting system delivered lower cross-sectional wage differentials. Following the financial crisis of 2008, the growth model has started reaching its limits. Real GDP growth had become increasingly dependent on capital accumulation, supported, in part, by external savings, and leading to the accumulation of public debt. The steep fall in the price of oil in the world market after June 2014 and the subsequent tightening of the external borrowing constraint facing Belarus triggered a recession in 2015, the first recession since 1995.

Overall poverty and shared prosperity trends

The period of rapid economic growth has been associated with considerable poverty reduction and high growth of living standards among the bottom 40 population. Measured at the internationally-comparable PPP US$5/day threshold, the poverty headcount fell from 32 percent in 2003 to less than 1 percent in 2014. For a higher threshold of PPP US$10/day, the share of the population of Belarus living in households with the level of purchasing power below that threshold fell from 82 percent in 2003 to less than 10 percent in 2014. While poverty has been falling across the whole Europe and Central Asia (ECA) region during this period, Belarus has outperformed the ECA region during the earlier years before the financial crisis in 2009 – while in 2001 the US$ 5/day poverty rate in Belarus was similar to the ECA-wide poverty headcount, by 2008, the $5/day poverty rate in Belarus has fallen much lower than in the ECA region as a whole, and indeed it was at the same level as the $2.5/day poverty headcount for ECA (Error! Reference source not found. Figure 0-1).
Within Belarus, economic growth and poverty reduction has also been associated with falling spatial disparities. From the starting point in 2003, when Belarus has a much lower incidence of poverty in Minsk than in other urban and rural areas, the past decade has been characterized by a process of regional absolute convergence between Minsk and the rest of the country. For the $10/day threshold, in Minsk the poverty headcount fell by 54 percentage points between 2003 and 2014, whereas rural areas recorded a 75 percentage points reduction in the poverty rate during the same period. The data suggest a greater contribution of large cities to overall poverty reduction during the earlier years (2003-2008), whereas during 2008-2015 a larger proportion of overall decline in the poverty headcount was due to falling rural poverty.

Despite overall income growth and poverty reduction during this period, along some dimensions the disparities between the B40 and the T60 groups have increased. The evolution of the profile of the population in the bottom two quintiles of the population over the 2003-2015 period reveals that on indicators such as the share of young dependents, as well as prevalence of high educational attainment (tertiary education), there is a divergence rather than a convergence between the B40 and T60 groups. Moreover, the B40 group remains more heavily concentrated in rural areas, and with lower access to core public services, although on this dimension we observe a convergence overtime. These patterns suggest that constraints remain to the income-generating capacity of the B40 group going forward, that could, for instance, in the case of education, accentuate disparities between B40 and T60 groups in the future.

Belarus has performed well in terms of the World Bank’s shared prosperity indicator. For a region-wide comparable time period, Belarus has exhibited the highest rate of growth of expenditures in the bottom 40 group during the 2006-2011 period (almost 9 percent on an annualized basis), at a time when many of the European countries were suffering from the effects of the financial crisis, registering negative growth of incomes both for the population overall and for the B40 group. As the economy slowed down further in 2015, the growth of incomes both in the B40 and the T60 groups
decelerated, yet welfare of the B40 group still grew faster than that of the T60 group, and compared to the ECA region and a number of Western European countries, incomes were growing relatively fast, below only Georgia and Kazakhstan.

FIGURE 0-2: SHARED PROSPERITY ACROSS THE ECA REGION (5-YEAR RANGES IN THE 2009-2015 PERIOD)

Notes: Estimates based on the ECAPOV harmonization. 5-year window which differs across countries but in all cases is within the 2009-2015 period.

Main drivers of poverty reduction and shared prosperity

Growth in wages and pensions were the main drivers of shared prosperity in Belarus, particularly prior to the financial crisis, with an increasing importance of social transfers in the second half of the period. A large share of disposable income growth during the 2003-2009 period (68 percent of total) was due to growth in wages during the same period. Aside from growth in wages, the second important factor was growth in pensions, contributing 20 percent of overall disposable income growth, followed by the growth of other income sources. During the years following the financial crisis (2009-2015), the absolute growth rates of wages were considerably lower, and the relative contribution of wages to total income growth was also lower – 47 percent of total. The relative contribution of pensions to B40 income growth increased from 20 percent during the first period to 34 percent during the second period, and also the contribution of other transfers, such as child benefits and other social assistance increased slightly from 3 percent of total to 12.5 percent of total.

Real wage growth and greater employment among the B40 group were behind labor income growth over the past decade. The data suggest improvements in the educational attainment during 2003-2015 for both the B40 and the T60 groups, as well as a partial (absolute) convergence between B40 and T60 educational endowment during this period – in percentage points terms the decline in the share of population with no more than general secondary population was greater in the B40 group, although the incidence of higher education increased faster in the T60 group. Educational gains translated into greater employment -- the share of households in the B40 group (or population residing in households) that receive wage income increased between 2003 and 2009, but these changes were
small, which is suggestive of the fact that strong labor income growth was primarily driven by increases in the real value of wages. Indeed, taking the index of wage levels in 2003 as 100, wages grew steadily during 2003-2015 and in 2015 were 207 percent of the 2003 level in constant prices, normalized by the GDP deflator; in comparison, the value of a similar index of GDP per worker was 177 in 2015. The Government sets both economy-wide, as well as regional and town-level targets on a recurrent basis, and these targets apply to the entire economy, including the private sector. Wage targets also resulted in little differentiation in wages across regions, and across sectors, while administrative restrictions on wage structures also result in redistribution of incomes in favor of low-income workers in sectors with low wages (IMF, 2014). B40 wages, as a share of T60 wages increased from 55 percent in 2003 to 65 percent by 2015. However, B40 still have poorer labor market outcomes. They have higher unemployment rates, more often work in less secure jobs (e.g. without written contracts) and tend to work in the sectors with lower wages.

**Pensions grew in lock step with wages, the pension system benefiting from a favorable demographic environment from a fiscal point of view.** Low birth rates and survival rates for the 1940-1946 cohorts, resulting in low numbers of pensioners in recent years, created a favorable environment for the pay-as-you-go PAYG pension system. During the 2003-2015 period the levels of pensions in real terms increased steadily, being recalculated in accordance with the growth of average wages. In fact, for the B40 population, pensions grew relatively faster between 2003 and 2015 in comparison with the T60 population. The pension system in Belarus is characterized by a notable degree of redistribution that protects the incomes of low income households. Bornukova, Shymonovich and Chubrik (2017) estimate that pensions reduced the Gini index of inequality in Belarus by 11 points relative to the Gini index of market incomes.

**The importance of social transfers has increased in recent years, particularly for certain population groups.** According to 2015 data, over half of the population (63 percent of the bottom quintile) were covered by social assistance in Belarus, higher than the ECA average (48.6 percent), but in line with the average for High Income countries (64 percent), or countries neighboring countries like Poland (61 percent). The targeting of the social assistance system in Belarus (excluding privileges) has deteriorated between 2003 and 2015, while the reliance on transfers among those who received them has increased over time. In 2003 and 2009 public transfers accounted for 12 percent of income in the B40 group, increasing to 20 percent in 2015. The increase in the importance of subsidies is both due to the increase in the magnitude of transfers, and also falling incomes in 2015 due to the recession. The system of transfers as a whole is progressive – in the absence of benefits the Gini index of inequality would increase by 2 percentage points – and a number of benefits (unemployment benefits, child benefits) are also very efficient, per unit of resources spent, in terms of their effect on reducing poverty and inequality. On the other hand, the progressivity and effectiveness of the extensive system of privileges – the scope of which has diminished during 2009-2015, is considerably lower.

**Some emerging challenges to future shared prosperity**

The recent deterioration of the external environment has shone a light on the degree of vulnerability of low income households and raises questions about the sustainability of past shared prosperity gains. In 2015 the poverty headcount at PPP $10/day increased by 2.5 percentage points at the national level, and in rural areas by almost 6 percentage points (i.e. by 30 percent) in just one year. The negative economic outlook, coupled with expectations of increasing unemployment due
to SOE reforms, as well as relatively high inflation in 2016 (13 percent) will continue eroding the purchasing power of household incomes and may lead to further increases in poverty in 2016. The fact that there is also a large number of households just above the $10/day threshold suggests that absent mitigating measures, further erosion of household welfare, such as on account of increasing utilities tariffs, can be associated with further increases in the poverty rate. The data on the dynamics of household incomes and expenditures in 2015-2016 is consistent with households at the lower end of the welfare distribution drawing down on savings to maintain consumption levels despite falling incomes. However, this is not a sustainable strategy if household incomes continue to deteriorate.

While the economy faces multiple challenges, this paper highlights two challenges to inclusive growth, the prominence of which is being accentuated by the recent recession – the impact of population ageing, and the need to provide an adequate safety net in the context of ongoing reforms, notably in the utilities sector. With respect to aging, as this process continues, the prominence of elderly population in the B40 group – and the prominence of pensions in the livelihoods of many households – will increase, creating pressure on the pension system, and bringing to the fore the importance of the active ageing agenda. The share of 60+ population in Belarus is projected to increase from 15 percent in 2000 to 35 percent in 2050, while the old age dependency ratio is projected to increase from 20 percent in 2000 to 46 percent in 2050. As the result of the shrinking working age population, and the increase in the share of elderly in Belarus, the projected fiscal flows in the pensions system in Belarus are projected to deteriorate, and the pension fund deficit could reach an equivalent of 9 percent of GDP by 2050 (Bornukova et al., 2015). The share of pension recipients both in the B40 population and in the T60 population increased between 2003 and 2015, and will continue increasing in the future, such future pension dynamics will play an increasingly important role in overall disposable income growth.

Meanwhile, ongoing reforms in the utilities sector will diminish the support to households in the form of subsidized utilities prices, which, absent compensatory measures, can have a notable welfare impact. Utilities subsidies are available to everyone in Belarus in the form of subsidized tariffs and account for about 2 percent of GDP. They are also strongly regressive – low tariffs disproportionately benefit higher income groups, while also leading to inefficient energy consumption. Simulations suggest that increasing heating tariffs to cost recovery levels would lead to a notable increase in the share of the overall budget that households would have to allocate to utilities payments, and this increase would be the highest for low income households. In the bottom decile the share of household budgets devoted to utilities during the heating season in urban areas could increase from 11.6 percent of total to 16.5 percent of total by the end of 2017 (to 20 percent by the end of 2018), under some of the recent tariff projections, and without any compensation. The Government has introduced, at the beginning of the 2016 heating season, a compensatory program that limits the impact of tariff increases, however it is estimated to only partially offset increasing prices.
1. INTRODUCTION

The most recent poverty assessment for Belarus was undertaken over a decade ago, and covers the period through 2002 (World Bank, 2004). The report highlighted several salient patterns of poverty in Belarus, including (i) the much lower incidence of poverty in the capital city of Minsk, (ii) strong links between poverty and educational attainment; and (iii) higher poverty risk among collective farmers and pensioners, as well as highlighting the notable pay differences among men and women. The poverty assessment also highlighted several dimensions of fragility with respect to the poverty reduction gains in Belarus, including unsustainable increases in real wages in excess of productivity; as well as Russian subsidies, particularly for imported natural gas – an input for utility companies.

Since the publication of the last poverty assessment, Belarus has experienced rapid economic growth – per capita GDP grew at a rate of 8.6 percent per year during the 2000-2008 period. This performance exceeded the average for the ECA region; Belarus was located at the 80th percentile of per capita GDP growth performance among ECA countries. The rate of growth also exceeded the average performance of other Upper Middle Income countries, as well as that of oil importing countries, or countries designated by the IMF as “Emerging and Developing” – all countries groupings of which Belarus is a member. With the advent of the financial crisis in 2009, growth stalled (GDP per capita grew by 0.2 percent in 2009), but then quickly rebounded to 7.7 percent in 2010. During the 2010-2015 period, the economy of Belarus, and of the ECA region as a whole, grew at half the pace of the 2000-2008 period, with the performance of Belarus aligned with the ECA average, but still high in comparison with Upper Middle Income, and especially with OECD countries. In 2015 the Belarusian economy entered a recession, which continued into 2016 and permeated most sectors of economic activity. The poverty reduction trend was halted and poverty increased in 2015 and 2016.

FIGURE 1-1: PRE- AND POST-CRISIS GROWTH PERFORMANCE IN BELARUS AND COMPARATOR COUNTRIES/GROUPS

The purpose of this paper is to provide a first comprehensive update of poverty, inequality and shared prosperity trends – and key drivers of these trends – over the past decade, starting with the end of the most recent poverty assessment, that is to focus on the period 2003 – 2015 (last available data point). This paper thus aims to undertake an analysis of recent trends on poverty and shared prosperity in
Belarus, highlighting links between poverty and shared prosperity with labor markets and fiscal systems. The paper also provide a first detailed look into the evolution of the shared prosperity indicator (i.e. the growth of expenditures of the bottom 40 percent) and the evolution of the profile of the bottom 40 percent of the population over the same period, to assess whether the underlying characteristics of the population either below the poverty line or vulnerable to poverty changed in notable ways over the past decade. The paper aims to serve several objectives including building core knowledge base on recent poverty and shared prosperity profile and trends in Belarus and making such a knowledge base available for the Systematic Country Diagnostic (SCD), and ongoing reforms in the utilities sector.

The main data source for the analysis is the Household Sample Survey (HSS), which is available annually for the period 1995-2015. The analysis will rely primarily on data for the period 2003-2015. The data is a repeated cross section with information on (i) household composition; (ii) income sources, both labor incomes and transfers; (iii) household expenditures, inclusively on utilities; (iv) housing conditions and amenities. The HSS also includes individual-level data on education and incomes for each household member. For each of the datasets, a standardized welfare distribution is available based on the ECAPOV harmonization, on which welfare categorization, including internationally comparable poverty thresholds and the indicators such as shared prosperity, describing the bottom forty percent of the population in any given year, will be based. In addition, the study will also rely on other official statistics published by Belstat, including statistics on social conditions and the standard of living, as well as national account statistics and economic statistics on the evolution of the structure of the economy, of the labor market, and of the social protection system.

A key data limitation, which restricts the scope of the analysis that is feasible, is the lack of Labor Force Survey (LFS) data. This is particularly constraining in light of the fact that the HSS data does not contain any information of the labor market characteristics of household members, including their labor market status, sectoral and occupational distribution of employment, or characteristics of unemployment, job search or inactivity. The only inference on labor markets that is possible with the data at hand through the availability in the HSS of data on income sources, which allows us to construct some proxies for employment status based on wage receipts. In order to address this notable data constraint, the paper also relies on data from the Life in Transition Survey (LiTS), an attitudinal survey implemented by the European Bank for Reconstruction and Development (EBRD) for a small, but nationally representative sample of adults in Belarus (and other ECA countries), but which has an a more detailed employment module.

The paper is structured as follows: section 2 provides a brief overview of macroeconomic developments over the past decade in order to put the track record of poverty, inequality and shared prosperity into a broader economic context. Section 3 presents an overview of poverty, inequality and shared prosperity dynamics during the 2003-2015 period. Section 4 looks in more details at the key factors that contributed to the poverty and shared prosperity dynamics described in section 3. Section 5 outlines several challenges to sustaining shared prosperity in the future. Section 6 concludes.
The economy of Belarus grew rapidly between 2000 and 2008, underpinned by energy supplies from Russia, the strong economic growth among Belarus’s main trading partners, and substantial terms of trade gains. Belarus benefited strongly from the implicit subsidies in the form of underpriced energy from Russia by importing energy at below world prices and exporting refined oil and other energy-intensive products at world market prices. Between 2006 and 2008, the prices of oil products doubled, while the prices of domestically produced fertilizers tripled. As a result, Belarusian exports became increasingly driven by the dynamics of world commodity prices. In addition, strong economic growth of trading partners in the CIS, and especially Russia, which alone accounted for over two-thirds of Belarus’s total non-energy exports during 2001–2008, benefited exports of machinery and agricultural goods. For 2001-2008, the share of CIS in machinery and agricultural exports was even higher: over 85 and almost 90 percent, respectively. Demand for exports from Belarus was strong on the back of favorable oil prices boosting growth in the CIS, especially Russia.

Note: The contributions of capital to output are obtained by applying the use of capital services approach in order to address the problem of biased fixed investment deflators. Available data on capital stock display its unnatural stability, as throughout the last 20 years, the annual growth rate of capital stock in real terms fluctuates around two percent. In order to minimize the bias, alternative deflators for the whole economy and the selected sectors are constructed by re-evaluating the capital stock. Source: Staff estimates based on Belstat data.

After 2005, economic growth became increasingly reliant on domestic demand. The decline in energy subsidies from Russia exposed structural vulnerabilities of the economy. With little ability to diversify its export products and markets to reduce its dependence on underpriced energy inputs economic growth in Belarus became less export driven and domestic demand had to be boosted. Growth was backed by large state support to the economy, sizeable public investments, and state-induced...
expansion of credit, particularly under government directed lending programs. Economic growth was driven mainly by capital accumulation. In addition, rapidly growing real wages fueled growth in consumption. Real wage and income growth outpaced productivity gains and, thus, became an additional factor contributing to the loss of competitiveness of Belarus.

State intervention has also helped soften budget constraints and delay restructuring in the economy. The expansion of credit was driven by growing dominance of the GDL programs, under which large state-owned banks allocate credit to priority sectors, projects, and individual companies at subsidized interest rates, often with explicit government guarantees. GDL programs supported agriculture and housing construction, but did not necessarily fund the most productive investments. Credit has expanded across all sectors of the economy; however, the agriculture and construction sectors—the main recipient sectors of GDL—have seen disproportionate increases.

Up until about 2009 high economic growth and full employment were key elements of the Belarus socioeconomic model and SOEs remained the main engine of employment. The public sector has been a source of employer of last resort, while centralized wage-setting system delivered lower cross-sectional wage differentials. As the evidence in the next section will suggest, the economic growth in Belarus during this period was pro-poor, helping to reduce the incidence of poverty and to increase the average standard of living. Low poverty incidence and low income differentiatiion also helped to strengthen the domestic demand which was relatively easy for local producers to meet.

Following the financial crisis of 2008, the growth model has started reaching its limits, however. Real GDP growth had become increasingly dependent on capital accumulation, supported, in part, by SIPs and external savings, leading to the accumulation of public debt. Growth was relying mainly on investments. At the same time, increasing capital-labor ratios in Belarus did not result in higher total factor productivity growth. Competitiveness deteriorated, as total factor productivity dynamics in the tradable sectors worsened vis-à-vis the non-tradable sectors. The sources of competitive advantage that had served Belarusian industry well in the 1980s and until mid-2000s—economies of scale in production, economies of scope in distribution and sales, brand recognition with channels serving the former Soviet Union markets, better information about customers’ preferences—began to dissipate in the increasingly globalized market. During 2011-2015, only five sectors out of 24—construction, mining, transports, communications, and finance—display positive TFP dynamics.

After the thirst shock of 2008-2009, the government responded with fiscal and monetary stimulus. During the second half of 2010 (in the Presidential election run-up) macroeconomic policies were loosened, resulting in the balance of payment crisis. The large and unsustainable external imbalances put pressure on reserves in early 2011, and the NBRB was unable to defend the Belarusian rubel through foreign exchange interventions. It devalued the national currency by 67 percent over six months of 2011, while inflation soared to 108 percent and banking system became fragile. As a result, the country experienced high external financing needs. A number of adjustment measures were

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1 In circumstances when capital inputs primarily determine economic growth, respective returns tend to fall. Accordingly, unless factor productivity is improving, growth acceleration cannot become investment-driven.
implemented (unification of the ER, reduction in government directed lending and budget consolidation measures), including receiving the rescue package from the Anti-Crisis Fund and Russia which provided some breathing space. Macroeconomic stability was restored in 2012 but the situation remained fragile and annual growth decelerated to less than 1.5 percent in 2012-2014.

The steep fall in the price of oil in the world market after June 2014 and the subsequent tightening of the external borrowing constraint facing Belarus triggered a recession in 2015, the first recession since 1995. GDP contracted by 3.8 percent in 2015, while private consumption declined by 2.4 percent and investment by 15.9 percent. Underlying Belarus's recession were deep seated structural rigidities exposed by a 3.7 percent simultaneous contraction of the Russian economy. The high exposure to external shocks because of a large dependency on the Russian market was further exacerbated by a narrow concentration of the export basket on mineral products and fertilizers. As the Russian ruble plummeted at the end of 2014, pressures on the Belarusian national currency intensified which depreciated by 36 percent against US dollar and 19 percent against Russian ruble during 2015.

The recession was also reflected in the deterioration of labor market outcomes. Throughout 2015, employment decreased by 1.4 percent y/y, while unemployment increased. The deterioration of labor market conditions was also evident at the firm level, through falling working hours (inclusively through partially-paid and unpaid leave). In January-September 2015, 8.3 percent of the active labor force worked reduced hours (compared to only 3.5 percent during the previous year), and 5.3 percent were subject to production stoppages, including at large SOEs and industrial sectors such as vehicles, transport equipment, machinery, and household appliances. In 2015, real wages declined by 2.3 percent. Since January 2015, a number of firms facing financial difficulties failed to pay wages, with nearly 500 companies accumulating arrears totaling 1.7 percent of the gross wage bill in the economy. The economic situation then continued to deteriorate further throughout 2016, although at a slower pace than in the previous year. At the same time, on the household side, the negative shock was even more pronounced in 2016. Real earnings fell by 3.8 percent in 2016; the contraction of real disposable incomes of the population in 2016 (7.3 percent y/y) was similarly more severe than in 2015 (5.9 percent y/y).

External shocks have required tightening of domestic demand policies and greater exchange rate flexibility in 2015 and 2016. In order to safeguard achievements in macroeconomic stabilization and address structural constraints, the authorities have started to implement a number of relevant policy measures, including a partial abolition of price controls over socially important goods and services, raising of the utility tariffs, and tightening of the conditions for new government directed lending and long-term financial assistance to SOEs. To mitigate the effects of economic downturn, the authorities

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2 While reflecting serious financial problems at the firm level, the wage arrears are not as sizable as those experienced in the early 2000s. Wage debts jumped to 7.5 percent of the gross wage bill in the economy after the Presidential elections of 2001, upon the electoral pledge to raise monthly wages to $100 throughout all sectors, regardless of productivity considerations. Even loss-making enterprises were expected to pay this wage, being granted with tax deferrals and/or bank loans.

3 The most recent contraction occurred in export-oriented sectors, such as metallurgy, production of electrical equipment, machinery and transport equipment, which traditionally export to Russia. In contrast, food, wood processing, pharmaceuticals and other light industries reported growth.
are in the process of implementing a set of policies to regain competitiveness and to begin diversifying the economy. In April 2016, the Government approved 2016-2020 Action Plan, aimed to regain competitiveness, reduce vulnerability to developments in the external environment, and to restore economic growth. The Government has successfully negotiated a program with the Eurasian Fund for Stabilization and Development (EFSD), and is currently discussing with the International Monetary Fund (IMF) a parallel program.

3. POVERTY, INEQUALITY AND SHARED PROSPERITY DYNAMICS DURING 2003-2015

Against this macroeconomic background presented in section 2, this section reviews the dynamics of poverty, inequality and shared prosperity over the past decade and a half, both through the period of rapid economic growth and the recent recession. In particular, the section aims to describe the dynamics of poverty along key dimensions, both spatial and for different population groups, as well as provide an account of shared prosperity and the composition of the B40 population over time. In addition to describing dynamics, the section also tries to put the performance registered by Belarus into international context.

3.1. POVERTY FELL DRAMATICALLY BETWEEN 2003 AND 2014

The poverty rate in Belarus fell precipitously between 2003 and 2014. Measured at the internationally-comparable PPP US$5/day threshold, the poverty headcount fell from 32 percent in 2003 to less than 1 percent in 2014. For a higher threshold of PPP US$10/day, the share of the population of Belarus living in households with the level of purchasing power below that threshold fell from 82 percent in 2003 to less than 10 percent in 2014, before increasing to 12.3 percent in 2015 (Figure 3-1).

FIGURE 3-1: POVERTY DYNAMICS AND COMPOSITION, 2003-2014

Source: Staff estimates based on the ECAPOV harmonization of HSS data.

A recent study of economic mobility in the Europe and Central Asia (ECA) region (Cancho et al., 2015) defines the following four economic classes: individuals living on less than $2.5 PPP per day (the regional extreme poverty line); individuals living on US$2.5 to $5 PPP per day (the regional moderate poverty line); individuals living on $5 to $10 PPP per day and individuals living with $10
PPP or more per day. Individuals with per capita expenditures of US$5-10 per day are considered as being vulnerable to falling back into poverty, whereas individuals with per capita expenditures in excess of US$10/day are defined as middle class. Based on these welfare groupings, the share of population vulnerable to poverty in Belarus fell from 50 percent of the population in 2003 to less than 10 percent of the population in 2014. At the same time, the share of the middle class population increased from under 20 percent to over 90 percent during the same time period, before falling to 88 percent in 2015. One notable characteristic of the poverty reduction dynamics during this period is that the pace of the reduction of the share of poor and vulnerable population on the one hand, and the pace of the expansion of the middle class on the other hand, was quite constant throughout the whole period, with the slowing down of the pace of poverty reduction only observed in 2009, with the onset of the financial crisis, then picking up again during 2010-2012, and only slowing down during the last 2 years (2013-2014), before the recession of 2015 resulted in an uptick of poverty.

FIGURE 3-2: REGIONAL POVERTY DYNAMICS IN ECA (2000-2013)

Source: ECATSD calculations using ECAPOV data based on HBS and EU-SILC surveys.

It should be noted that the process of poverty reduction and of the expansion of the middle class during the past decade was a more general process in the ECA region. For instance, according to regional estimates, the share of the population of the ECA regions below the PPP US$5/day threshold fell from 38 percent in 2003 to 13 percent in 2013, and the share of the population below the PPP US$10/day threshold fell from 73 percent to just below 47 percent during the same period (Figure 3-2). However, even against this background of overall income growth and poverty reduction in the region more broadly, Belarus stands out the country with the smallest share of poor population (below $2.5/day threshold), alongside Slovenia, and also the country with one of the smallest shares of

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4 Note the definition of middle class as corresponding to incomes in excess of PPP US$10/day is also consistent with recent work on economic mobility in Latin America (Ferreira et al., 2013).
vulnerable population, and one of the largest shares of population in the middle class group (Figure 3-3).

FIGURE 3-3: COMPOSITION OF POPULATION LIVING ON US$ PPP 10/DAY OR BELOW IN THE ECA REGION

Source: ECATSD calculations using ECAPOV data based on HBS and EU-SILC surveys.

At the subnational level, in 2003 the profile of poverty is described by a much lower incidence of poverty (both $5/day and $10/day) in Minsk than in other urban areas and rural areas. While for the $5/day threshold there are also notable differences in the incidence of poverty between large cities, small cities and rural areas, for the $10/day threshold the headcount is broadly similar for these three type of residence areas, all of which standing out against the lower incidence of poverty in the nation’s capital. From this starting point, the past decade has been characterized by a process of regional absolute convergence between Minsk and the rest of the country. For instance, for the $10/day threshold, in Minsk the poverty headcount fell by 54 percentage points between 2003 and 2014, whereas rural areas recorded a 75 percentage points reduction in the poverty rate during the same period (Figure 3-4). It is also the case, however, that during the recession in 2015 the PPP $10/day headcount increased by over 5 percentage points from 18.3 percent to 23.9 percent, whereas in Minsk no increase in poverty incidence was observed – the PPP $10/day poverty headcount fell between 2014 and 2015.
This is confirmed by the formal decomposition of changes in the $10/day poverty headcount between 2003 and 2015 by type of residence. The decomposition, based on Huppi and Ravallion, (1991), allows for changes in the overall national poverty headcount to be decomposed into “intra-sectoral” changes (here sectors being the different residential categories), as well as changes due to geographic population shifts. The results, presented separately for the 2003-2008 and 2008-2015 periods, suggest that at the beginning of the period poverty reduction in large cities accounted for a larger relative share of the total, whereas during 2008-2015 a larger proportion of overall decline in the poverty headcount was due to falling rural poverty – rural areas accounted for 31 percent of population in 2008, but over the 2008-2015 period rural areas contributed 38 percent of the overall (national) poverty decline. On the other hand, Minsk city, while accounting for 16 percent of the country’s population, contributed only 7 percent of the overall poverty decline (Table 3-1).


<table>
<thead>
<tr>
<th>Location</th>
<th>Population share in t1</th>
<th>Absolute change</th>
<th>Relative change</th>
<th>Population share in t1</th>
<th>Absolute change</th>
<th>Relative change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Minsk city</td>
<td>16.5</td>
<td>-7.4</td>
<td>15.9</td>
<td>16.3</td>
<td>-1.6</td>
<td>7.1</td>
</tr>
<tr>
<td>Large city</td>
<td>28.7</td>
<td>-15.6</td>
<td>33.4</td>
<td>28.4</td>
<td>-4.9</td>
<td>21.2</td>
</tr>
<tr>
<td>Small city</td>
<td>23.5</td>
<td>-11.1</td>
<td>23.7</td>
<td>24.3</td>
<td>-6.7</td>
<td>28.9</td>
</tr>
<tr>
<td>Rural</td>
<td>31.3</td>
<td>-12.7</td>
<td>27.2</td>
<td>31.1</td>
<td>-8.9</td>
<td>38.2</td>
</tr>
<tr>
<td>Total Intra-sectoral effect</td>
<td>-46.8</td>
<td>100.2</td>
<td>-22.2</td>
<td>95.4</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Population-shift effect</td>
<td>0.1</td>
<td>-0.2</td>
<td>-2.6</td>
<td>11.0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Interaction effect</td>
<td>0.0</td>
<td>0.0</td>
<td>1.5</td>
<td>-6.3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Change in poverty (HC)</td>
<td>-46.7</td>
<td>100.0</td>
<td>-23.3</td>
<td>100.0</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Source: Staff estimates based on the ECAPOV harmonization of HSS data.
Across regions of Belarus, the profile of poverty in 2003 was again characterized by a much lower poverty rate in Minsk city, and higher, and comparable (especially at the $10/day threshold) in other regions, including the Minsk Oblast (excluding the capital). Over the 2003-2014 the pace of poverty reduction appears similar across the various regions; a process of absolute convergence between Minsk city and other regions (Oblasts) is observed to take place (Figure 3-5). Both at the beginning and at the end of the observed time period the differences between regions (outside Minsk) are less than 5 percentage points at the $10/day threshold. Notably, even at the $10/day threshold, the share of populations in Minsk city with expenditures below that level in 2015 was 0.7 percent.

![Figure 3-5: Poverty Dynamics by Region ($5/day and $10/day thresholds)](image_url)

**FIGURE 3-5: POVERTY DYNAMICS BY REGION ($5/DAY AND $10/DAY THRESHOLDS)**

Source: Staff estimates based on the ECAPOV harmonization of HSS data.

Oblast-level decomposition of poverty changes during 2003 and 2015 suggest a broadly uniform decline in the poverty headcount during 2003-2008, and an increasing contribution in more recent years (2008-2015) to overall poverty decline of falling poverty headcounts in the 3 eastern oblasts of Belarus -- Vitebsk, Gomel and Mogilev (Table 3-2).


<table>
<thead>
<tr>
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</thead>
<tbody>
<tr>
<td></td>
<td>Population share in t1</td>
<td>Absolute change</td>
</tr>
<tr>
<td>Brest</td>
<td>14.7</td>
<td>-6.3</td>
</tr>
<tr>
<td>Vitebsk</td>
<td>13.6</td>
<td>-5.9</td>
</tr>
<tr>
<td>Gomel</td>
<td>15.6</td>
<td>-7.1</td>
</tr>
<tr>
<td>Grodno</td>
<td>11.8</td>
<td>-6.3</td>
</tr>
<tr>
<td>Minsk</td>
<td>16.5</td>
<td>-7.4</td>
</tr>
<tr>
<td>Minsk-Oblast</td>
<td>15.5</td>
<td>-8.2</td>
</tr>
<tr>
<td>Mogilev</td>
<td>12.3</td>
<td>-5.7</td>
</tr>
<tr>
<td>Total Intra-sectoral effect</td>
<td>-46.8</td>
<td>100.1</td>
</tr>
<tr>
<td>Population-shift effect</td>
<td>0.1</td>
<td>-0.2</td>
</tr>
</tbody>
</table>
As the share of population below the $5/day and below the $10/day threshold fell over the past decade, the composition of this population also evolved somewhat. For instance, taking the $10/day threshold, over the 2003-2015 period the share of single-member, or 2-member households in this group decreased, even though for the population overall, the share of single-member or two-member households increased (Figure 3-6). A notable trend is the increase in the share of population below the $10/day threshold that originates from large households, particularly households with 5 or more members – this share increased from 14 percent in 2003 to 32 percent in 2014, before falling to 28 percent in 2015, but still double the initial share.

**FIGURE 3-6: COMPOSITION OF THE POPULATION BELOW $10/DAY THRESHOLD BY HH SIZE.**

Poverty rates among households with no children (age 0-12) were lower in 2003 compared to households with 1 or more children, and this remains to be the case according to 2015 data. Over the 2003-2014 period the rate of poverty reduction was similar for households without children, as well as for households with 1 or more children. One notable difference is the initially slower declines in poverty among households with 3 or more children, catching up only during 2012 - 2014 (Figure 3-7). The recession of 2015 was associated with an increase in the incidence of poverty for all groups of household (by number of children), although the (absolute) magnitude of the increase in the poverty

### Table: Interaction effect and change in poverty

<table>
<thead>
<tr>
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</thead>
<tbody>
<tr>
<td>Population share in t1 Absolute change</td>
<td>0.0</td>
<td>Relative change</td>
<td>0.0</td>
<td></td>
</tr>
<tr>
<td>Change in poverty (HC) Absolute change</td>
<td>-46.7</td>
<td>100.0</td>
<td>-23.3</td>
<td>100.0</td>
</tr>
</tbody>
</table>

Source: Staff estimates based on the ECAPOV harmonization of HSS data.
headcount was higher for household with more children – the poverty rate increased by 3 percentage points for households with 2 children, by almost 7 percentage points for households with 3 children, and by 13 percentage points among households with 4 or more children.

With regard to households differentiated by the number of elderly household members, a notable change in the composition of the population below $10/day between 2003 and 2015 is the lower poverty headcount among households without elderly at the beginning of this time period, but a higher poverty headcount in this group in 2014; in other words, poverty declined faster, particularly in recent years, among households with elderly members as compared to households without any elderly members. Furthermore, the incidence of poverty measured at the PPP $10/day threshold fell further in 2015 for households with 2 or more elderly, whereas it increased for household with no elderly, or for those with only one person in the 60+ age group.

FIGURE 3-7: POVERTY RATE ($10/DAY) FOR DIFFERENT TYPES OF HOUSEHOLDS

What characteristics differentiate the population below the PPP US$ 10/day poverty threshold in 2015 from the population above this threshold? The population below the poverty threshold is younger on average (33.1 years on average vs 42.8 for non-poor), originates in families with much higher youth dependency ratio (71 percent vs 37 percent for non-poor) and lower old-age dependency ratios (12 and 18 percent respectively). Only 11 percent of the poor are pensioners, while among those above the poverty line this share is twice as high – 23 percent. Those below the poverty line live in families with more children than the noon-poor: only one fourth of the poor live in families with no children, while 57 percent of non-poor do so. At the same time, 30 and 13 percent respectively live in families with two and three or more children, while for non-poor these numbers are only 13 and 2 percent. Half of poor people live in rural areas and only 1 percent in the capital city, while for the non-poor these numbers are equal around 22 percent. Poor people have worse education outcomes: among them only 8.5 percent have tertiary education (28 percent among the non-poor), while the share with general secondary education only is higher (40 and 24 percent respectively). Moreover, people with per capita consumption below 10 USD/day in 2005 PPP have poorer access to main utilities including hot and cold water, heating, gas and others. However, these differences are generally small and are mainly explained by the higher rural population share among the poor. Within urban and rural sub-
populations separately the gap in access to utilities is small and, for many utilities, statistically insignificant.

3.2. THE RECESSION OF 2015-2016 AND A PARTIAL REVERSAL OF FAVORABLE TRENDS

In 2015, all regions of Belarus faced economic decline. The decline was slowest in Minsk Oblast and fastest in Grodno and Vitebsk Oblast, but it contrasts with the dynamics during 2012 - 2014 when most of the regions demonstrated economic growth. The biggest negative contribution to real GDP growth came from Minsk city (-1.3 percentage points, or 1/3 of total GDP decline), the lowest from Minsk Oblast and Mogilev Oblast (by -0.3 percentage points), because of the slowest decline in the first and the lowest share of the latter in the national economy (Chubrik, 2016).

The economic decline was associated with employment levels and wages, particularly in later years. The economic downturn in Belarus started somewhat earlier than the onset of recession. Rayon-level estimates show that decreases in industrial output, fixed capital investment and employment rate, and increasing share of low-making enterprises can be observed for at least some of the 119 rayons of Belarus throughout the 2010-2014 period. For instance, decreases in the employment rate were observed in most rayons as early as 2013. The prominent feature of 2014-2015 is the fall in real wages, which, by 2015 can be observed across all but 6 rayons (Chubrik, 2016). In terms of magnitudes, wages fell by 2.3 percent overall in real terms in 2015 relative to 2014, and in some regions like Brest, Vitebsk, and Gomel wages fell by more than 4 percent (Belstat, 2016).

The worsening external environment, points to higher household vulnerability and sustainability concerns. In 2015 the poverty headcount at PPP $10/day increased by 2.5 percentage points at the national level. The decline in welfare was not uniform across the country, with rural areas being more affected. In rural areas the poverty headcount increased by almost 6 percentage points (i.e. by 30 percent) in just one year (Figure 10). Across regions, there are also notable differences, with a small increase in poverty in Grodno (and a further decline in Minsk city), but a large increase in the poverty headcount in the Brest region. Furthermore, Figure 3-9 suggests that not only did the $10/day poverty headcount increase in 2015 by 2.5 percentage points, but also that there is a large number of households just above the $10/day threshold. The negative economic outlook, coupled with expectations of increasing unemployment due to SOE reforms, as well as relatively high inflation in 2016 (13 percent) will continue eroding the purchasing power of household incomes and may lead to further increases in poverty in 2016.
Preliminary data point to a further deterioration of household welfare in 2016. Following the economic contraction of 3.9 percent in 2015, the economy is projected to contract again by a similar order of magnitude (3.6 percent) in 2016. If 2015 is a guide, this will likely translate into higher poverty and vulnerability. While household data for the full 2016 year are not yet available, data from the first quarter of 2016 reveal a mean percentile growth rate of disposable incomes of -5 percent with respect to Q1 of 2015. The income growth incidence curve (Figure 3-10) shows that disposable incomes fell in real terms with 95 percent confidence for a large share of the population of Belarus. The dynamics of per capita consumption also show a fall in household expenditures, albeit of smaller magnitude and only marginally statistically significant.
FIGURE 3-10: INCOME AND EXPENDITURE GROWTH INCIDENCE CURVES (GICS), Q1 2015 – Q1 2016.

Source: Staff estimates based on HSS survey data.

The smaller magnitude of the fall in household expenditures relative to the decline in household incomes may be due to some consumption smoothing, in part through reliance on savings. Cross-sectional elasticities of household expenditures with respect to income are quite high during the 2005-2009 years (elasticity is higher than 0.9), whereas in 2010 (following low growth in 2009) and in 2012 (following high inflation in 2011), the relationship between income and expenditures weakens, particularly at the bottom of the welfare distribution. In recent years (2013-2015) the expenditure elasticity with respect to income has exhibited a downward trend, particularly at the 10th and 25th percentiles of the distribution, and to a much smaller degree at higher points in the distribution. As the economy is estimated to post a second consecutive year of negative growth in 2016, and as growth is forecast to remain negative or flat in 2017, before recovering very slowly during 2018-2019, the ability of households to run down savings will reach its limits, leading to further declines in household welfare.

FIGURE 3-11: ELASTICITY OF HH EXPENDITURES WITH RESPECT TO HH INCOME

Notes: estimates based on cross-sectional quantile regressions estimated at different percentiles of the distribution. Source: HSS data.
The objective measures of deteriorating household welfare are also mirrored by subjective measures of well-being – according to the Life in Transition Survey (LiTS) between 2006 and 2016 Belarus recorded the largest deterioration of reported well-being among all ECA countries (EBRD, 2016) – the share of adults reporting to be satisfied with life fell from 66 percent in 2006 (one of the highest in the ECA region and significantly higher than the Transition region average) to 50 percent in 2010, to 41 percent in 2016, below Transition region average (Figure 3.12).

The decline in overall life satisfaction is also reflected in the broader discontent with both the economic and political situation in the country, as well as the perception of adequacy of household finances. Belarusians are more pessimistic, on average, than the respondents in the Transition region as a whole about the economic and political evolution of their country over the past 4 years, or indeed about their own situation with respect to the recent past. Only 17 percent of adults in Belarus were satisfied with their personal financial situation in 2016, compared to 31 percent of adults in the Transition region as a whole (Figure 3.13).

### 3.3. EVOLUTION OF THE COMPOSITION OF THE BOTTOM 40 PERCENT DURING 2003-2015

As incomes of households rose over the past decade, and until the recession of 2015, the share of population below the poverty line fell dramatically. A related, but separate, question examined in this section is whether the composition of the population of those below the poverty threshold – their main characteristics – has also changed in notable ways alongside the reduction in the poverty headcount, or whether the composition of poverty in 2003 and in 2015 is relatively stable. Given the dramatic changes in the poverty headcount, comparing populations below a certain absolute threshold is not very meaningful – for instance, at the PPP US$ 10/day almost 90 percent of the population were poor in 2003, such that the characteristics of the poor population at the beginning of the period were not very different from the overall population of the country, whereas only 11 percent of the population were below this threshold in 2015. For purposes of comparability, we examine below the main characteristics of the bottom 40 population over the 2003-2015 period. The key advantage of
this approach is that exactly 40 percent of the population are always in the B40 group, such that it is meaningful to ask to what extent the composition of the B40 group has evolved overtime.

Bussolo and Lopez-Calva (2013) suggest that that the population at the bottom of the welfare distribution may be characterized by a lower stock of assets (human and otherwise) to draw upon for income-generating purposes. In addition, these households may also use their asset endowments less intensively, as well as get lower returns to their asset endowments. Any structural rigidities that persist overtime, even as income rise in an absolute sense, may be indicative of inequality traps, or persistence of certain population groups at the bottom (see also Bourguignon, Ferreira and Bolton, 2006).

One of the constraints commonly associated with poor and B40 households is the relatively high share of dependents, and, by implication, a smaller share of working age population in households. A smaller share of working age population implies that the incomes of those able to work, and who do work, are smaller, in per capita terms, relative to households with a larger share of working adults. The data for Belarus show that the share of working age population was 11 percentage points lower in the B40 group compared to the T60 group in 2003, and this difference remained unchanged in 2009, before declining in more recent years. Notably, the B40 group is characterized by a much higher share of children, and the difference between B40 group and the T60 group has increased overtime – from 9 percentage points in 2003 to 11 percentage points in 2015, as the result of a faster decline in the share of children in the T60 group (Figure 3-14). The T60 group has a considerably higher share of population residing in households with no children, and a much smaller share of population residing in households with more than 2 children.

In addition to the fact that the B40 group continue to be characterized by the smaller share of working age adults in households, and thus, *ceteris paribus*, lower current household-level capacity to generate employment income, the B40 group also continues to have lower educational attainment than the T60 population. Despite improvements in educational attainment over the past decade – the share of those with general secondary education or below in the B40 group fell from 55 percent in 2003 to 34 percent in 2015, the level of educational attainment in the T60 group also improved considerably during the same period. Moreover, given the generally high educational attainment overall in Belarus, returns to
education are likely to be more subdued for secondary education, even professional secondary, simply on account of its prevalence in the population. On the other hand, if returns to tertiary education are high, then it is notable that in terms of the share of those with tertiary education, this indicator has actually improved faster in absolute terms (percentage points increase) in the T60 group than in the B40 group. We return to this point in Section 4.

FIGURE 3-16: EDUCATIONAL ATTAINMENT IN B40 AND T60 GROUPS OVER TIME (AGE 22+)

Source: Staff estimates based on HSS data.

Geographically, Minsk city accounts for a much higher share of the population than of the B40 population, and this tendency has changed little over time. On the other side of the ledger, the Brest region has a high share of B40 population, given its population size, and the concentration of the B40 group in Brest has increased monotonically over time. Another two regions that are relatively poor, i.e. have a higher share of B40 population relative to the corresponding share of the overall population, are Mogilev and Gomel, although in both cases the concentration of the B40 group in these two regions has declined over time.
Looking at differences by level of urbanity, the B40 population remains disproportionately located in rural areas and small towns, while the T60 population – in big cities and Minsk. It should be noted that there is a relative convergence over time in the geographic distribution of the B40 and T60 groups (Figure 3-18). The share of B40 population residing in rural areas declined from 47 percent in 2003 to 37 percent in 2015, a faster decline than in the T60 group, and the share of B40 in big cities also increased faster than in the T60 group. Nevertheless, there is still a 20 percentage points difference in the share of B40 and the share of T60 residing in rural areas (the former is larger) and the same difference in the share of B40 and the share of T60 population residing in Minsk (the former is smaller).

Source: Staff estimates based on HSS data.
The urbanization of the country’s population has led to an improvement in the access to public services, inclusively for those in the B40. Access to key services such as running water, hot water and sewerage has increased, and, at least in urban areas, the disparities in access between the B40 and the T60 group have disappeared. Access remains considerably lower – albeit improving – in rural areas, which accounts in part for the overall lower access of B40 population to services, given their higher concentration in rural areas. At the same time, even within rural areas, access to key services is somewhat worse for the B40 population, even though the inequities in access to services appear to have declined notably over the past decade.

**FIGURE 3-19: ACCESS TO PUBLIC SERVICES IN URBAN AREAS (B40 AND T60)**

**FIGURE 3-20: ACCESS TO PUBLIC SERVICES IN RURAL AREAS (B40 AND T60)**

Source: Staff estimates based on HSS data.

The evolution of the profile of the population in the bottom two quintiles of the population over the 2003-2015 period reveals that despite overall income growth and poverty reduction during this period, along some dimensions the disparities between the B40 and the T60 groups have increased. In particular, on indicators such as the share of young dependents, as well as prevalence of high educational attainment (tertiary education), there is a divergence rather than a convergence between the B40 and T60 groups. Moreover, the B40 group remains more heavily concentrated in rural areas, and with lower access to core public services, although on this dimension we observe a convergence overtime. These patterns suggest that constraints remain to the income-generating capacity of the B40 group going forward, that could, for instance, in the case of education, accentuate disparities between B40 and T60 groups in the future. We return to this discussion in the next chapter that looks in more detail at some of the main drivers of past shared prosperity in Belarus. The next section, in turn, looks at the related issue of the overall dynamics of inequality in Belarus during a period of rapid economic growth and poverty reduction.

### 3.4. ECONOMIC GROWTH AND POVERTY REDUCTION WITH NO RISING INEQUALITY

Economic growth has been associated with a dramatic reduction of poverty in Belarus over the 2003-2014 period. But have growth and poverty reduction been accompanied by an increase in inequality...
in Belarus during the same period? This section reviews the main trends in inequality in Belarus, both overall for the country, and across geographic space.

Inequality in Belarus remains low, and has decreased over the past decade. The Gini index of inequality in Belarus – at 26.7 in 2015, is lower than the average for the ECA region (31 in 2015), and in fact is one of the lowest recorded among ECA countries. For comparison, the Gini index of inequality in the Russian Federation was 42 (33 in Poland). Following some up and down swings in early years, the Gini index reached a high of 29.6 in 2007, and then fell in most years with the exception of 2010 and 2014. The level of inequality is similar in urban and rural areas of Belarus (with the exception of a decrease in inequality in rural areas in 2015), and urban and rural Gini indices have followed similar trends over the past decade (Figure 3-21).


Source: Staff estimates based on the ECAPOV harmonization of HSS data.

The Gini index, while it provides an overall picture of the evolution of inequality in Belarus over time, does not allow any immediate insight into the distributional changes at various parts of the welfare distribution. We examine the evolution over time of two quantile ratios – the fifty-ten ratio (Figure 3-22), which looks at inequality in the bottom half of the distribution by means of the ratio of the 10th percentile of per capita expenditures to median per capita expenditures, and the ninety-fifty ratio (Figure 3-23), which looks at inequality in to top half of the distribution, respectively the ratio of median expenditures to the 90th percentile. In both cases there are signs of mild convergence. For instance, in urban areas median per capita expenditures were 45 percent higher than the 10th percentile in 2003, and in 2015 they were 42 percent higher. Likewise, urban median household expenditures were 47 percent lower than those of urban households in the 90th percentile, and in 2015 they were 44 percent lower.
A similar examination of the 50/10 and 90/50 quantile ratios at the regional level reveals a reduction in inequality in the lower part of the distribution, as captured by the 50/10 quantile ratio, across all regions of Belarus. In the upper half of the distribution, the 90/50 ratios also exhibit a reduction in the differences between the 50th and 90th percentiles between 2003 and 2015 across all regions with the exception of Minsk city, where the degree of inequality in the upper half of the distribution increases steadily over time.

Another indicator that confirms the reduction in spatial disparities over time is given by the decomposition of overall inequality into between-group inequality and within-group inequality. Figure 3-24 plots the share of overall inequality that is attributable to between group inequality across urban and rural areas (the remainder being inequality within urban and rural areas). On the same graph we present the decomposition for Oblasts of Belarus, with the line plotting the between Oblast component. The share of overall inequality that can be attributed to differences in mean expenditures across urban and rural areas has been declining steadily throughout the past decade until 2014 (indicating a convergence of mean incomes between urban and rural areas), with an increase in the last year (2015), when the economy was in recession. Across Oblasts, the share of overall inequality attributable to differences in mean expenditures across regions goes up and down during the 2003-2015 period, with a notable decrease between 2010 and 2012, and a subsequent increase in recent years between 2012 and 2015.
The above discussion refers to the inequality of outcomes. However, there is now a fairly large literature that argues that not all inequality need be objectionable on the grounds of justice, and proposes a decomposition of overall inequality into inequality due to differences in effort and inequality due to differences in circumstances (see, among others, Roemer, 2000; Ferreira and Gignoux, 2008; Checchi and Peragine, 2010), of which it is the latter that is objectionable, because it refers to inequality generated by circumstances which were not chosen by the individual. A recent study (EBRD, 2016) estimated the degree of inequality of opportunity for all countries in the ECA region, relying on the data from the LiTS survey, which allows one to construct a measure of inequality of opportunity based on the following set of circumstances (urban/rural birthplace, parents’ level of education, gender, ethnic majority/minority, and whether the parents were members of the Communist party). Figure 3-25 plots the relationship between overall inequality and inequality of opportunity across the ECA region. This relationship is positive – countries with a higher overall level of inequality also tend to have higher inequality of opportunity. Belarus is in the middle of the group on both indicators. The estimates suggest that inequality of opportunity in Belarus accounts for one third of overall inequality. This is relatively low compared to other countries in the region. For instance, in both Moldova and Ukraine inequality of opportunity accounts for more than 40 percent of overall inequality, in Poland 37 percent and in Russia 34 percent. At the same time, the degree of inequality of opportunity is much lower in Germany, where it accounts for only 23 percent of overall inequality. The main circumstance in terms of contributions to overall inequality of opportunity in Belarus is parental education (account for about 40 percent of total inequality of opportunity), meaning that children born to parents with higher levels of education are presented with a better opportunity set compared to children born to parents with low levels of education. It should be noted, however, that parental education the main contributor to inequality of opportunity in many countries in the
sample, and in relative terms, the influence of this circumstance in Belarus is actually low compared to other countries.

**FIGURE 3-25: OUTCOME AND OPPORTUNITY INEQUALITY**

Source: EBRD (2016).

Having described the trends in poverty and inequality during the 2003-2015 period, the next section reviews the dynamics of shared prosperity during the same period, an indicator that captures both the pace of increasing welfare at the bottom of the welfare distribution, as well as, when compared to the overall pace of welfare increases, the equity aspects of income growth, namely whether the incomes or expenditures of those at the bottom of the welfare distribution are growing faster than average, and thus catching up.

### 3.5. STRONG SHARED PROSPERITY PERFORMANCE PRIOR TO THE RECESSION

Promoting shared prosperity, defined as the income (or expenditure) growth of the bottom 40 percent of the population, is one of the twin goals of the World Bank (alongside the elimination of extreme poverty). The shared prosperity goal aims to capture the fact that increases in living standards among the poor will not be possible without sustained economic growth, yet growth by itself will not be sufficient – the shared prosperity indicator thus measures the degree of inclusiveness of economic growth in a given country.

According to the latest comparable data for the ECA region, Belarus has performed well in terms of the World Bank's shared prosperity indicator. For a region-wide comparable time period, Belarus has exhibited the highest rate of growth of expenditures in the bottom 40 group during the 2006-2011 period (almost 9 percent on an annualized basis). This is at a time when many of the European
countries were suffering from the effects of the financial crisis, registering negative growth of incomes both for the population overall and for the B40 group (Figure 3-26). As the economy slowed down further in 2015, the growth of incomes both in the B40 and the T60 groups decelerated (Figure 3-27). Nevertheless, welfare of the B40 group still grew faster than that of the T60 group, and compared to the ECA region and a number of Western European countries, incomes were growing relatively fast, below only Georgia and Kazakhstan.

FIGURE 3-26: SHARED PROSPERITY ACROSS THE ECA REGION (5-YEAR RANGES IN THE 2006-2013 PERIOD)

![Graph showing shared prosperity across the ECA region in the 2006-2013 period.]

Notes: Estimates based on the ECAPOV harmonization. 5-year window which differs across countries but in all cases is within the 2006-2013 period.

FIGURE 3-27: SHARED PROSPERITY ACROSS THE ECA REGION (5-YEAR RANGES IN THE 2009-2015 PERIOD)

![Graph showing shared prosperity across the ECA region in the 2009-2015 period.]

Notes: Estimates based on the ECAPOV harmonization. 5-year window which differs across countries but in all cases is within the 2009-2015 period.
The good shared prosperity performance of Belarus during the past decade is not an artefact of a particular choice of the beginning and end years for which the growth of household expenditures is computed. Figure 3-28 considers the increase of B40 and T60 expenditures in Belarus for any given 5-year period ending from 2005 and 2015. The estimates suggest that over the past decade and a half Belarus consistently recorded high growth rates of real household expenditures averaging over 10 percent on an annualized basis until 2009, and ranging from between 7 and 9 percent on annualized basis during the 5-year intervals ending in 2011 to 2014. Another thing that could be noted from the graph is the fact that the shared prosperity figures track reasonably well the growth dynamics of GDP growth rates – falling slowly staring in 2008 and until roughly 2012, then being stable before falling again in 2015. Pre-financial crisis growth of B40 welfare was higher than post-financial crisis, but even during the 2011-2014 period the recorded growth rates are still quite high.

**FIGURE 3-28: SHARED PROSPERITY IN BELARUS: 5-YEAR MOVING WINDOW (2001-2015)**

![Graph showing shared prosperity in Belarus](image)


Another observation from Figure 3-28 is that for the most part, the B40 growth rates exceeded those for the population as a whole – this is the case for all 5-year windows with the exception of those ending in 2009 and 2010. Finally, one can see the rapid slowdown of B40 income growth during the 2010-2015 period from 8.9 percent in annualized terms during 2009-2014 to 5.6 percent in 2010-2015. As can be seen from Figure 3-29, this slowdown is entirely on account of falling household expenditures during 2015. Given continued negative growth in 2016, and expectations of a very slow recovery in subsequent years, the growth of household expenditures of the B40 group (and overall) is likely to slow down further.
This chapter has described the main trends in poverty, inequality, and shared prosperity in Belarus over the 2003-2015 period. In doing so, it has documented the impressive reduction in poverty over this period, as well stable, or decreasing inequality during the same period, both of these trends being reflected in strong shared prosperity performance compared to the rest of the ECA region. The next chapter considers some of the key drivers of these trends in poverty reduction and shared prosperity.

4. KEY FACTORS CONTRIBUTING TO POVERTY REDUCTION AND SHARED PROSPERITY

Over the past decade and a half, the dynamics of households’ expenditures in Belarus track closely the evolution of household incomes, both for the B40 and T60 groups (Figure 4-1). In other words, the growth of expenditures that underlies the shared prosperity indicators in Belarus is mirrored, during the period under examination, by the evolution of household incomes. Recall also the high elasticity of household expenditures with respect to household incomes in Belarus. This close correlation allows us gain further insights into key drivers of shared prosperity by considering in more detail what were the main drivers of disposable income growth in Belarus.
Over half of household income, on average, is comprised of labor income. The other key income categories are pensions, transfers, and other income sources (Figure 4-2). The comparison of household income sources for B40 and T60 groups reveals a larger share of pension and of transfers (and a smaller share of labor income) in the B40 population. Over time, the data suggests decrease of the relative importance of labor income in the B40 group, and an increased share of both pension and social transfers between 2003 and 2015. The share of other income sources (notably privileges), is lower in 2015. In the T60 group an increase in the share of labor income is observed between 2003 and 2009, and a subsequent decline of the share of labor income category between 2009 and 2015, with an increase of the importance of pensions and transfers, and a decreasing importance of other income, mirroring similar compositional changes in the B40 group.

FIGURE 4-2: COMPOSITION OF HOUSEHOLD INCOME BY SOURCE
The composition of income in Belarus is not uniform across geographic space. Rural households rely to a somewhat larger degree on pensions, and to a somewhat smaller degree of labor income. There are also some differences in the evolution of income sources between 2003 and 2015. In the B40 population in rural areas the importance of labor income increased overtime, whereas in the urban household within the B40 group the share of labor income was higher in 2003 (60 percent) in comparison with 2015 (55 percent). At the same time, the urban B40 group has seen an increase in the share of pensions (from 18 percent to 24 percent of total) as well as social transfers (from 4.7 percent to 7.9 percent). Other important differences include the considerably higher share of social transfers (social assistance, child and unemployment benefits) in rural areas as compared to urban areas. (Figure 4-3).

FIGURE 4-3: INCOME COMPOSITION IN URBAN AND RURAL AREAS

A more formal account of the evolution of different contributors to household disposable income over time is provide by the Shapley decomposition of household disposable income growth by
component (Figure 4-4). The period 2003-2015 is broken down into a pre-financial crisis period (2003-2009) and post-financial crisis period (2009-2015). The estimates show that during 2003-2009 total household incomes per capita in the B40 group rose by 11.3 percent on an annualized basis. A large share of this income growth (68 percent of total) is due to growth in wages during the same period. Aside from growth in wages, the second important factor was growth in pensions, contributing 20 percent of overall disposable income growth, followed by the growth of other income sources.

FIGURE 4-4: SHAPLEY DECOMPOSITION OF INCOME CHANGES BY COMPONENT 2003-2009 AND 2009-2015

Source: Staff estimates based on the ECAPOV harmonization of HSS data.

During 2009-2015, the growth of incomes in both the B40 group and the T60 group slowed down in comparison to the pre-financial crisis period. In terms of key contributors to overall income growth during 2009-2015, it is still the case that the key drivers were wages and pensions, but now both the absolute growth rates of wages were considerably lower, and the relative contribution of wages to total income growth was also lower – 47 percent of total. The relative contribution of pensions to B40 income growth increased from 20 percent during the first period to 34 percent during the second period, and also the contribution of other transfers, such as child benefits and other social assistance increased slightly from 3 percent of total to 12.5 percent of total.

Guided by the results of the Shapley decomposition, we examine next in more detail what underpins the dynamics of key income components contributing to shared prosperity in Belarus, namely (i) labor income; (ii) pensions; and (iii) social protection benefits.

4.1. EVOLUTION OF LABOR INCOME

Growth in labor income was shown to be the key contributor to overall income growth for households in Belarus, particularly in the B40 group. Indeed, wages were the dominant contributor during the pre-financial crisis period 2003-2009. Growth in wages can be on account of one of the following factors (or both): (i) growth in the number of individuals (and households) receiving wages; and (ii) growth
in the value of wages received among wage employees. We examine the evolution of both factors below:

Official statistics show an increase in the activity and employment rates during the 2004-2011 period (Figure 4-5). The activity rate increased from roughly 75 percent in 2004 to over 81 percent in 2011, and the employment rate increased from 73 percent to 81 percent during the same period. During the 2011-2015 period there was a dip in the employment and activity rates in 2012, following by a gradual recovery back to 2011 levels by 2015. It should be noted that the increase in the employment rate is not entirely on account of increasing number of employed/active (both increased between 2003 and 2010, but were falling over the past 5 years); the 2003-2015 period also witnessed a 6 percent decline in the total number of individuals of working age (Figure 4-6). In other words, the increasing employment and activity are a combined effect of demographic trends (population aging), and higher activity levels among younger cohorts.

Improving employment outcomes can be driven, in part, by improvements in educational attainment during this period, as better education tends to be associated both with a higher probability of employment, as well as a higher probability of skilled occupations. Regression estimates based on HSS 2015 data suggest that relative to the baseline of secondary education, the probability of employment increases for higher levels of education, and in particular for tertiary education, and it is correspondingly lower for those with pre-secondary education (Figure 4-7). While the occupational categories of respondents in the HSS survey are not available, it is possible to examine the links between education and the occupation type based on data from the Life in Transition (LiTS) survey. Estimates from a similar regression show that the probability of the individual holding a professional occupation increases with her level of education, and, relative to the baseline of secondary education, there remains a notable tertiary education premium in Belarus (Figure 4-8).
Belarus already has near universal primary and secondary enrollment, (99 percent for pre-primary, 94 percent for primary and 99 percent for secondary education levels). Access to pre-school education has also undergone considerable expansion over the past decade. Expansion of both pre-school institutions such as pediatric medical and special childcare, and children development centers, as well as part-time and at-home childcare options, has resulted in increasing pre-school enrollment both in urban and rural areas (75 percent in urban areas and 55 percent in rural areas according to 2011 figures, an increase from 70.9 and 46.3 percent respectively in 2000) (World Bank, 2013). Finally, tertiary enrollment rates have increased since 2003, for both men and women, with Belarus starting at already high levels relative to its GNI per capita, as compared to other ECA countries, and by 2013 tertiary enrollment was nearly universal for women, and indeed the highest in the ECA region, and higher than would be predicted based on GNI levels alone (Figure 4-9).

The improvements in educational attainment in Belarus over the past decade have been achieved through a combination of (i) policy continuity (in contrast with disruptive restructuring of the education sector in many other transition economies); and (ii) adequate financing. Belarus’ public expenditures on education are in excess of 5 percent of GDP – higher than in the ECA region on average, and on par with very high HDI countries (Figure 4-10). According the recent Public Expenditure Review, education expenditures were at 13.5 percent of general government budget expenditures, close to other transition economies. While education expenditures as a share of general government expenditures have been declining until 2008, they have recovered after the 2009 crisis, and by 2011 exceeded pre-crisis levels (World Bank 2013). The Government has also been able to adjust to declining demographic trends through school consolidation (see Box 1).
FIGURE 4.9: TERTIARY ENROLLMENT AND GNI PER CAPITA ACROSS ECA COUNTRIES

<table>
<thead>
<tr>
<th>2003</th>
<th>2013</th>
</tr>
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</table>

Source: WDI. Gross enrollment rates can exceed 100% due to the inclusion of over-aged and under-aged students because of early or late school entrance and grade repetition.

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**Box 1: School consolidation – an unfinished agenda**

One of the key policy developments over the past decade has been the Government’s effort to adjust the sector to declining demographic trends through a program of school consolidation. Under the National Development Program for General Secondary Education (GSE) in 2007-2016, 673 GSE schools have been closed and 789 reorganized across all 6 oblasts (regions) of Belarus and the city of Minsk, reducing by nearly one-third the number of institutions in rural areas. As a result, the total number of teachers has been reduced by 15% since 2007, while others have been retrained to teach other subjects or transferred to other schools (World Bank, 2015).

While the school consolidation program helped boost the fiscal sustainability of the sector, the number of teachers, and thence wage expenditures in Belarus remain high (the ratio of education
sector wages to economy-wide wages in Belarus, at below 80 percent, is lower in Belarus that in other neighboring countries, including Russia, Ukraine and Poland (World Bank, 2013)). At 15 pupils per teacher, the pupil-teacher ratio is Belarus is lower than in high HDI countries or Russia, albeit it is comparable to the value for Very High HDI countries (Figure 4-10).

FIGURE 4-10: EXPENDITURES ON EDUCATION AND PUPIL-TEACHER RATIO

The success of the consolidation program is not fully realized, in part, because signification expenditures on salaries, utilities and school meals leave limited room for quality improvements. On average, salaries, utilities and meals account for as much as 84 percent of available budgets, and in some schools for as much as 98 percent of the total (World Bank, 2013). Thus, despite financial savings from school consolidation, students in “consolidated” schools are not necessarily benefiting from an improved learning environment. According to 2010 data, some Rayons spend more than 25 percent of their education budgets on heating alone, leaving little room for the rehabilitation of facilities or laboratory equipment (World Bank, 2015).

Human capital improvements are a key driver of shared prosperity. Bussolo and Lopez-Calva (2013) propose a framework for analyzing the drivers of shared prosperity in which the differential ability of households to improve their income is a function of (i) asset (human, physical, social) endowment, including education; (ii) intensity of asset use; and (iii) returns to assets (e.g. wages in the case of human capital). For these reasons, it is important to consider not only the educational dynamics overall, but also the distributional incidence of improvements in educational attainments. As was noted in section 3.3, improvements in the educational attainment in Belarus during 2003-2015 can be observed both for the B40 and T60 groups (see Figure 3-16). There was a partial (absolute) convergence between B40 and T60 educational endowment during this period – in percentage points terms the decline in the share of population with no more than general secondary population was greater in the B40 group.
At the same time, the incidence of higher education in the T60 group increased by 9.3 percentage points, compared to 7 percentage points in the B40 group, i.e. there was no absolute convergence in the expansion of higher education for the bottom 2 quintiles.

Did educational gains translate into greater employment among the B40? Notably, employment information is not available directly from the HHS survey in Belarus. We can examine, instead, the share of individuals in the bottom 40 percent of the population, and in the T60 group, who receive wage income. The results are reported in (Figure 4-11) for 2003, 2009 and 2015. It appears that the share of those receiving wages increased for the T60 group (from 54 percent in 2003 to 58 percent in 2015), and the share of wage recipients in the B40 group increased from 41 percent in 2003 to 44 percent in 2015. However, since the shared prosperity indicator is computed at the household and not at the individual level, the indicator that is a more direct counterpart, is the share of households (or population residing in households) that receive wage income (Figure 4-12). This indicator shows an improvement in the pre-financial crisis period, a subsequent deterioration, and, only in the case of B40 population, an increase in the last two years for which data is available.

![Figure 4-11: Share of Wage Income Recipients in B40 and T60 Groups.](image1)

![Figure 4-12: Share of Population Residing in Households with Wage Recipients.](image2)

Source: Staff estimates based on HHS data.

While the HSS survey allows us to document greater levels of employment in the B40 group, it does not provide information on the types of jobs (sector, occupation, type of contract) across the population. In order to gain some insights into the types of jobs held by those at the bottom end of the welfare distribution, we turn to the LiTS 2016 survey. The LiTS data reveals that those in the B40 population, when employed, have less secure jobs. Members of the B40 group are more often self-employed than T60 (3.9 percent vs 2.3 percent). A higher share of B40 group work without written contracts (8.2 percent) than among T60 (6.3 percent) that increases their risks to be laid off and makes them more vulnerable to turbulence on labor market. In terms of the type of enterprises where people

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5 Note the B40 group in the LiTS survey is constructed on the basis of the LiTS expenditure module, which does not correspond to the expenditure module in the HSS, such that the two B40 populations are not the same.
work, those in the B40 group are less often employed in banks, foreign firms and state-owned enterprises – types of employers that are associated with highest wages or stability.

The sectoral structure of employment is less favorable for the bottom of the distribution compared to the top. Members of the B40 group are relatively more often employed in the sectors that have lower average wages (Figure 4-13). For instance, the B40 population is characterized by a higher share of agricultural employment, while wages in this sector are 30 percent lower than average wages in the economy. At the same time, members of the B40 group are less often work in sectors that are associated with higher wages, such as financial services (Figure 4-13). The magnitude of changes in employment levels, combined with the differentiation in employment patterns between the B40 and the T60 groups, are suggestive of the fact that the robust labor income growth was primarily driven by increases in the real value of wages, and less so by the expansion of wage recipients. We examine the dynamics of wage levels next.

FIGURE 4-13: EMPLOYMENT FOR B40 AND T60 AND AVERAGE WAGES BY SECTORS, PERCENT

Wage levels grew considerably in Belarus over the past decade. Taking the index of wage levels in 2003 as 100, wage growth normalized by the GDP deflator (also by CPI) outpaced productivity growth expressed as GDP per worker normalized by the same price index, particularly in the second half of the period (Figure 4-14). Wage growth in Belarus has been driven by Government-set wage targets. The Government sets both economy-wide, as well as regional and town-level targets on a recurrent basis, and these targets apply to the entire economy, including the private sector. In addition, the Programs for the Socio-Economic Development of Belarus set medium-term wage objectives for the economy (IMF, 2014). The observed wage growth over the past decade has tracked the administratively-set wage targets precisely.

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SOURCE: Staff estimates based on LiTS and Belstat data.
The wage targets have had several implications. First, there is little differentiation in wages across regions (Figure 4-15), and in the regional wage dynamics over time. Second, there is also little differentiation in wages across sectors, while administrative restrictions on wage structures also result in redistribution of incomes in favor of low-income workers in sectors with low wages (IMF, 2014). According to Belstat data, the ratio of average wages in agriculture to average national wages increased from 69 percent in 2010 to 74 percent in 2015, in comparison, earnings in agriculture in Russia were 57 percent of average in 2015. With the exception of the ICT sector, where average earnings are 3 times the national average, across other sectors differences in average earnings are subdued (Figure 4-16).
The wages gap between the B40 and T60 group has fallen overtime. In 2003, average wages in the B40 group were 55 percent of the level of wages earned in the T60 group; this ratio has increased to 61 percent in 2009 and 65 percent in 2015 (Figure 4-17).

FIGURE 4-17: B40 WAGES (% OF T60 WAGES)

Source: Staff estimates based on HSS data.

The Oaxaca-Blinder (1973) decomposition allows wage disparities to be decomposed into endowment effects and return effects—which reveal whether disparities in earnings are driven by differences in portable characteristics of the population (i.e. human capital) or by differences in returns to those characteristics that are determined by group-specific characteristics (i.e. intensity of use). Estimates based on this decomposition suggest that the gap is mostly driven by returns to endowments rather than difference in levels of endowments, here measured by a combination of education, work experience, gender, and region of residence. The relative contribution of endowments is about 30 percent of the overall wage gap, and this has remained constant over time.

TABLE 4-1: OAXACA-BLINDER DECOMPOSITION OF THE REAL WAGE GAP

<table>
<thead>
<tr>
<th></th>
<th>2003</th>
<th>2009</th>
<th>2015</th>
</tr>
</thead>
<tbody>
<tr>
<td>group_1 (T60)</td>
<td>6.18</td>
<td>6.93</td>
<td>7.24</td>
</tr>
<tr>
<td>group_2 (B40)</td>
<td>5.58</td>
<td>6.44</td>
<td>6.81</td>
</tr>
<tr>
<td>difference</td>
<td>0.60</td>
<td>0.49</td>
<td>0.43</td>
</tr>
<tr>
<td>endowments</td>
<td>0.19</td>
<td>0.14</td>
<td>0.12</td>
</tr>
<tr>
<td>coefficients</td>
<td>0.41</td>
<td>0.34</td>
<td>0.30</td>
</tr>
</tbody>
</table>

Note: real wages are in logarithms.
Source: Staff estimates based on HSS data.
A recent analysis of returns to education in Belarus for the period 1995-2011 shows wages to be positively correlated with education levels, and returns to education to be relatively stable throughout the whole period (Chubrik and Shymanovich, 2013). The results of the Oaxaca-Blinder decomposition are similarly suggestive of the importance of returns to education (among other characteristics) in explaining differences between wages in the B40 and T60 group, albeit it should be noted that data limitations do not allow us to account for important characteristics such as the difference in the sector and occupation characteristics of those employed across the two groups.

The evidence presented in this section leads us to conclude that human capital increases contributed to wage income growth overall in Belarus, and particularly in the B40 group. This is important, because human capital improvements are a key driver of shared prosperity (Bussolo and Lopez-Calva, 2014). Educational endowments have increased over the past decade and a half; in particular, tertiary enrollment rates increased for both men and women—from an already high level. There was also a partial (absolute) convergence between B40 and T60 educational endowment during the past decade. The probability of holding a professional occupation is also higher for higher levels of education, which would suggest an improvement in the skill composition of employment in the B40 group, although lack of sectoral information in the B40 ground does not allow us to verify this directly. Finally, a combination of positive returns to employment, and administratively mandated increases in wages throughout the economy, which resulted in falling wage inequality over time, resulted in B40 wages converging over time to those of the T60 group, although they are still only two thirds of the T60 wages.

4.2. CONTRIBUTIONS OF PENSIONS TO SHARED PROSPERITY

Social protection benefits – particularly pensions – are an important source of livelihood both overall for the B40 and T60 population groups, and especially for some population groups (e.g. elderly, disabled, poor). Pensions alone accounted for 25 percent of household total incomes in 2015 (23 percent in the T60 group). For both population groups, and in particular for B40, the relative share of pensions increased over time – in 2003 pensions accounted for 20 percent of incomes in the B40 population (Figure 4-21). Reliance on pensions in higher in rural areas, compared to urban areas, but in both cases the relative importance of pensions increases overtime. The decomposition of overall household income changes during 2003-2015 suggested that growth in pensions in particular was the second most important contributor to overall income growth both pre-2009 financial crisis, and during the 2009-2015 period, and, moreover, the importance of the contribution of pensions to overall disposable income growth increased considerably post-2009.
Belarus spends about 10 percent of GDP on social protection, an average amount by ECA standards. Three quarters of the population are covered by the social protection system, including social insurance, or social assistance, or both. Some three quarters of that amount is absorbed by social insurance programs, mainly pensions, which are the most important component of the social protection system in Belarus. This mirrors the relative importance of pensions among non-wage sources of income in households. According to administrative data, there were more than 2.7 million pension recipients in Belarus in 2015 (more than a quarter of the total population of Belarus). Pensions in Belarus have a wide coverage, about half of the households in Belarus (40 percent in the bottom decile) received pensions in 2015. Consistent with the age profile of the welfare distribution, namely the increase in the share of elderly population in the T60 group overtime, the incidence of pensions has increased between 2003 and 2015 in the upper half of the distribution. On the other hand, while the share of receiving households increased more in the T60 group than in the B40 group, the relative importance of pensions in the overall household income increased more at the bottom of the income distribution – in the B40 group, among receiving households, the share of pensions in household income increased from 46 percent in 2003 to 51 percent in 2015. This is consistent with the results of the Shapley decomposition of disposable income growth that showed the notable increase in the relative contribution of pensions to overall disposable income growth overtime.
The pay-as-you-go (PAYG) pension system in Belarus benefited from a favorable fiscal environment prior to the financial crisis. This was due to low birth rates and survival rates for the 1940-1946 cohorts, resulting in low numbers of pensioners in recent years (Zviniene and Biletsky, 2011). While similar in size to other European countries (total pensions in Belarus were about 9 percent of GDP in 2013), a couple of characteristics are notable, including: (i) very low retirement ages (60 for men and 55 for women); (ii) very high contribution rates -- total pension contributions are 29 percent of gross wages, of which 1 percent is paid by the employee and the rest is covered by the employer (Lisenkova and Bornukova, 2015).

While replacement rates are not particularly high in Belarus (cca 40 percent of average wages, compared to the OECD average of 54 percent), individuals who reach retirement age in Belarus can continue working while receiving pensions, and indeed during the 5 years post retirement age (55-59 for women and 60-64 for men) 50 percent of men and 60 percent of women are found to be employed (Bornukova, Lisenkova and Luzghina, 2015). Moreover, pension amounts in Belarus are indexed to average wages, meaning that pensions in Belarus kept up with the rapid increase in wages in Belarus over the past decade and a half.

During the 2003-2015 period the levels of pensions in real terms increased steadily, being recalculated in accordance with the growth of average wages. In fact, for the B40 population, pensions grew relatively faster between 2003 and 2015 in comparison with the T60 population. In relative terms, the ratio of the average pension to the average wage was relatively constant during this period, at just below 50 percent, falling somewhat in the last 3 years.
The pension system in Belarus is characterized by a notable degree of redistribution that protects the incomes of low income households. For instance, estimates suggest that in terms of effective replacement rates, minimum wage workers can expect 95 percent of their pre-retirement income replaced after retirement, while for workers earning 2 times the average wage the effective replacement rate is only 25 percent (World Bank, 2011). The recent analysis (Bornukova, Chubrik, and Shymanovich, 2017) based on the commitment to equity (CEQ) methodology (Lustig and Higging, 2016) show that pensions play a major redistributive role in Belarus. The concentration curve for pensions, or the cumulative proportion of pensions plotted against the cumulative proportion of population ranked by market income, is well above the 45-degree line (Figure 4-23), and is, in fact, higher than the concentration curves for other transfers such as social benefits and privileges. Bornukova, Shymanovich and Chubrik (2017) estimate that pensions reduced the Gini index of inequality in Belarus by 11 points relative to the Gini index of market incomes. Pensions in Belarus are also among the most efficient measures for social fiscal interventions, measured in terms of the impact on poverty and inequality per 1 percent of GDP of expenditure (or tax) – only child benefits, child support and unemployment benefits have a higher composite efficiency than pensions.
Another way of illustrating the redistributive character of pensions in Belarus is to consider the alternative treatments of pensions as a government transfer, or as a deferred income. Given the contributory nature of pensions, they can be viewed as income that is earned during working years, but deferred until retirement. Bornukova, Shymanovich and Chubrik (2017) estimate the effect of pensions of poverty and inequality according to these two scenarios. Table 4-2 reports the changes in poverty and inequality when moving from disposable to market income. When pensions are treated as a transfer, they are subtracted from disposable income to obtain market income, whereas when pensions are a deferred income, they are considered as part of market income (thus, what is subtracted is other direct transfers such as social assistance benefits, while direct taxes are added, but without SPF contributions). Comparing the two scenarios one can observe the large impact of pensions on inequality, both in terms of the reduction of the Gini index and of the 90/10 quantile ratio, as well as the large reduction in both the USD 10 PPP poverty rate and poverty gap on account of pensions alone.

### TABLE 4-2: ALTERNATIVE TREATMENTS OF PENSIONS (2015)

<table>
<thead>
<tr>
<th></th>
<th>Transfer</th>
<th>Deferred income</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gini</td>
<td>0.14</td>
<td>0.02</td>
</tr>
<tr>
<td>90/10</td>
<td>11.57</td>
<td>0.45</td>
</tr>
<tr>
<td>USD 10 PPP</td>
<td>Headcount Index</td>
<td>16.5</td>
</tr>
<tr>
<td></td>
<td>Poverty Gap</td>
<td>11.2</td>
</tr>
</tbody>
</table>

As the process of population ageing in Belarus continues, the prominence of elderly population in the B40 group – and the prominence of pensions in the livelihoods of many households – will increase, creating pressure on the pension system, and bringing to the fore the importance of the active ageing agenda that was highlighted in the recent *Golden Aging* report (World Bank, 2015). We return to these challenges in the next chapter.

### 4.3. THE IMPORTANCE OF NON-CONTRIBUTORY SAFETY NETS

In addition to social insurance, another important component of the safety net, particularly for low income households, is provided by the (non-contributory) social assistance system. By ECA standards, Belarus spends a relatively high sizeable share of GDP on social assistance -- in 2015 Belarus spent 2.76 percent of GDP on programs including on i) child-related benefits, ii) privileges and subsidies, iii) means-tested support low-income households (GASP), iv) disability-related allowances, and v) other programs.

**FIGURE 4-24: GDP PER CAPITA AND SA EXPENDITURES IN ECA**

![GDP per capita and SA expenditures in ECA](image)

Source: SPEED database

In 2005, the SA system stood at about 2.8 percent of GDP, declining below 2.2 percent of GDP by 2011, but the slowdown of GDP in recent years was not associated by a similar shrinkage of the safety net in Belarus, such that as the share of GDP spending rose to pre-crisis levels in the last 3 years. The structure of the SA system has undergone some changes over the past decade. While child-related allowances were always the largest SA component, in terms of relative shares, the importance of child-allowances increased overtime, primarily at the expense of privileges and subsidies, which fell throughout the period, and in 2015 were only a minor component of the safety net in terms of its relative share (Figure 4-25).
The various social assistance programs cover over half of the population of Belarus. According to 2015 data, over half of the population (63 percent of the bottom quintile) were covered by social assistance in Belarus, higher than the ECA average (48.6 percent), but in like with the average for High Income countries (64 percent), or countries neighboring countries like Poland (61 percent). This is the result of high reliance of the system on categorical benefits results in a low degree of targeting. Thus, 42 percent of the top quintile were also covered by social assistance in Belarus, compared to only 20 percent for ECA and for High Income countries on average (25 percent for Poland). The share of income-tested programs designed to support low-income families stood at 0.06 percent of GDP in 2015, having fallen in recent years simultaneously with the expansion of categorical child-related benefits, which, by comparison, stood at 1.8 percent of GDP in 2015 (World Bank, 2017). While the overall coverage of social assistance programs is high, the coverage of the bottom quintile is actually quite low by European standards, given the very small share of means-tested programs in the overall SA system.

Source: SPEED database.
Across individual categories of assistance programs, based on 2015 data, child subsidies, particularly those for children under the age of 3, have the largest coverage (almost a quarter of the B40 group), and the coverage of subsidies tends to be higher in the B40 group than in T60 group. The coverage of non-child related subsidies is much lower, and in the case of the burial subsidies, it mostly goes to the T60 population. In the case of privileges, a number of them cover a notable part of the population of Belarus, especially privileges for nutrition support, for public transport, for medicines and sanatorium care, as well as privileges for costs associated with pre-school education. Notably, a number of privileges such as those for transport and for medicine, cover a higher share of the T60 population than of the B40 population, while privileges for pre-school costs and nutrition are more heavily concentrated among lower income households.

One of the notable changes in the SA system in Belarus was the elimination of a large number of poorly targeted social privileges were abolished in 2007. As the result, the share of population receiving privileges fell from 64 percent in 2003 to 48 percent in 2009 and 36 percent in 2015 in the B40 group. In the T60 group the coverage fell even more from 60 percent in 2003 to 36 percent in 2009 to 31

percent in 2015. This is also reflected in the falling share of resources devoted to privileges in the overall SP budget.

FIGURE 4-29: SHARE OF B40 AND T60 POPULATION REPORTING RECEIPT OF PRIVILEGES

Source: Staff estimates based on HSS data.

Poor targeting of privileges is seen both indicators – distribution of program budget across deciles and distribution of number of receivers across deciles. Both indicators improved over time, but the targeting is still not very well. Share of money they are received by household in the B40 increased from 40 to 47 percent, while share of money received by T60 decreased respectively (Figure 4-30). There are receivers of the privileges in all parts of the distribution: in 2015 13.5 percent of privileges receivers were in the bottom decile, while 7.6 percent in the top one. Allocation of money was even more equal. In 2015 41 percent of program budget was received by households in B40, of which 12 percent went to bottom decile, while 10.4 percent of privileges were received by top decile of the distribution. This was due to the fact that the average size of privileges received was higher for higher deciles if measured in absolute amounts, but it was lower as a share of disposable incomes (Figure 4-31).
Privileges remain common across most population groups. The profiles of those households who receive privileges and of those who do not are similar, albeit not identical. Receivers of privileges are more likely to live in cities (except for Minsk) than non-receivers and less likely to come from rural areas. Sixty two percent of receivers live in big cities comparing to 55 for non-receivers, Families who receive privileges are usually bigger (51 percent of receivers have children comparing to 44 percent for non-receivers) and have more children (for example, 8 percent of families who receive privileges have three children or more, while there are no among non-receivers). They more often consist of pensioners than the other group (pensioners are 28 percent among receivers and 18 percent among non-receivers). Also, privileges have a limited effect on poverty reduction. If we subtract the amount of privileges from total welfare, the poverty headcount increases just marginally by few decimal points.

Other recent changes that improved the performance of the SA system involve the 2007 reform of the Public Targeted Social Assistance (GASP) program, with the replacement of categorical eligibility by an income test, and an increase in the eligibility threshold from 60 percent of the Minimum Subsistence Basket (MSB) to 100 percent of MSB, resulting in an expansion of coverage from 60,000 beneficiaries in 2007 to 287,000 in 2008. The change also resulted in an expansion of coverage under GASP, which previously consistent primarily of 1-parent families with under-aged children or families with many under-aged children) to some other types of families as well as household groups such as single individuals, including pensioners and disabled.

Nevertheless, the targeting of the social assistance system in Belarus (excluding privileges) has deteriorated between 2003 and 2015. The share of the SA budget going to the B40 group fell from 54 percent to 47 percent of total, while the share of recipients fell from 53 percent to 48 percent over the same period.
Meanwhile, the reliance on transfers among those who received them has increased over time. In 2003 and 2009 public transfers accounted for 12 percent of income in the B40 group, increasing to 20 percent in 2015, and a similar increase, albeit smaller in magnitude can be observed in the T60 group. Across individual programs, child subsidies have both the highest coverage and generosity – in the B40 group subsidies for children under 3 accounted for almost a quarter of household income for those who receive it. The increase in the importance of subsidies is both due to the increase in the magnitude of transfers, and also falling incomes in 2015 due to the recession.

Source: Staff estimates based on HSS data.

The Shapley decomposition of income growth by income source suggested that social assistance did not contribute significantly to income growth during the pre-crisis period (2003-2008), whereas it had a higher contribution, 13 percent of total disposable income growth, during the more recent years.
(2009-2015), even though this contribution is still considerably smaller than that of pensions. Nevertheless, both the SI and the SA systems have had an important effect in terms of safeguarding low-income households in Belarus from falling below the poverty line. Simulations based on 2015 data suggest that the removal of all pensions would have increased the corresponding poverty headcount from the baseline of 11 percent to 38 percent, or 27 percentage points. Similarly, removing social assistance transfers is associated with a 5.6 percentage points increase in the poverty headcount. At the same time, the removal of all privileges results in only marginal changes in the poverty headcount, highlighting their lack of effectiveness as a poverty reduction mechanism.

**FIGURE 4-35: SIMULATED POVERTY IMPACT OF REMOVING SOCIAL PROTECTION BENEFITS**

![Figure 4-35: Simulated Poverty Impact of Removing Social Protection Benefits](source: Staff estimates based on HSS data.)

The recent CEQ analysis (Bornukova, Shymanovich and Chubrik, 2017) also confirms that direct transfers are pro-poor (when measured with respect to market income) and remain progressive when measures with respect to disposable income, in the sense that the presence of direct transfers results in a lower degree of inequality in Belarus. The absence of benefits, taken as a whole, would increase the Gini index of inequality by 2 percentage points. A number of benefits are also very efficient, per unit of resources spent, in terms of their effect on reducing poverty and inequality, as noted in the CEQ. In particular, unemployment benefits, as well a child benefits for ages 0-3 and 3+, as well as child support after breadwinner's death are quite effective both as poverty reducing and as equalizing instruments. On the other hand, severance pay, funeral benefits, and student grants are not efficient interventions, as measured by the reduction in poverty or inequality due to these benefits, normalized by the size of the program (Figure 4-36).
5. EMERGING CHALLENGES TO POVERTY AND SHARED PROSPERITY

A favorable external environment throughout the first decade of the current century has allowed for robust economic growth in Belarus, which has led to a notable reduction in absolute poverty, and one of the best performances in the ECA region on the shared prosperity indicator – economic growth has been shared widely, primarily through a social contract based on full employment and wage/pension growth, as well as an extensive system of benefits and privileges with a wide coverage. In recent years, the deterioration of the external environment has exposed some of the structural imbalances in the economy of Belarus, while at the same time the recession over the past two years has brought to the fore the increased vulnerability of households and raised questions about future sustainability of past poverty and shared prosperity gains.

While the economy of Belarus is currently facing multiple challenges, this section highlights two emerging challenges that are relevant to protecting the welfare of poor and B40 households. The first challenge is that posed by population ageing, that reduces income earning capacity of households through higher dependency ratios, while simultaneously putting pressure on the social protection system through the falling ratio of pensions contributors and pension recipients. The second challenge is posed by the ongoing reforms in the utilities sector that can have an important negative welfare impact on vulnerable household through increasing tariffs and requires an improved safety net in order to alleviate the impact of higher tariffs. The importance of strengthening the safety nets in order to alleviate the impact of energy sector reforms is in fact part of the larger reform agenda in the social protection sphere, which also includes, notably, the importance of strengthening the social insurance

Source: Bornukova, Shymanovich and Chubrik (2017)
system in Belarus. However, the analysis of challenges of reforming social insurance is made difficult by the lack of LFS data. Thus, we focus here on utilities.

5.1. POPULATION AGING AND ITS IMPLICATIONS

The population of Belarus is aging, and the size of the working age population has been declining since 2000, and is projected to continue declining over the foreseeable future. At the same time, the size of the elderly population is projected to continue increasing until after 2050 – the share of 60+ population in Belarus is projected to increase from 15 percent in 2000 to 35 percent in 2050 (Figure 5-1). The worsening demographic environment also sees the old age dependency ratio increasing from 20 percent in 2000 to 46 percent in 2050 (Figure 5-2).

The aging issues is a common challenge for most countries in the ECA region. In general, aging may be driven by two factors – increases of life expectancy or declines in fertility. In Belarus, like in many other countries in the region, the latter factor played a key role. However, low fertility is not a problem per se, but requires adequate changes in demographic and economic policy as well as adjustments in individual behavior. Fertility tends to have a U-share relation with income, such that it might rebound again with the further increases in prosperity.

The economic consequences of aging are uncertain. Among the main channels through which aging may adversely affect the economy are (i) higher old-age dependency ratio in the labor market and hence smaller numbers of workers as a share of total population; (ii) fiscal challenges that require more resources in pay-as-you-go pension systems and other age related areas of public expenditures, like healthcare, and (iii) lower capacity for investment driven by a lower stock of savings due to a declining share of people of working age who tend to save the most as a share of their income. However, population aging is not only a burden for an economy; it can also provide a stimulus and have positive macroeconomic effects. For these effects to materialize, strong behavioral and policy responses are generally needed. Among the potential responses are increases in labor force participation rates, especially for elderly; increases in labor productivity and changes in savings patterns of households.

The recent Golden Aging report (World Bank, 2015) places Belarus among the top of the countries in the ECA region in terms of the severity of the challenges presented by population aging and argued that Belarus, together with Bulgaria, Moldova and countries in the Western Balkans need large adjustments along both demographic and economic dimensions. In Belarus, this means, in particular, improving life expectancy, with the mortality risk for a 60-year-old male today being considerably lower than for a 60-year-old male in 1959. Among the seven indicators considered in the report – three demographic ones and four economic, Belarus is in the top quartile of risk for healthy life expectancy and in the middle two quartiles for the remaining six indicators. Belarus fares poorly by regional standards on the indicator of healthy life years, requiring complex and multifaceted reforms, inclusively to promote prevention in the health sector and to promote behavioral changes.
As the result of the shrinking working age population, and the increase in the share of elderly in Belarus, the projected fiscal flows in the pensions system in Belarus are projected to deteriorate between present day and 2050. This is due to the fact that aging and the shrinking of the working age population will have a negative effect on GDP per capita growth in the future, as well as wage growth in excess of GDP (due to increasing labor scarcity), which will imply pension growth in excess of GDP. The pension system in Belarus operated under a relatively favorable demographic environment over the past decade. The share of the working age population in Belarus has increased between 1975-2000, while at the same time, the pension cohorts over the past decade have been composed of those born during or immediately after WWII, when birth rates were low. Combined with increased mortality during the transition years, this implied a relatively small share of pensioners, limiting pressure on the expenditure side. This is not sustainable, however. Recent simulations (Bornukova et al., 2015) suggest that the ratio of pensions expenditures to GDP could increase from 9 percent in 2013 to 20 percent by 2050. The cumulative effect of the increasing number of beneficiaries (pensioners) and the falling payments into the pension fund, could result in a pension fund deficit equivalent to 9 percent of GDP by 2050 (Bornukova et al., 2015).

In addition to emerging fiscal sustainability issues, another (related) emerging concern has to do with the ability of the elderly to continue benefiting from shared prosperity in the future. HSS data reveal that while the share of wage recipients has remained constant over the past decade, the share of pension recipients both in the B40 population and in the T60 population increased – in the B40 group the share of pension recipients increased from 19 percent in 2003 to 24 percent in 2015 (30 percent to 37 percent in T60 for the same period). As the population aging process continues, all else equal, the share of pension income in overall disposable income will increase for an increasing share of the population. This shines a spotlight on the ability of pension income to support the well-being of the B40 (and beyond) in the future.
Currently, the replacement rate of pensions in Belarus is just above 40 percent. Recent simulations (World Bank, 2011) suggest that, under no reform scenario, the replacement ratio is projected to decrease to below 35 percent over the next 50 years. Such projections are of course highly dependent on the system parameters. For instance, Belarus currently has the lowest retirement age (55 for women, 60 for men) in the ECA region, and well below the age of 65, which tends to be the standard among OECD countries. Should retirement age thresholds change to 65/65 for both men and women, the projected replacement rates would actually increase to just below 55 percent of the same period (World Bank, 2011).

5.2. IMPACT OF UTILITY TARIFF REFORMS

Many households benefit not only from direct transfers, but also from subsidized tariffs for a number of services provided by the state, such as passenger transport or utilities. For instance, in the district heating sector, the total fiscal and quasi-fiscal costs of cumulative losses on residential district heating services was estimated to have risen from 0.7 percent of GDP in 2005 to 1.6 percent of GDP in 2012 (World Bank, 2014). Residential heating tariffs were at only 20 percent of cost recover levels in 2012, and at less than 60 percent currently, thus providing important price subsidies to households for the heating that households consume.

Low tariffs lead to inefficient energy consumption and disproportionately benefit higher income groups. Utilities subsidies, available to everyone in the form of subsidized tariffs and accounting for about 2 percent of GDP, are strongly regressive. While higher income groups tend to spend a lower share of their total expenditures on utilities, their consumption in absolute terms is much higher (because high income households tend to occupy larger living areas and have much higher total
expenditure (World Bank, 2011). Bornukova, Shymanchik and Chubrik (2017) show that in $PPP terms the amount of utilities subsidies is monotonically increasing with income and is highest for the top decile of the distribution (Figure 5-4).

FIGURE 5-4: DISTRIBUTION OF UTILITIES SUBSIDIES ACROSS THE POPULATION

Sources: Bornukova, Shymanchik and Chubrik (2017). Notes: Incidence of indirect utility subsidy, by disposable income decile, PPP $ and %

The elimination of subsidies, and re-alignment of tariffs with cost-recovery tariffs would result, absent mitigating measures, in notable welfare costs, particularly to low income households. To estimate the welfare impact on households of increasing tariffs on utilities, we can use the framework proposed in Freund, C. and Wallich C. (1996).[1] Specifically, we examine how the change in tariffs is affecting the share of utility expenditures in the total household expenditures. This change can be calculated as:

\[
\text{Change in Budget Share} = \frac{S_0(P_1-P_0)/P_0}{\varepsilon + \varepsilon(P_1-P_0)/P_0+1},
\]

Where \(P_1\) and \(P_0\) are prices after and before the price change, and \(S_0\) is the initial budget share before the price change. When faced with increases in utility tariffs, households may change their consumption patterns, inclusively for utilities. The degree of such adjustments – the price elasticity of demand (\(\varepsilon\)) – is not known and will likely vary across households. So far, we have not modelled behavioral adjustments (i.e. assumed a price elasticity of demand of zero), but this parameter can be varied. \(S_0\) – is initial share of utilities in households’ expenditures.

Simulations suggest that increasing heating tariffs to cost recovery levels would lead to a notable increase in the share of the overall budget that households would have to allocate to utilities payments, and this increase would be the highest for low income households. In the bottom decile the share of household budgets devoted to utilities during the heating season in urban areas could increase from 11.6 percent of total to 16.5 percent of total by the end of 2017, under some of the recent tariff projections, and without any compensation. By the end of 2018 the share of households budgets devoted to utilities in the bottom decile could reach 20 percent, absent compensatory measures. Note that for households at the bottom of the income distribution the share of budgets devoted to utilities is higher, and the absolute magnitude of the tariff increases is similarly higher, in comparison with households further up the income ladder, i.e. tariff increases are more problematic for low income households. This is also confirmed by focus group discussions that revealed that in order to cope with tariff increases poor households would have to cut back on consumption of food and clothing, or have to borrow money from friends or relatives (World Bank, 2014).

The Government has introduced, at the beginning of the 2016 heating season, a compensatory program that limits the impact of tariff increase to no more than 20 percent of household budgets in urban areas, and no more than 15 percent of household budgets in rural areas. Estimates of household expenditures on utilities, accounting for this compensatory measure, are presented in Figure 5-6. Note that the introduction of the program alleviates some of the impact of the program – in the bottom decile utility expenditures are estimated to increase to 16 percent at the end of 2018 instead of 20 percent absent compensation. Still the impact of tariff increases on low income households is still notable, taking into account that spending in excess of 15 percent of budget on utilities in commonly considered in the literature as a threshold identified with “energy poverty”, indicating a level of expenditures that is difficult to meet.
FIGURE 5-6: SHARE OF HOUSEHOLD BUDGETS DEVOTED TO UTILITIES, WITH 15/20 PROGRAM

Source: Staff estimates based on HSS 2016 (Q1) data.

It is also evident from the estimated program coverage and the distribution of the program budget across deciles that the targeting of the program could be improved. Less than 30 percent of the population in the bottom decile is estimated to be would be covered by the program in 2017, and only a quarter of the program budget would go to the bottom quintile (less than half of the budget would go to the B40 group). Alternative program designs that offer compensation on a sliding scale depending on the ratio between the household’s income and the Minimum Subsistence Budget (MSB) are currently being considered and could help improve both the coverage of households at the bottom and the targeting of program resources.
6. CONCLUDING REMARKS

High growth rates over the past decade were associated with a considerably fall in the poverty headcount from over 80 percent of the population in 2003 to roughly 10 percent of the population in 2015, measured at the international PPP$10/day threshold. Economic growth was widely shared – indeed, Belarus has registered one of the best performances along the World Bank’s shared prosperity indicator among all countries in the ECA region. Disposable income growth has been driven by a combination of income and pension growth, with an increasing importance of the contribution of non-contributory social transfers in more recent years. A key feature of the social contract in Belarus has been the provision of full employment with the help of a large SOE sector that employs over 60 percent of the workforce. A system of state support in the form of subsidized loans and tax concessions has in turn allowed the SOE sector to maintain excessive employment. In addition, wages have growth considerably in real terms, inclusively through administrative wage targets that affect most spheres of the economy, and not just the SOE sector. A combination of high growth and a favorable demographic environment (from the point of view of the pension system) has also allowed pensions to keep pace with wages – an important aspect as the elderly are becoming a more prominent share of the population overtime, inclusively of the B40 group.

While the fall in the poverty rate during 2003-2014 is impressive, among certain population groups poverty, as measured at the international PPP$10/day threshold is still quite prevalent. More than a quarter of people living in households with 2 children (0-12) were below the poverty threshold (45 percent among households with 3+ children), compared to only 7 percent among households with no children. Similarly, while less than 1 percent of population of Minsk city live on less than PPP$10/day,
in rural areas the poverty rate is 24 percent in 2015. Across regions, there are also notable differences – the poverty rate in Minsk Oblast was 10.9 percent in 2015, whereas in Brest 22.3 percent of the population were below the poverty threshold.

The worsening external environment also highlights household vulnerability and sustainability concerns along multiple dimensions of the existing social contract. A deterioration of external conditions in recent years exposed a number of growing imbalances in the economy. As the result, economic growth slowed down, culminating in a recession during 2015-2016, which has led to a reversal of the poverty reduction trend of the past. In Brest, already the poorest region, the incidence of poverty increased by over 5 percentage points between 2014 and 2015. Furthermore, the high concentration of the population just above the poverty line, combined with a sluggish recovery suggest that new shocks could lead to further increase in the vulnerability of low income households. The evidence from household surveys is consistent with low income households drawing down on savings to deal with income losses, which is not sustainable over a long period of time. The ongoing reforms of utility tariffs can also have important welfare effects, absent mitigation measures, and estimates suggest that the mitigation measures currently in place do not fully compensate for tariff increases that have already taken place. The worsening economic and demographic environment also adversely affects the pension system, raising concerns about the ability of the elderly to continue benefiting from shared prosperity in the future as they have been able to do in the past.

Finally, while lack of data has not allowed us to address labor market issues in detail here, it should be noted that labor markets are currently under stress and the number of jobs is shrinking. During the recession in 2015-2016, SOEs adjusted by reducing working hours and obliging workers to go on partially paid, or even unpaid, leave. Earlier estimates of over-employment based on firm-level data looking a comparison between the relative labor productivity of state and non-state firms with similar characteristics, suggest that eliminating the excess employment in SOEs (e.g. increasing labor productivity to the level observed in comparable private sector enterprises) could lead to an increase of about 4.2 percentage points in the overall unemployment rate (World Bank, 2011).

The combination of the population aging process, as well as ongoing reforms in the energy sector and the need for improving the allocation of factors of production in the Belarus economy in order to boost productivity – especially important in the context of population aging – requires a parallel policy agenda aimed at improving the ability of the social protection system (both the social insurance and social assistance components), to provide an effective – and sustainable – safety net. This is also consistent with the longer term objective of ensuring the sustainability of past shared prosperity gains. From the perspective of households, things that will be important will be investing in people's productive capacity (assets) at the bottom of the distribution, and creating opportunities for them to use the assets productively in the labor market. This will require, for instance, investing in policies that promote and maintain access to early childhood education, as well as improving the Government’s ability to assess the quality of education and the degree to which the skills provided by the education system match the demands of the labor market, particularly in the expanding private sector. In addition, in order to preserve impressive gains in poverty reduction, it will be important to reduce the
vulnerability of those who are not poor anymore but remain vulnerable to negative economic shocks, in part through strengthening the parts of the social protection system that have been shown to have a high degree of efficiency in reducing poverty and inequality. Finally, it should be noted that aiming for sustainable shared prosperity, because of the anonymity of the B40 group, requires focusing not on individuals with particular characteristics, but on channels that enable the accumulation, and intensive use of assets, and embed good incentives in the social transfer systems in order to maximize the earning capacity of households (Bussolo and Lopez-Calva, 2014). Recent changes in external environment present a set of risks – but also offer an opportunity to build on past successes in inclusive growth, but with a renewed focus on the sustainability of the social contract.

REFERENCES


