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**Social consequences of the oil price shock in the resource
rich post-soviet countries**

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Abstract

This study seeks to determine the impact the fall in global oil prices post-2014 had on the welfare of the populations of three resource-rich post-Soviet states: Russia, Kazakhstan, and Azerbaijan. Changes in welfare will be explored through the analysis of several socio-economic indicators affected by the local currencies' devaluations. It will be suggested that the single-commodity export dependence of the countries concerned, and the domestic development of non-tradeable sectors faltered in the face of external shocks. Several policy suggestions are offered to mitigate the effects of the economic downturns observed.

Key words: *social affairs, welfare, oil and gas, exports, post-soviet countries, Russia*

Introduction

High economic performance in Russia, Azerbaijan, and Kazakhstan was largely fuelled by oil and gas windfalls, experienced during surging oil prices, and was further boosted by government spending by 2014. The rapid development of non-tradable sectors, such as construction, transportation and trade, was mainly caused by large-scale state infrastructure projects and monetary injections into the economy in the form of increased wages and social benefits, confirming the implications of the Wagner hypothesis – public expenditure increases as income grows (Bashirli and Sabiroglu 2013). The increases seen in non-tradeable sectors, however, depended in a large part on current spending and consumption and were, therefore, inefficient creators of value-added (Bayramov & Orujova 2017, 321).

The 2008 economic recession, which spread near worldwide, was accompanied by a sharp decline in oil prices, adversely affecting oil- and gas-exporting countries. Those countries dependent on natural resource extraction and export experienced a reduction in revenues, leading to strong downward pressures on their respective national currencies and a plethora of other negative consequences, such as inflation and reduced government spending. Several post-Soviet countries, whose budgets are largely dependent on oil and gas, were particularly vulnerable to price fluctuations and experienced far-reaching problems due to their governments' declining revenues.

The Russia-Ukraine crisis and corresponding sanctions on Russia have multiplied the impact of falling oil prices on Russia's and other regional economies. The Russian *ruble* experienced extreme volatility throughout 2014, bringing panic to central authorities as well as to neighbouring countries dependent on the Russian market. After the *ruble* lost close to 50% of its

value relative to the dollar by November 2014, the Russian Central Bank decided to let the currency float freely.

This paper aims to assess how the oil price shock and resulting devaluation and changing price levels affected several other socio-economic indicators, including real wages, minimum standards of living, unemployment and volumes of social spending, as well as the loss of value of savings and deposits by households in the post-soviet countries. Taken altogether, these indicators function as a proxy for the overall welfare of the concerned countries' populations. In the absence of a rebound in oil prices – oil prices are not expected to return to their pre-crisis levels – this study's relevance lies in understanding how the aforementioned indicators affect welfare and, therefore, what policy changes should be pursued in order to mitigate such negative consequences and forge more sustainable development.

Literature review and methods

The adverse effect of resource dependence on macroeconomic stability has been widely cited and analysed in academic literature. Resource-dependent countries usually concentrate their exports on a specific product, such as a natural resource or an agricultural product. This, in turn, makes those countries highly susceptible to changes in world markets, as well as to volatile export revenues, which finance budget spending and affect the country's ability to import other goods (UNDP 2011, 20). Volatile energy exports make up fundamental contributions to the state budgets of the countries concerned and, as such, resource dependent economies tend to display dysfunctional behaviour, including large public sectors and unsustainable budgetary policies (Robinson et al. 2006, 448). Resource windfalls are used by governments to support their current spending needs, often without consideration for how quickly such windfalls can fluctuate and

without a secondary plan to continue to support the policies after the change in prices or output volumes.

Crivelli and Gupta (2014) support Robinson et. al's observation, finding that as resource revenues are volatile, without stringent and appropriate fiscal rules put in place, that volatility is transmitted to the budget. Aslanli (2015), too, explores how the dependence on volatile sources of income, i.e. huge revenue inflows from resource extraction and export, leads to two major problems: income volatility and exchange rate distortions. He explains that high spending from current resource windfalls converts income volatility into highly volatile expenditures, creating serious consequences for fiscal sustainability and sustainable government spending. Aslanli found Azerbaijan's government spent more revenues than it saved.. As such, Aslanli warns that "a sustainable fiscal policy must take into account the volatile nature of revenues for safeguarding the national economy and state budget against external shocks and price fluctuations" (2015, 115).

Not only resource export-dependence, Briguglio et al. (2008) emphasize that both export concentration and dependence on strategic imports are important factors influencing economic vulnerability in developing countries. Moreover, the results of their empirical calculations show an inverse relationship between a country's economic vulnerability index and GDP per capita. Any adverse shock to commodity prices negatively impacts economic growth, inflation and investment decisions in these countries. Sakal (2014) found, in the case of Kazakhstan, rising oil prices generated rapid growth but oil dependence made Kazakhstan vulnerable to crisis and negatively impacted the standard of living of people.

Commodity export dependence and its dependence on external pricing is not only related to GDP and GDP per capita but also has an effect on inequality. As point out Gylfason and Zoega (2002), there is a possible link of increased dependence on natural resources with both less rapid

growth rates and inequality. This hypothesis is tested and supported by Buccellato and Alessandrini (2009), whose results establish that ores and metals are positively related to income inequality. As such, their findings illuminate that economies endowed with natural resources have grown slower than other economies, also with a view to growth's distribution across populations within countries themselves. Buccellato and Micievicz (2009) apply this hypothesis directly to Russia, finding that hydrocarbons have positively impacted inequality both between and within Russian regions.

Satpayev and Umbetaliyeva (2015) found that Kazakhstan's oil industry suppressed the development of other sectors of the economy, precluding diversification. Relatedly, Bayramov & Orujova, (2017) studied three of the post-Soviet states concerned in this study and questioned the sustainability of economic growth in these countries due to their export dependence and, particularly, due to low levels of economic diversification. Gelb (2010) states that less concentrated economies perform better in the long run in terms of economic growth and macroeconomic stability. Historical trends show that natural resource prices are more volatile and harder to predict and, therefore, resource-dependent countries do not usually succeed in smoothing extreme price cycles. Shorter booms accompanied by exchange rate overvaluation oftentimes result in soaring price levels of non-traded sectors and high, but unsustainable, growth rates. In periods of price slumps, resource-dependent countries experience the opposite, that is, the sharp devaluation of local currencies and low, even negative, economic growth.

Bayramov & Abbas (2017) looked specifically to the experience of several resource-rich, post-Soviet states and observed that energy export-driven economic growth was met domestically with investments exactly in the previously mentioned non-tradeable sectors. The authors found that, while non-tradeable sectors such as infrastructure depended largely on continued spending

and consumption, they were not capable of facilitating long-term, sustainable growth. Moreover, they agreed that these projects' contribution to GDP was low and unsustainable. Satypayev and Umbetaliyeva (2015) found Kazakhstan's macroeconomic policies to increase state spending in order to counter economic downturns and mitigate social consequences stimulated economic growth and development only to a limited extent and could not be ensured during long-lasting crises. As such, they found that neither the structure of the economy nor the population's standard of living improved significantly or sustainably on account of such policies.

Similar results were obtained by Campa & Goldberg (2002). They empirically tested the possible macroeconomic determinants of the 'pass-through' effect of exchange rates on import prices and found that a 1% increase in inflation results in a 0.002% increase in the severity of the 'pass-through' effect. Exchange rate fluctuations account for 60% of the changes in import prices in the short run, and 80% of the changes in import prices in the long run. Other variables, such as real GDP and money growth, had a negligible impact on the 'pass-through' effect. Moreover, the authors found that the elasticity of an imported good has a significant impact on the severity of 'pass-through' as well – countries importing manufactured and high-technology goods experience a weaker 'pass-through' effect than countries importing primary products and energy products, due to the higher elasticity of the latter.

Goldfajn & Werlang (2000) assessed the 'pass-through' effect for a long period of 20 years in a wide range of 71 developing and developed countries. Alongside exchange rate and initial inflation indicators, the authors also included GDP deviation and economic openness as factors affecting the severity of the 'pass-through' effect. The empirical findings indicate that real exchange rate overvaluation and the initial level of inflation play a decisive role in the magnitude of the 'pass-through' effect; additionally, the effect is stronger if the period considered is longer.

For example, a 12-month time horizon exhibits a greater magnitude of ‘pass-through’ effect than a 3-month time horizon.

The review of existing literature suggests that export dependence creates volatility not only in states’ budgets but the resulting susceptibility to exchange rate and other changes also set forth a ‘pass-through’ effect, leading to volatility in citizens’ spending and saving power. As found, currency devaluation impacts a country’s domestic price levels – the severity of this impact hinges on various factors, such as the current level of inflation. Several case studies have also ascertained that devaluations have an adverse impact on the total welfare of households. As external shocks and their effects on state budgets limit the ability of the government to improve citizens’ welfare directly through its social policies, exchange rate volatility is felt dually by citizens. The following sections will analyse in-depth the socio-economic situation in Russia, Azerbaijan, and Kazakhstan after the shock in the price of oil and subsequent currency devaluations, beginning in 2014, in order to gauge its impact on the welfare of the concerned countries’ populations.

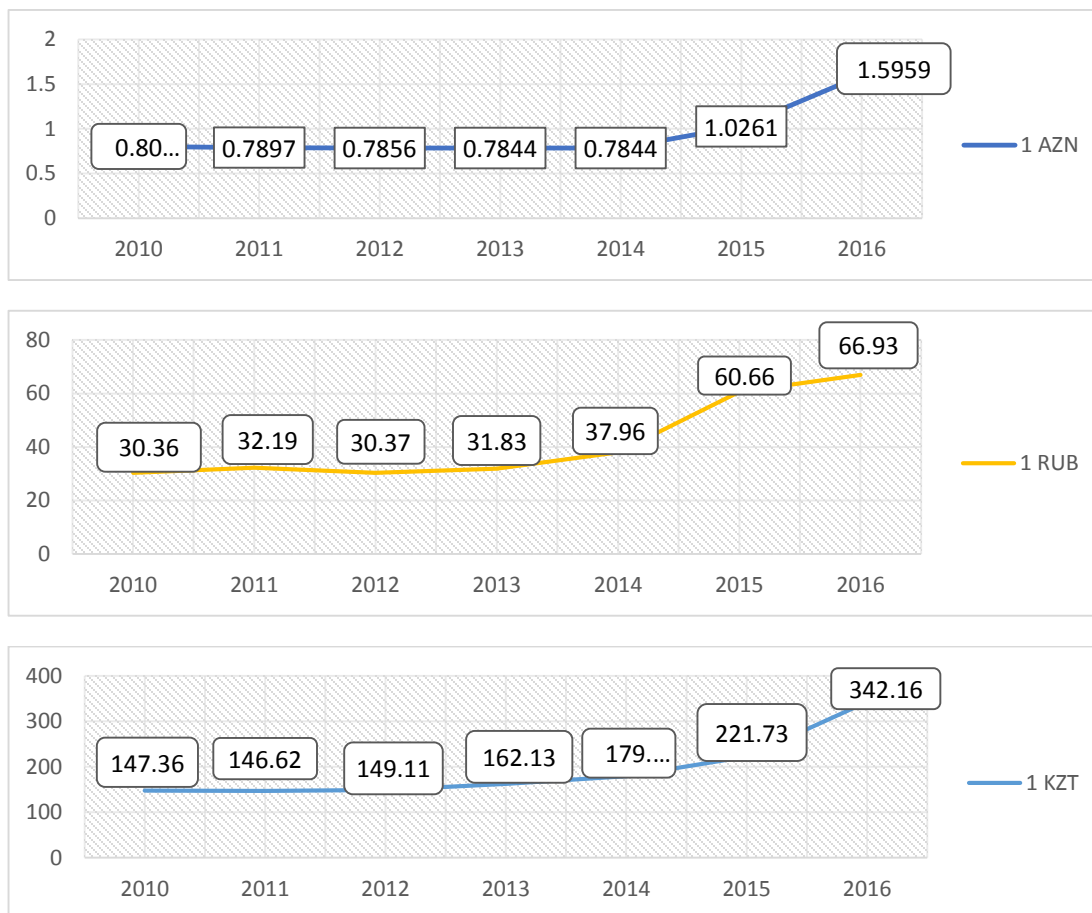
Macroeconomic changes, social costs and devaluation

The oil price shock had an immediate impact on the national currencies of most oil-exporting countries. Prior, the absorption of oil and gas windfalls influenced the exchange rate by appreciating the currencies concerned to levels rendering other non-resource related tradeable sectors, such as agriculture or manufacturing, uncompetitive (Franke et al. 2009, 128). The fall in oil prices and subsequent depreciation and devaluation of the currencies concerned led to widespread difficulties throughout all the countries concerned.

All three countries considered in this study experienced a sharp devaluation of their currencies between 2014 and 2015, as a direct result of the sharp drop in oil prices worldwide. Figure 1 demonstrates the pattern of changes in exchange rates of the Russian *ruble* (RUB),

Azerbaijani *manat* (AZN), and Kazakh *tenge* (KZT). As seen in Figure 1, the *ruble* began to rise sharply after 2013. The *tenge* had a steady rise until 2014, after which it rose more and more sharply. The Azeri *manat* exhibited a stable rate with a sudden rise in 2014. The higher rate continued in 2015 and the first three quarters of 2016.

Figure 1. Exchange rate of national currencies against USD, 2010-2016



Source: National Statistical Committees of Azerbaijan, Kazakhstan, and Russia, 2017.

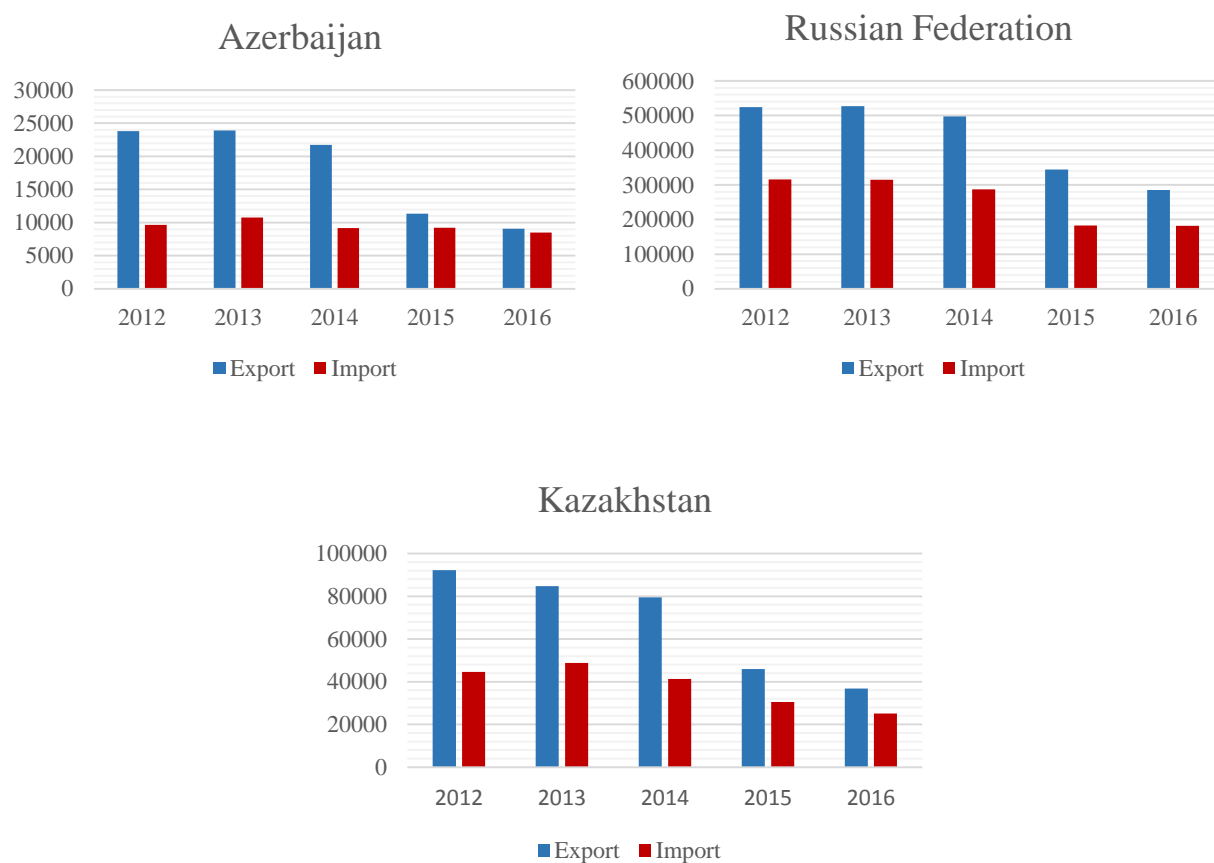
Devaluation of all concerned currencies has had a devastating effect on macroeconomic stability and the well-being of the general population of each country. The changes in welfare, spurred by shifting domestic price levels (thanks to the ‘pass-through’ effect), will be shown through their consequences on several macroeconomic indicators, discussed below. Firstly, the

changes in prices of imported goods, which constitute a substantial part of each population's consumption, have sharply risen; simultaneously, the real purchasing power of local currencies has substantially deteriorated.

1.1 Import and Export Patterns

The oil price shock has negatively impacted total trade turnover of all energy rich post-Soviet states. The official statistic figures of the selected countries show that both imports and exports have decreased since 2014, due to lack of revenues from exporting oil and gas (see Figure 2 below). The resource-rich post-Soviet countries were considered as single-export culture countries when the devaluation took place – exports of energy products in these countries accounted for more than 70% of total exports, while in Azerbaijan the indicator was more than 94% (Bayramov and Abbas 2017). In this regard, the decline in energy prices led to a decrease in total export value.

Figure 2. Import and Export patterns of Azerbaijan, Russia, and Kazakhstan (in million USD)



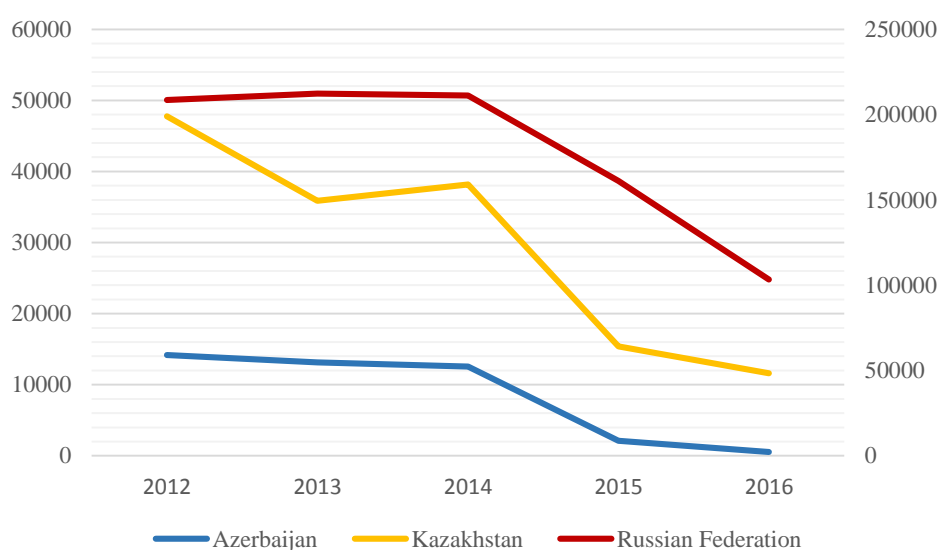
Source: UN Department of Economic and Social Affairs, Statistics Division.

As it may be observed by Figure 2, there were downward trends in the export values of the countries after the oil shock and devaluation. Due to the decline in exports, which led to the decline in the volume of foreign currency entering those markets, difficulties in meeting currency demands in domestic markets were observed.

Figure 3 demonstrates the comparative analysis of above-mentioned countries in terms of the differences between exports and imports thereof. The right vertical axis represents trade surplus, while the left axis stands for the saldo of the remainder. As it may be seen from Figure 3,

after the oil shock occurred, a negative balance in trade turnover was formed as a result of the decline in export value – that led to the fact that the foreign currencies entering the country were less than the currencies leaving it. The emergence of the deficit affected social spending in real terms– the reduction in budget expenditures had a negative impact on mentioned countries’ social spheres, explored throughout later sections.

Figure 3. Trade Saldo for Russia, Kazakhstan, and Azerbaijan (in million USD)

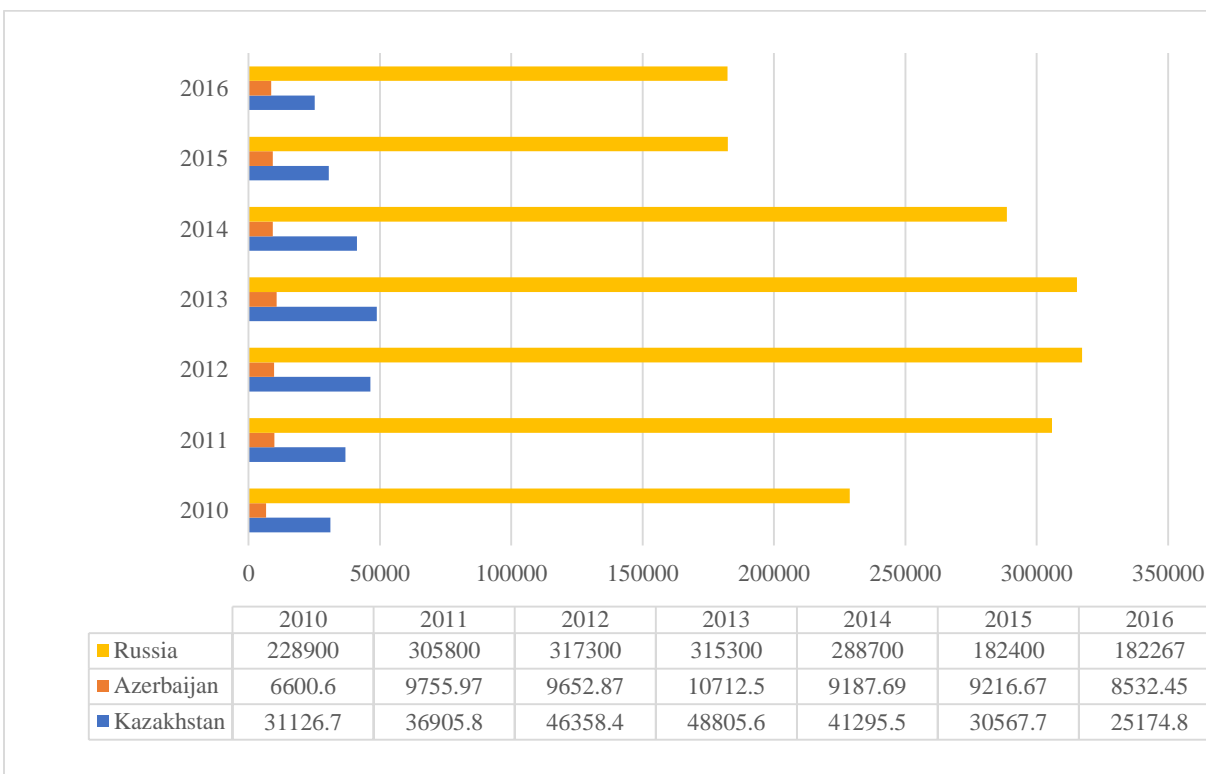


Source: UN Department of Economic and Social Affairs, Statistics Division.

Figure 4 illustrates the dynamics of total imports in Russia, Kazakhstan, and Azerbaijan from 2010 to 2016. As shown in Figure 4, Russia and Kazakhstan exhibit an absolute decrease in total imports in terms of US dollars starting from 2014, a trend not followed by Azerbaijan. In Azerbaijan, imports exhibited a slight decline starting from 2013; however, the downward trend reversed in 2014, but accelerated strongly in 2015, due to the shock from the unannounced devaluation that occurred in February 2015. The volume of imports in dollar terms still shows a decline by approximately 7.4% in 2016, but made a strong recovery in 2016, in terms of the local

currency. That year saw an upsurge in total imports with an increase of 83.9%, in comparison with the whole year of 2015.

Figure 4. Total imports of Azerbaijan, Kazakhstan, and Russia (in thousand USD)



Source: National Statistical Committees of Azerbaijan, Kazakhstan, and Russia.

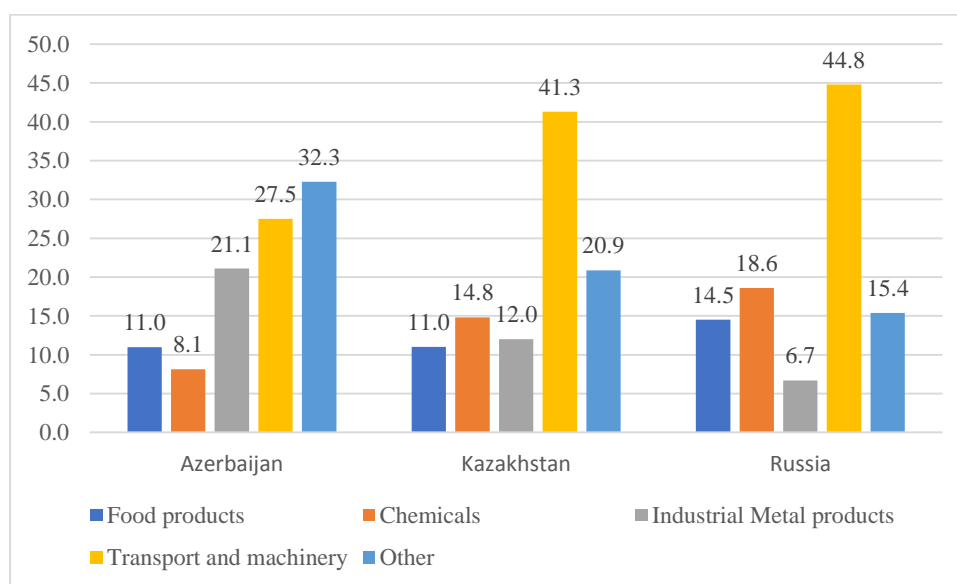
As it becomes clear, devaluation had a negative impact on the balance of trade and sharp decline in export value in spite of the attempts to reduce foreign economic pressure. The direct effect of currency devaluation resulted in a sharp upsurge of expenditure on total imports; namely, as a result of the devaluation, the same value of total imports in terms of foreign currency is equivalent to a larger amount of money in local currencies. Given the large magnitude devaluation, 20-54% in the considered countries, this effect was noteworthy. The high level of dependency on imports led to an increase in prices in the consumer market on both imported and domestic goods. The devaluation not only affected prices for average consumers, but also government budgets -

changes in the foreign trade cycle had a negative impact on the social security of the populations. These two realities and their precise consequences for the populations of the three countries will be detailed in the following sections.

1.2 Prices and Inflation

Figure 5 illustrates the share of main product groups in the total imports of Russia, Azerbaijan and Kazakhstan. The figure shows that transportation tools and machinery hold a large share of total imports of all three, making up nearly a 1/3 of imports in Azerbaijan and over 40% of imports in Kazakhstan and Russia. Industrial metal products and chemicals, a substantial part of which is constituted of medicaments and bandage materials, are another important import product group for all concerned, taking up over a quarter of imports. Food products constitute 11% to 14% of total imports in the period considered.

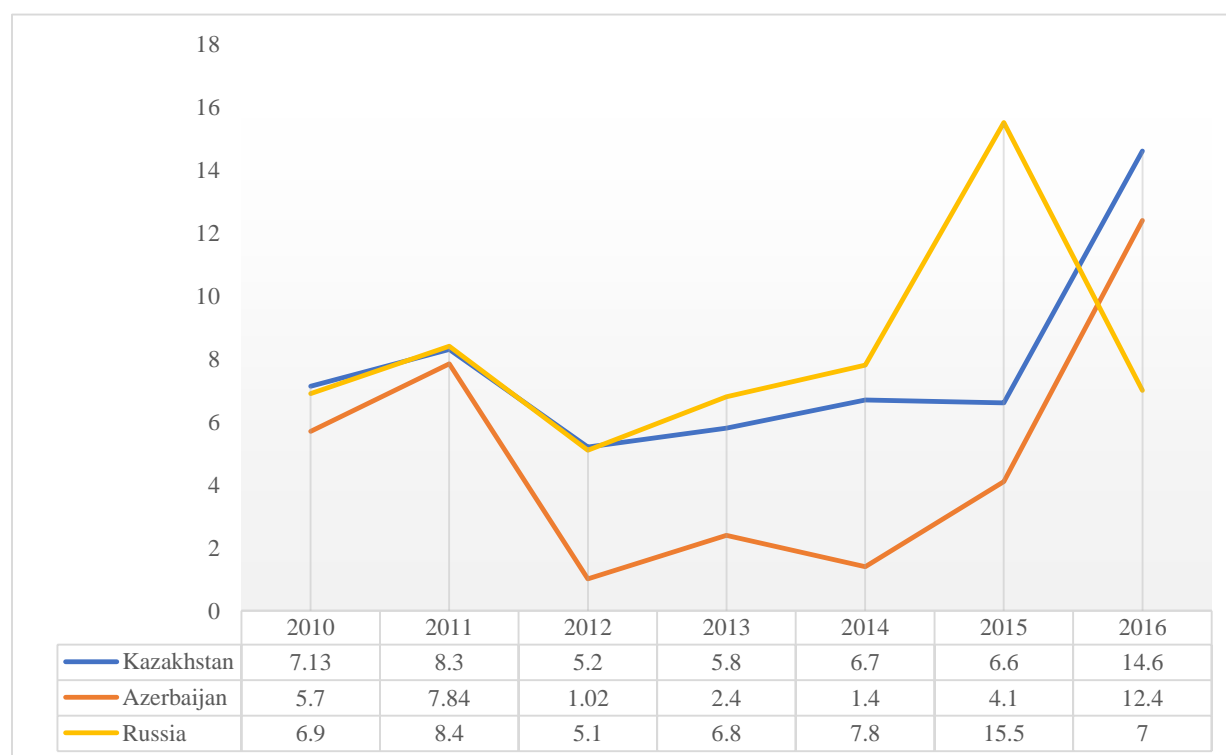
Figure 5. Import structure in Azerbaijan, Kazakhstan and Russia, 2016



Source: State Statistical Committees of Azerbaijan, Kazakhstan and Russia.

Inflation was another important consequence of devalued currencies. As imports constitute a substantial share of private households' and businesses' consumption, the impact of devaluation was immediately observed in the upsurge of local prices. As seen from Figure 6, Kazakhstan and Azerbaijan experienced sharp increases in inflation in 2015, as the countries have shifted to floating exchange rate regimes.

Figure 6. Average yearly inflation rates (% change)



Source: IMF, World Economic Outlook (April 2017).

Table 1 below, gives the percent change in prices for several food and non-food consumption goods in Azerbaijan and Kazakhstan. Despite the increase in overall consumer price levels, certain categories of consumer products, such as food products, exhibited more pronounced price increases – the trend of a stronger ‘pass through’ effect for food products is supported by Kray in her studies, too (2005). Food products constitute roughly 40% of total consumption in Azerbaijan and Kazakhstan, and this proportion is even higher for low-income populations.

Another important group is medicaments, also constituting an important share of household consumption costs. The average change in the price of medicaments was slight for Azerbaijan; however, in Kazakhstan, the price of Ampicillin and vitamins, both included in the World Health Organization's (WHO) list of essential medicines, rose sharply. As previously mentioned, low-income households experience the greatest burden of the rising prices of these basic consumption goods.

Table 1. Percent change in prices of selected food and non-food consumption goods in 2014-2015 (yearly)

Product Group	Kazakhstan	Azerbaijan
Overall change in prices	-	12.4
Overall change in import prices	-	0.9
Bakery products and cereals	-	11.7%
Bread	14.4%	-
Starchy food products	11.4%	-

Oils and fats	17.04%	17.3%
Dairy products	7.5%	7.2%
Fruits	-	4.4%
Sugar and Confectionary products	20%	6%
Tea, coffee, and cacao	18.2%	14.7%
Medicaments	-	2.2%
- Ampicillin	26.75%	-
- Vitamins	33.05%	-
Household Appliances	41.3%	29.4%

Source: National Statistical Committees of Azerbaijan and Kazakhstan.

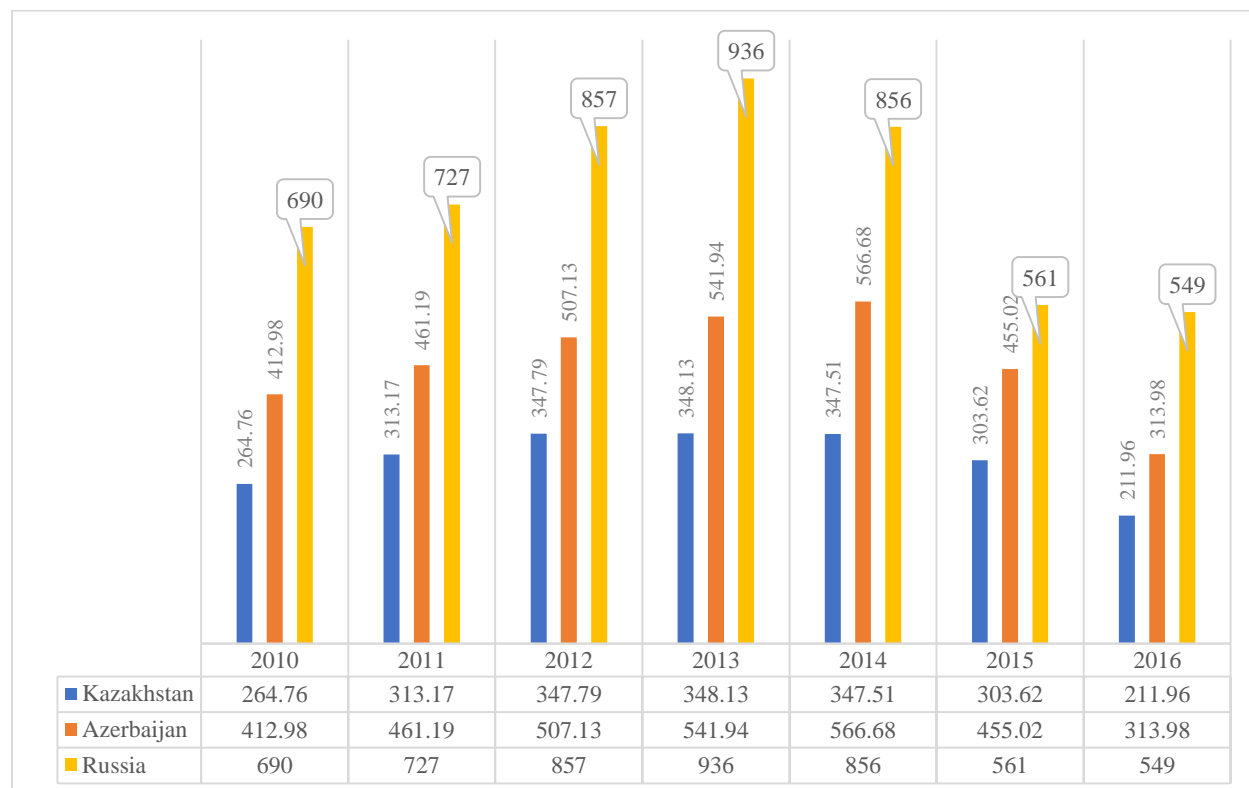
As it becomes clear, consumer prices have increased in each selected country. The gradual increase in prices created some additional costs for households – as it may be observed from Table 1, the highest price hikes were observed in food products. While devaluation is a direct cause of the price upsurge in mainly import-based product groups, like household appliances, devaluation also causes indirect price increases in manufacturing, packaging and processing, as many of these processes rely on imported components, equipment and ingredients. The increase in prices means additional expense for households and negative impact on their social status, as the next subsection will reveal that wages did not rise to offset increased prices.

1.3 Population income

The change in prices has resulted in a loss of real purchasing power of the populations of Russia, Azerbaijan, and Kazakhstan. The consumption basket of average households in each of these countries has shrunk substantially. Due to depreciating currencies and volatile exchange rates, average monthly salaries have dropped substantially, in dollar terms, as seen in Figure 7. In

comparison with 2014, average monthly salaries have decreased 39% and 44% in Kazakhstan and Azerbaijan, respectively.

Figure 7. Average monthly salaries expressed in dollars



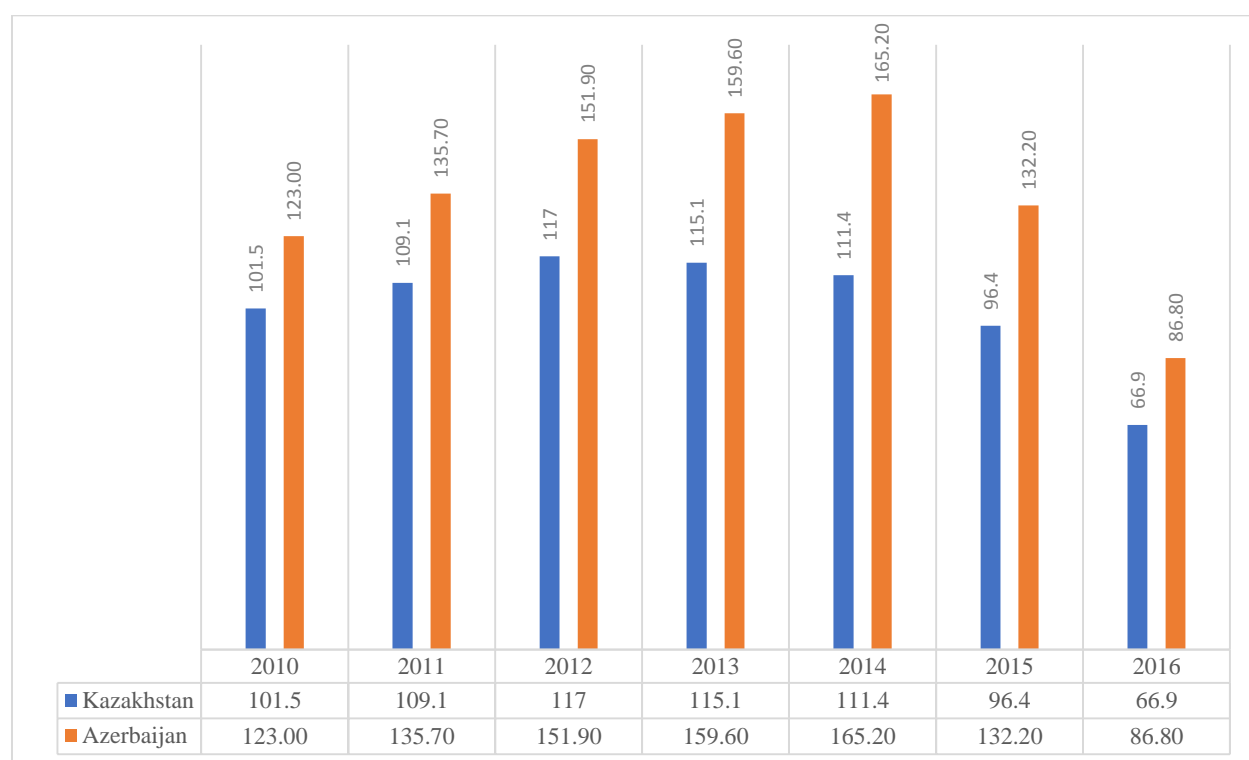
Source: National Statistical Committees of Russia, Azerbaijan, and Kazakhstan.

Russia's and Kazakhstan's failure to adjust the minimum standard of living (MLS) to reflect levels of inflation results in an underestimation of the poverty aggravated by devaluation. In fact, the Azerbaijani government increased the MLS by 4,07%, in accordance with official inflation statistics in 2015 (4,05%), they did not do the same in 2016, despite two-digit inflation (12.4%). Kazakhstan only adjusted its MLS by a magnitude of 7%, lagging far behind its two-digit level of inflation, 13.1%.

For 2016, the MLS in Azerbaijan was 136 *manat*, Kazakhstan 22,859 *tenge* and Russia 6,204 *ruble* per month, respectively. As seen from Figure 8, the MLS steadily rose throughout the

2010 - 2013 period, in terms of dollars. However, starting from 2014, MLS began to decline in dollar terms. As of October 2016, the MLS in dollars has shrunk by more than 30% in all countries concerned.

Figure 8. Minimum Living Standard (MLS) in dollar terms



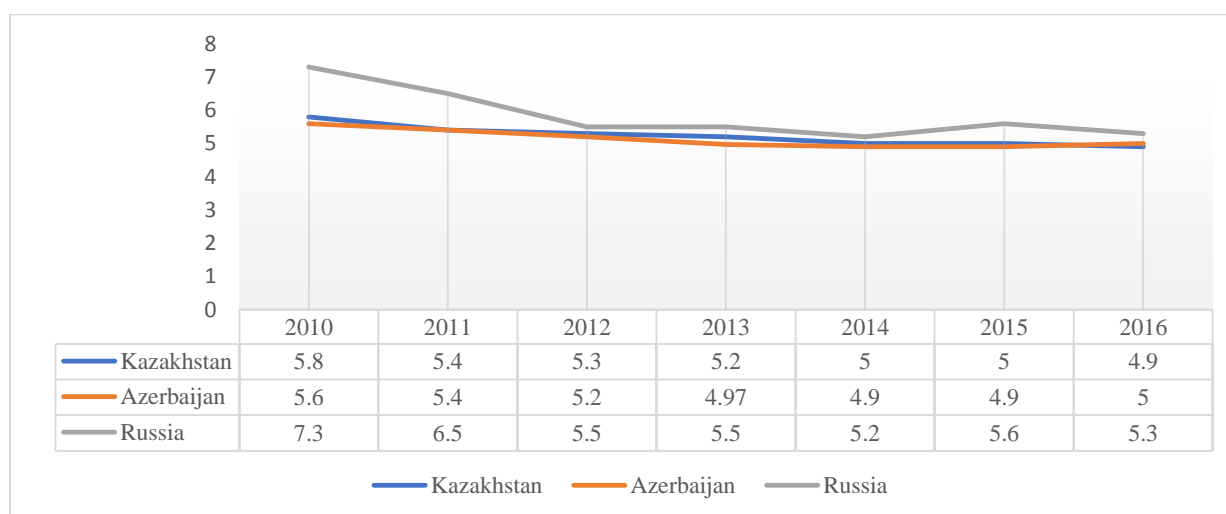
Source: National Statistical Committees of Azerbaijan and Kazakhstan.

This inadequate adjustment of MLS compared to changes in the economy understates the true level of poverty in each country. For example, according to the national statistics of Azerbaijan in 2015, poverty levels measured as a headcount ratio have slightly decreased, despite the sharp drop in purchasing power, from 5.0% to 4.9%. These poverty calculations were carried out based on previous price levels and an unadjusted minimum living standard.

1.4 Unemployment

After the oil shock an increase in unemployment rates was observed in all the oil rich post-Soviet countries (Silagadze 2017). Figure 9 presents the official statistics of unemployment for Russia, Azerbaijan and Kazakhstan.

Figure 9. Unemployment levels of Russia, Azerbaijan and Kazakhstan, %



Source: National Statistical Committees of Azerbaijan, Russia and Kazakhstan, 2017.

According to official statistics from the three countries, unemployment levels do not exhibit strong adverse impacts from devaluation. Kazakhstan and Russia even observed their unemployment rates fall in 2016, in comparison to 2015. However, consideration of official statistics of unemployment as the sole indicator for these countries' populations' employment may be misleading.

Firstly, poor registration practices for job search and unemployment benefits substantially hinder the accurate estimation of unemployment in the three countries concerned; this factor aggravates the already high levels of hidden unemployment. Secondly, official employment figures mainly cover public employees and some large private entities with sustainable activity

during the last decade; small and medium scale enterprises (SMEs) often proceed without official registration of their employees, in order to avoid the tax burden. In times of economic difficulties, informal employment is the first target of employers. This means that, although devaluation more strongly affected SMEs and forced many to bankruptcy, the number of employees employed by SMEs who lost their jobs, as a result, has not been reflected in official statistics.

1.5 Erosion of total savings

Another adverse effect of currency devaluation and continuing depreciation of local currencies is the loss of real value of total savings and deposits by households within the economies concerned. The data presented below elucidates the state of total savings and deposits in Azerbaijan, Kazakhstan and Russia.

In Azerbaijan, before the first devaluation, which took place on February 21st, 2015, a number of total deposits and savings in commercial banks in *manat* terms surpassed that in foreign currencies by almost twofold. The situation radically changed by the end of the first half of 2015 (Table 2). Deposits in foreign currencies, mostly USD, rose continuously from 2014-2015, and remained high in 2016, whereas total deposits and savings in *manat* fell by almost three times in the same time period. The trend was especially sharp after the second devaluation, on December 21st, 2015, after which deposits in *manat* dropped by 20% and foreign currency deposits surged by 45.5%.

Table 2. Total Household Savings and Deposits in Azerbaijan, mln. *manat*, 2013-2016

	2013, end of year	2014, end of year	2015, end of period (semi- annual)		2016, end of period (semi-annual)	
			I half	II half	I half	II half

<i>Foreign currency deposits¹</i>	2,507.2	2,766	5,473	8,053.7	6,298.6	5,931.5
<i>Manat deposits</i>	3,883.3	4,422.4	2,179.9	1,420.2	1,517.1	1,517.2

Source: The Central Bank of the Republic of Azerbaijan.

Additionally, not only had deposits in *manat* declined but also the value of *manat* deposits in terms of foreign currencies fell. Given the two-digit inflation rate throughout 2016 and the further depreciation of the *manat*, the situation was further aggravated towards the end of 2016.

Table 3 contains information on total deposits and savings in Kazakhstan for the period concerned. While the first devaluation of the *tenge* took place in February 2014, the table shows information on deposits starting from the end of 2013. As seen from the table, the volume of deposits and savings until the end of the period was higher before the first devaluation in February 2014. Deposits in the local currency fell significantly in 2015, after the first and second devaluations of the *tenge*; however, the *tenge* value of foreign currency deposits surged during the same time. As can be seen from the comparison of Tables 2 and 3, households in both Azerbaijan and Kazakhstan prefer to hold their savings and deposits in foreign currencies. This observation can be explained by a low level of confidence in each countries' local currencies among its citizens.

Table 3. Total Household Savings and Deposits in Kazakhstan, in mln. *tenge*, 2013-2016

	2013, end of year	2014, end of year	2015, end of period (semi-annual)		2016, end of period (semi-annual)	
			I half	II half	I half	II half
<i>Foreign currency deposits²</i>	1,737,407	2,995,193	2,924,263	5,446,254	4,811,000	4,247,654

¹ These are foreign currency deposits converted to *manat*, based on the exchange rate in the period concerned.

² These are foreign currency deposits converted to *tenge*, based on the exchange rate in the period concerned.

<i>Tenge deposits</i>	2,208,111	1,442,868	1,437,882	1,433,231	2,284,613	3,408,483
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Source: The Central Bank of the Republic of Kazakhstan.

Finally, Table 4 presents data on total household savings and deposits in Russia from 2014 – 2016. The pattern of savings and deposits in Russia reveals a drop in *ruble* deposits in 2014, at the height of the *ruble's* volatility, with a corresponding jump in savings and deposits held in foreign currencies, as customers began to lose faith in their local currency. This trend, however, reversed shortly, with *ruble* deposits rising already in 2015, and foreign currency deposits falling by the first half of 2016. Households in Russia, unlike those in Azerbaijan and Kazakhstan, prefer to hold their savings and deposits in their local currency, revealing a firm trust in it. This trend is interrelated with the political situation in Russia, in which political elites purposefully inflame national pride in order to deflect domestic attention from continued international sanctions and a negative perception of Russia in the international community.

Table 4. Total Household Savings and Deposits in Russia, mln. *ruble*, 2014-2016

	2013, end of year	2014, end of year	2015, end of period (semi- annual)		2016, end of period (semi-annual)	
			I half	II half	I half	II half
<i>Foreign currency deposits</i> ³	2,956,962	4,846,110	5,082,456	6,820,855	5,930,539	5,723,670
<i>Ruble deposits</i>	14,000,569	13,706,572	14,809,844	16,398,222	17,132,178	18,476,652

Source: The Central Bank of the Russia Federation.

³ These are foreign currency deposits converted to *ruble*, based on the exchange rate in the period concerned.

Simultaneously, loans provided to economic agents have also become more expensive as a result of local currency devaluations. As seen from Tables 5 and 6, immediately before the first devaluation in both countries, in February 2014 and February 2015, in Kazakhstan and Azerbaijan respectively, loans to the economy in foreign currencies were half (or less) of those in local currencies. The two sharp devaluations in Azerbaijan had an abrupt effect on borrowers, whose loans were taken out in dollars. In 2019 the government of Azerbaijan approved a massive social package covering more than 3.0 million people and included compensation for creditors who borrowed money before the devaluation. The package offers compensation for increased costs incurred through dollar-denominated loans taken before the 2015 devaluations – confirmation that the oil price shock and subsequent devaluation has had negative social consequences for large swathes of the population.

Table 5. Total loans to the economy in Azerbaijan, in mln *manat*, 2014-2016

	2013, end of year	2014, end of period (semi-annual)		2015, end of period (semi-annual)		2016, end of period (quarterly)	
		I half	II half	I half	II half	I half	II half
<i>foreign currency loans⁴</i>	4,346.3	4,526.5	5,037.0	8,769.4	10,735.9	8,863.8	8,663.1
<i>Tenge loans</i>	11,076.7	12,228.3	13,505.7	11,519.0	10,994.5	9,570.4	7,781.4

Source: The Central Bank of the Republic of Azerbaijan.

⁴ These are foreign currency loans converted to *manat*, based on the exchange rate in the period considered.

In Kazakhstan, there was an abrupt increase in the value of dollar deposits in *tenge* between the first half of 2015, and the second half of the year. The jump in Kazakhstan's loans to the economy can be attributed to the fact that the *tenge* was allowed to float in August 2015. affecting the value of loans customers held.

Table 6. Total Loans to the economy in Kazakhstan, in mln *tenge*, end of 2013-2016

	2013, end of year	2014, end of period (semi-annual)		2015, end of period (semi-annual)		2016, end of period (quarterly)	
		I half	II half	I half	II half	I half	II half
<i>foreign currency loans</i> ⁵	3,354,890	4,045,181	3,540,632	2,603,840	4,273,131	4,299,548	4,129,465
<i>Tenge loans</i>	7,936,659	8,118,143	8,565,052	8,107,612	8,401,114	8,156,392	8,578.859

Source: The Central Bank of the Republic of Kazakhstan, 2017

Below, in the table detailing total loans to the economy in Russia, a trend similar to that of Azerbaijan can be observed. After the *ruble* was allowed to float freely, there can be observed a jump in the value of foreign currency loans by the 2nd half of 2014. Unlike Azerbaijan, however, *ruble* loans have also increased for the period concerned.

Table 7. Total loans to the economy in Russia, in bln. *ruble*, 2014-2016

	2013, end of year	2014, end of period (semi-annual)		2015, end of period (semi-annual)		2016, end of period (quarterly)	
		I half	II half	I half	II half	I half	II half
<i>foreign currency loans</i> ⁶	4,278.9	4,422.2	7,125.8	6,711.5	8,995.7	7,457.1	6,472.4
<i>Ruble loans</i>	17,963.3	19,252.9	20,659.5	20,434.9	20,889	21,480	21,731.7

⁵ These are foreign currency loans converted to *tenge*, based on the exchange rate in the period considered.

⁶ These are foreign currency loans converted to *ruble*, based on the exchange rate in the period considered.

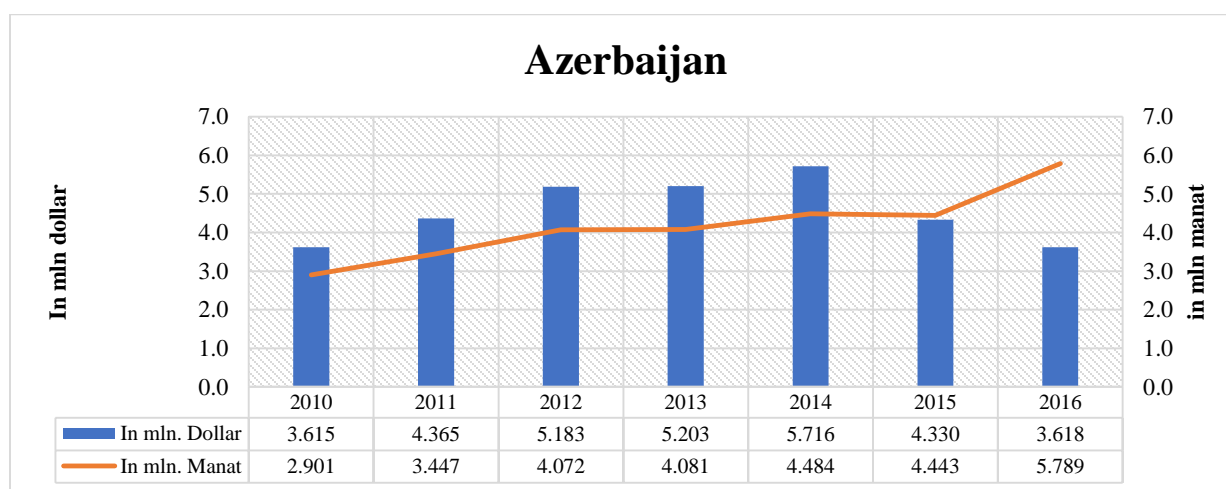
Source: The Central Bank of the Russian Federation.

In summary, the oil price shock and resulting devaluations in Azerbaijan, Kazakhstan and Russia have led to a sharp deterioration of the real value of deposits and savings held in local currencies. At the same time, the value of loans taken out in dollars has soared in terms of local currencies. Borrowers have faced an expansion of their debts, aggravating their financial disadvantage, which had already deteriorated due to surging price levels.

1.6 Social Spending

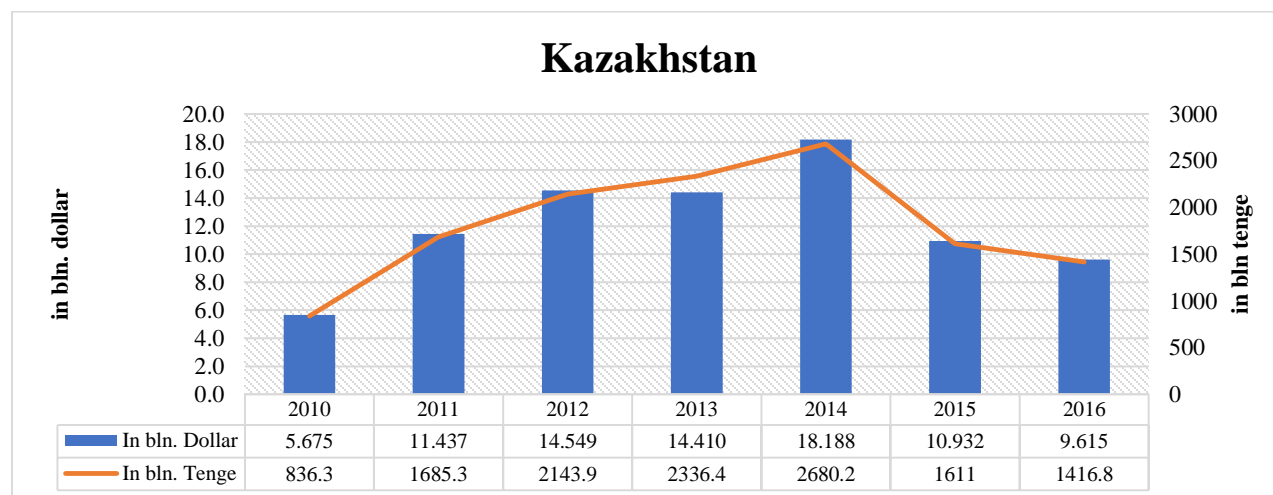
Declining oil revenues have also affected the budgets from oil funds, shrinking total budget revenues and the amount of funds available for government expenditures. Starting from early 2014, the absolute value of social spending measured in dollars shrunk in all countries concerned. In Azerbaijan and the Russian Federation, social spending measured in *manat* and *ruble* remained relatively stable; however, Kazakhstan experienced a sharp reduction in social spending in *tenge* terms.

Figure 10. Social Spending dynamics in dollar and *manat* terms in Azerbaijan, 2010-2016



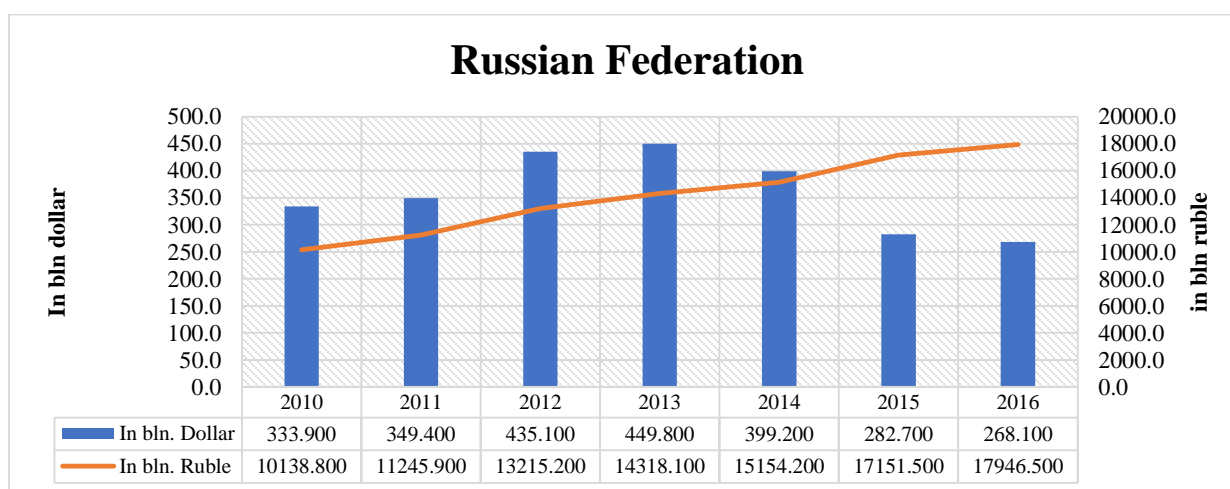
Source: State Statistical Committee of the Republic of Azerbaijan

Figure 11. Social spending in dollar and *tenge* terms in Kazakhstan, 2010-2016



Source: State Statistical Committee of the Republic of Kazakhstan.

Figure 12. Social Spending in dollar and *ruble* terms in Russia, 2010-2016



Source: National Statistical Committee of the Russian Federation, 2017.

The figures above confirm that the oil shock has negatively impacted social policy in the three oil-rich post-Soviet countries concerned. Social spending in these countries is important for protecting economically and socially vulnerable groups, such as children, women and elderly people in poverty. Additionally, many of these countries' citizens have grown accustomed to expanded social safety nets and improved living standards, thanks to their countries' resource wealth, putting increased pressure on governments to continue delivering (Kendall-Taylor 2012, 752). As seen in the preceding figures, universal and targeted social assistance spending in dollar terms in all countries has been greatly reduced, putting more direct pressure on already vulnerable populations.

Conclusion and recommendations

Plummeting oil prices during the last two years have significantly affected the macroeconomic stability and well-being of the populations of oil-exporting countries, such as those in Russia and three resource rich, former Soviet republics – Azerbaijan and Kazakhstan. The forced devaluation of the national currencies of all three countries and the subsequent shift to a managed floating exchange rate regime has caused large fluctuations in these countries' exchange rates. The fluctuations have had an immense negative impact on price levels and the populations' purchasing power and, hence, the total welfare of the population. These results are not surprising considering the dependence of the concerned countries on imports of consumption goods and manufacturing equipment.

Changes in exchange rates of national currencies against the dollar in Russia, Azerbaijan and Kazakhstan have severely impacted the economy, which confirms the important role of exchange

rates largely emphasized by the new developmental school of thought presented by Bresser-Pereira (2013). This school posits that with the inadequate adjustment of exchange rates and lack of prudent management of resource revenues, countries dependent on oil exports finally face the economic hardships largely predicted and analysed by the ‘Dutch Disease’ mechanism, where an appreciating exchange rate makes production of other traded good unprofitable, leading to continued over-dependence on the very resource’s export (Pomfret 2005, p. 863).

The countries concerned are experiencing a very complex economic situation. However, given the expectations of a moderate increase in oil prices, the following suggestions may mitigate the economic downturns in these oil- and gas-rich countries:

1. ***Boosting domestic demand.*** When foreign demand is volatile and negatively affects world market prices, countries should focus on encouraging domestic demand, instead of relying on exports. This can be done through various measures, such as subsidies for domestic producers and income tax concessions to industrial sectors capable of and oriented towards meeting domestic demand. There is a rich history of developing countries that have successfully increased domestic demand in times of global economic recessions, and this approach can be successfully utilized by oil- and gas-rich countries as well. In order to boost overall demand, it is important to address and include low-income households, who have a higher capacity to increase their consumption via a rise in employment and income. This will not only contribute to the strengthening of certain indicators, like GDP, but it will also facilitate inclusive growth and development (UNDP 2011).

2. ***Export diversification.*** Diversification of exported goods would facilitate the diversification of risks related to external prices shocks. In addition, moving away from the commodities sector would create a buffer against changing commodity prices, which tend to be more volatile than other exports. Diversification will also facilitate the boost of domestic demand.

By broadening the range of goods and services available in the economy, both foreign and local markets will benefit. For the short run, these economies can carry out vertical diversification; that is, they can create new manufacturing sectors related to oil such as chemicals or plastic manufacturing. However, in the medium and long-term, the priority must lie in non-oil manufacturing sectors.

This, however, is a long and deliberate process, and it will not produce desired results in the near future. Alas, these steps must be taken in order to avoid the recurrence of such economic downturns in the long term.

3. ***Increasing social protection.*** Increasing social protection of vulnerable population through the budget consideration process by re-balancing budget expenditure lines. Azerbaijan's post oil shock social package, which mainly addressed vulnerable groups by re-allocating state funding, can be an example for minimizing negative social consequences of devaluation in other resource rich post-Soviet countries.

In conclusion, the economic resilience of oil-rich countries can be achieved through prudent and sustainable industrialization strategies. This will be achieved faster through regional economic cooperation between these countries.

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