

Volatility, Diversification and Oil Shock in Resource-Rich Turkic Countries: Avenues for Recovery

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Abstract

The paper analyses the current level of economic and export diversification in three resource-rich Caspian basin Countries: Kazakhstan, Azerbaijan and Turkmenistan and attempts to reveal the underlying causes of high vulnerability of these economies to the recent oil price shock. On the other hand, the economies are evaluated in the light of so called subsidized economies, e.g. an economy mainly driven by public spending and current consumption expenditure. The latter in this case are mainly fueled by monetary injections as a result of large resource windfalls encountered by an economy.

Keywords

Economic diversification, oil dependence, subsidized economies, Kazakhstan, Azerbaijan, Turkmenistan

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1. INTRODUCTION

The recent sharp decline of hydrocarbon prices has caused a deep economic slowdown in resource-rich economies. Surely, oil-rich Caspian Basin countries were not an exception. Due to the high level of resource-dependence, the slackening oil revenues have weakened the current account; as a result, currency devaluations have become inevitable. Kazakhstan was the first among the three countries in devaluing its national currency after the sharp depreciation of the Russian ruble due to its close ties with Russian market. The national currency – *tenge* – was depreciated twice in 2014 amounting by more than 40% of its original value. The Azerbaijani *manat* has also experienced two major devaluations in 2015, resulting in more than 50% depreciation of the national currency. Turkmenistan experienced a similar situation in which the country's monetary authorities were forced to devalue the Turkmen *manat* by 25% against the dollar in early 2015 (IMF 2016a: 54, IMF Staff Report, 2016). The latter have further deteriorated the already depressed economies and overall well-being.

The large impact of oil prices on economic growth and macroeconomic stability in oil-rich post-Soviet countries have raised the question regarding the sustainability of economic development achieved in recent years. So, the paper considers that three Caspian Basin economies, namely Kazakhstan, Azerbaijan and Turkmenistan, by shedding a light on the current state of economies and explores the underlying causes of recent economic slowdown. The paper argues that low levels of economic and export diversification is one of the main reasons for such high vulnerability of these countries to the oil price shock. Large resource windfalls observed in the years of high-oil prices have triggered the rise in public spending and the population's income. With the seizure of resource revenues, these countries were incapable of maintaining the existing level of growth and consumption.

In addition, it can be mentioned that, due to the public spending-driven character of the economies, the sharp reduction of oil windfalls has made these economies incapable of supporting already-created subsidized economies. Such economies were created based on government expenditure in the form of current consumption, as well as long-term investment expenditure. Moreover, resources were mainly channeled to non-tradable sectors; the latter sectors were incapable of acting as a solid buffer against the price shock.

2. LITERATURE REVIEW

The high susceptibility to external shocks and the import dependence of the countries have led to discussions whether these countries suffer from resource dependence, e.g. so-called *resource curse* at extreme. Such countries are usually accused of being dependent on a single natural resource and disregarding the development of other economic sectors. Those economies mainly focus their financial, as well as non-financial assets on the extraction and export of such natural resources and its derivatives (Gylfason et al. 1999: 211). Auty (1998: 12) concludes that, in comparison with resource-deficient countries, resource-rich countries develop a specialized production structure and are not able to escape the staple trap. Moreover, the author mentions that, in such economies, non-tradable sectors are usually favored vis-à-vis tradables in an unsustainable manner, which is especially visible in small open economies.

Moreover, Atkinson and Hamilton (2003: 1801) found that resource-rich countries on average exhibit lower savings levels in comparison with resource-poor countries, which, in turn, deteriorates the investment opportunities within a country. Torvik (2002: 461) has developed a model where the author concludes that, as a result of pursuit for rent-seeking, the economic agents in a resource-rich country are attracted to the resource sector, whereas the investments for other productive sectors deteriorate.

Sabonis-Helf (2007: 160-161) discusses the oil economies such as Kazakhstan and Turkmenistan in the light of what is called “petrostates”. Similar to the scholars mentioned above, the author also states that the development trajectory of oil-rich countries shows the signs of “petrolization”, e.g. the economies are shaped in a way mostly serving the oil industry. Moreover, the government budget in this case is mainly provided by oil revenues, instead of tax revenues, which decreases the accountability and transparency of the states in budget spending and governance. The latter issue, that is, the inefficiency and non-transparency of institutions in resource-rich countries is extensively emphasized by Ross (1999: 309-310).

The concentration on a specific product makes a country susceptible to international price shocks which largely affects the export revenues, and hence, country’s macroeconomic stability. On the other hand, the concentration of productive economic activities on a specific sector exacerbates the

economy's dependence on imports; in case of currency, commodity and etc. macroeconomic and international shocks, the large swings in import prices threatens the well-being of population by weakening their purchasing power and job opportunities. Gelb (2010: 8) and Hvidt (2013: 7-8) attribute such threats specifically for oil-rich countries, where the export revenues from those resources largely impacts the macroeconomic stability and welfare. Moreover, Gelb (2010: 5) indicates that while per-capita resources fall down as the population grows larger, the welfare of the citizens may be threatened.

In the light of the above-mentioned factors, the analysis of the economic and export structures of Azerbaijan, Kazakhstan and Turkmenistan present an opportunity to shed light on how successfully these countries were able to establish diversified economies and to build solid buffers against the external shocks.

3. MEASURING DIVERSIFICATION

3.1. Economic Diversification: Approaches and Measurement

The notion of economic diversification has been largely discussed in recent decades in economic literature and it has become a hot topic especially in the light of economic development of resource-rich developing countries.

Diversification is the expansion in a range of economic activities or the increase in the number commodities produced within the economy. The economists usually distinguish economic and export diversification. *Economic diversification* refers to the increase in the number of the products manufactured within the country, whereas the *export diversification* mainly contemplates the broadening of the range of products exported by the country. On the other hand, vertical and horizontal diversification strategies are considered (Esanov 2012a: 4). *Vertical diversification* is the advancement of the country on a value chain of the production of a specific product type in terms of value generation. On the other hand, *horizontal diversification* refers to the shift of the country's productive resources towards totally new fields of economic activity.

The advantages of economic diversification were discussed by several scholars. Diversification is one of the main tools for long-term economic growth and sustainable economic development. Some empirical works have sustained a firm positive relationship between the level of economic diversifi-

cation and economic growth (Lederman and Maloney 2007: 28-29, Hesse 2008: 12-13). Another argument for diversification emanates from the external shock emanating from various economic downturns largely observed in world economy in recent decades. Hence, the weakening of the dependence on oil revenues would largely contribute to long-term economic stability in these economies (IMF 2016b: 29-30).

In turn, the level of economic development is firmly related to economic and non-economic sectors. The instability of factors such as inflation and currency exchange rates discourages investors and entrepreneurs to engage in economic activities which are not traditional for the country, due to uncertainty in the long-term capability of such activities in value generation. On the other hand, the volume and direction of foreign direct investments (FDI) also affects the diversification of the country's economy (Harding and Javorcik 2009). Some scholars reckon the possession of large reserves of natural resources by a country as one of the main factors affecting the level of diversification. Esanov (2012a: 13) has empirically tested the effect of resource dependence on the level of export diversification and found a negative relationship between those variables.

Another group of factors affecting the economic diversification are non-economic. The institutional capacity and transparent governance factors can greatly contribute to successful diversification (OECD 2011). On the other hand, the presence of appropriate infrastructure, such as roads, electricity and etc., as well as the availability of labor supply with adequate skills and human capital also play an important role in the successful implementation of diversification strategies and policies (Esanov 2012a: 16).

The level of diversification is measured with different indicators, however, as a result of mathematical analysis, Palan (2010: 16) has indicated that the Herfindahl-Hirschman Index (HHI) is the most appropriate and satisfies the axioms necessary for an indicator of diversification. The index is calculated as following:

$$HHI = \sum_{i=1}^n S_i^2$$

Here, S_i is the share of a specific economic sector or product group in the economy or total exports respectively; i – a specific economic or export sec-

tor (product group), n – is the number of economic or export sectors (product groups) in the country. Index values varies within $[0;1]$ interval. The low values of index point to the low level of economic or export concentration around a specific sector or product group.

In the light of all the above-discussed issues, the next subsection presents the economic and export structure of the economies considered in the study, where the level of economic diversification in these economies will be measured with HHI.

3.2. Measuring Diversification: The Case of Kazakhstan, Azerbaijan and Turkmenistan

Tables 1-3 below represent the structure of the economy in the countries considered. As seen from the tables, Kazakhstan is shown to be more diversified in economic activities as seen from the structure of GDP. Although being primarily a hydrocarbon country, it is more advanced in the manufacturing industry in comparison with other two countries: the value generation in the manufacturing industry has almost equaled the mining industry (15% of GDP) in terms of a share in GDP in recent years. For Azerbaijan, the manufacturing industry contributed to less than 5% of GDP, whereas the mining industry constitutes around 26-42%, although it has substantially decreased due to the increasing share of other sectors. As for Turkmenistan, still more than one-third of GDP is generated by mining sectors, and this share has gradually increased by 9 percentage points throughout the considered period. However, the share of the manufacturing sector has also equaled the share of the mining sector; one-third of generated value is attributable to manufacturing industries.

Other leading sectors in GDP are constituted of the non-tradable sectors in all three countries. For instance, wholesale and retail trade is the leading non-oil sector in Kazakhstan, whereas for Azerbaijan the leading sector is construction. The opposite is observed in Turkmenistan: the share of non-tradable sectors is relatively low given that more than 80% of GDP is generated by tradable sectors. The leading non-tradable sector is construction, constituting around 6-8% of GDP.

Table 1. *The Breakdown of GDP of Kazakhstan*

Sectors	2007	2010	2011	2012	2013	2014	2015
A - Agriculture, hunting, forestry, fishing	5.7	4.4	4.9	4.2	4.5	4.4	4.8
B-Mining and quarrying	15.1	19.5	17.7	17.1	15.2	15.2	12.7
D- Manufacturing	11.5	11.3	11.0	11.0	10.7	10.2	10.1
E - Utilities	1.7	2.1	2.0	2.0	1.9	1.9	2.0
F - Construction	9.4	7.8	6.4	6.2	6.0	5.9	6.0
G-Wholesale and retail trade	12.4	13.0	13.6	14.9	15.1	16.0	17.0
H – Transportation and storage	9.0	8.0	6.8	7.3	7.5	7.9	8.6
Other Activities	35.2	33.9	37.6	37.3	39.1	38.5	38.8

Source: National Statistics Committee of the Republic of Kazakhstan, www.stat.gov.kz

Table 2. *The Breakdown of GDP of Azerbaijan*

Economic activity	2005	2010	2011	2012	2013	2014	2015
A-Agriculture, forestry and fishery	9,1	5,5	5,1	5,1	5,4	5,3	6,2
B–Mining sector	42.2	45,9	48,0	43,1	39,2	34,3	26,4
C-Manufacturing sector	6,5	4,7	4,0	4,2	4,2	4,7	5,3
D-Utilities	0,8	1,1	1,8	2,1	2,1	2,0	2,3
F-Construction	9,0	8,1	8,0	10,1	11,6	12,6	12,1
G-Wholesale and retail trade	6,1	6,4	6,3	6,7	7,1	7,9	10,0
H-Transport and Storage	5,2	5,6	5,1	4,9	4,4	4,5	5,4
I-S-Other activities	21,1	15,9	15,8	17,6	19,3	21,2	24,0

Source: National Statistics Committee of the Republic of Azerbaijan, www.stat.gov.az

Table 3. *The Breakdown of GDP of Turkmenistan*

Sectors	2005	2010	2011	2012	2013	2014
A - Agriculture, hunting, forestry, fishing	18.53	14.34	13.77	14.09	14.07	13.97
B-E - Mining, Manufacturing, Utilities	30.68	39.76	38.16	39.06	38.99	38.74
D- Manufacturing	28.92	37.47	35.96	36.81	36.75	36.51
F - Construction	6.39	8.00	7.68	7.85	7.84	7.79
G-Wholesale, retail trade, restaurants and hotels	5.04	4.29	4.12	4.21	4.21	4.18
H - Transport, storage and communication (ISIC I)	7.79	6.55	6.29	6.44	6.43	6.39
Other Activities	30.11	25.65	24.62	25.19	25.15	24.99

Source: Author's calculations based on UN Comtrade Statistics, www.un.org

The breakdown of total exports (Table 4a-4c) reveal more specialized exports, although the level of product concentration of Kazakhstan is lower than in other economies considered, as will be discussed below. As expected, the leading export products are the products pertaining to mineral fuels and oils in all three countries. For Kazakhstan, this number constitutes around 70% in the beginning of the period; for Azerbaijan and Turkmenistan, the figures are even higher occupying 85% and 90.1%, respectively. Starting from 2012, this share has begun to grow, probably due to the rising oil and gas prices in world markets. The share of this sector has substantially decreased in 2015, again, as a result of the sharp fall in oil prices.

Table 4a-4c. *Share of Top Export Products in Total Exports (in %)*

Kazakhstan

Product group	2005	2010	2011	2012	2013	2014	2015
Mineral fuels, mineral oils and products of their distillation; bituminous substances and etc.	70.1	71.7	72	69.8	76.3	76.4	68
Iron and steel	8.1	6.4	6.9	6.4	3.8	4.3	5.5
Inorganic chemicals; organic or inorganic compounds of precious metals, etc.	3.0	4.6	3.4	3.8	3.7	3.6	6.6
Copper and articles thereof	5.4	3.8	3.7	4.1	3.5	2.3	4.4
Ores, slag and ash	3.3	3.8	5.0	4.3	3.2	3.3	2.4
Cereals	0.9	1.7	0.8	1.8	1.6	1.4	1.8
Natural or cultured pearls, precious or semi-precious stones, precious metals, etc.	1.4	2.2	1.9	2.1	1.3	1.0	1.6

Azerbaijan

Product groups	2000	2005	2010	2011	2012	2013	2014	2015
Animal and plant products	1.6	2.5	0.9	1.0	1.3	1.3	1.5	2.9
Oils and fats of animal and plant origin	0.2	1.0	0.9	0.7	0.9	1.0	0.9	1.3
Food products, non-alcoholic beverages and etc.	1.4	1.6	1.0	1.0	1.3	1.4	1.4	2.4
Mineral products, including: Oil and gas products	85.1 85.1	84.6 84.5	94.2 94.1	94.5 94.5	93.2 93.1	92.8 92.7	92.5 92.4	86.6 86.5
Chemicals	2.1	3.0	0.2	0.5	0.7	0.2	0.3	0.7
Plastics and articles thereof	1.2	1.6	0.4	0.5	0.5	0.5	0.7	1.0
Textiles, knitted or crocheted	2.3	1.0	0.2	0.2	0.2	0.2	0.2	0.3
Other products	6.1	4.7	2.2	1.6	2.6	2.6	2.5	4.8

Turkmenistan

Products	2005	2010	2011	2012	2013	2014	2015
Mineral fuels, mineral oils and products of their distillation; bituminous substances and etc.	90.7	69.1	90.5	93.2	89.4	90.8	91.4
Cotton	4.2	18.2	5.6	3.6	5.0	5.1	5.2
Salt; sulphur; earths and stone; plastering materials, lime and cement	0.0	0.0	0.0	0.1	0.3	0.2	0.9
Plastics and articles thereof	1.3	3.7	1.0	1.2	0.9	0.9	0.9
Other made-up textile articles; sets; worn clothing and worn textile articles; rags	0.7	1.2	0.6	0.4	0.4	0.4	0.4
Articles of apparel and clothing accessories, not knitted or crocheted	0.3	1.0	0.3	0.2	0.2	0.2	0.2

Source: Authors calculations based on Trademap Statistics, www.trademap.org

Given the economic and export structure of these economies, the Herfindahl-Hirschman Index can be calculated. The results are illustrated in Figure 1. The index reveals very low levels of economic diversification in Kazakhstan and moderate levels of economic diversification in Azerbaijan. Turkmenistan is in the worst position in this regard.

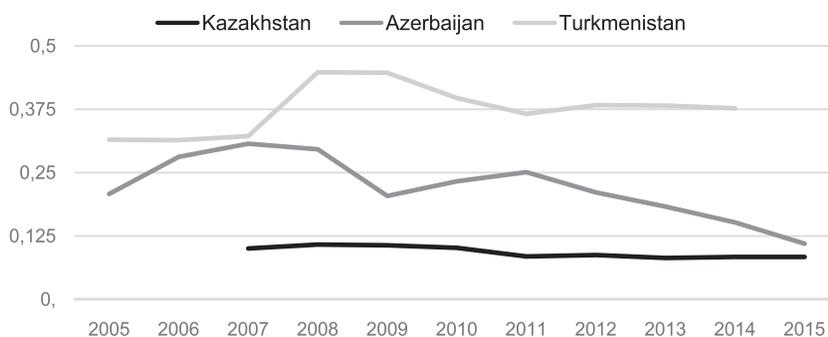


Figure 1. Herfindahl – Hirschman Index for Economic Diversification

The Herfindahl-Hirschman index in Figure 2 also reveals the high concentration of exports in all three economies. Unlike the concentration of economic activities, exports are highly dependent on oil and gas products, which is also reflected in remarkably high figures of HHI.

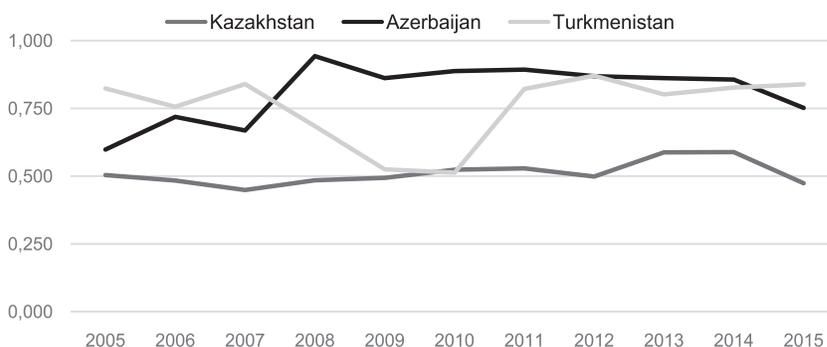


Figure 2. Herfindahl – Hirschman Index for Export Diversification

The analysis of these three countries raises concerns regarding the sustainability of long-term economic growth in these economies. First, all three countries are highly dependent on resource revenues. Although Kazakhstan appears to be less concentrated, its export is mainly dominated by mineral products. The share of non-resource products in total exports is very small and mainly constituted of unprocessed non-hydrocarbon products – steel, ores and copper in the case of Kazakhstan and cotton in the case of Turkmenistan. These sectors are located in the lower ring of the value chain and not able to generate high value-added.

As with economic activities, non-oil sectors in all three countries are dominated by nonproductive and non-tradable sectors, such as construction, trade and transportation. These are the sectors in which development is fueled by public spending and depends on the consumption patterns and opportunities of the population, which will experience slowdown during economic recessions when population income is deteriorated and the government bears large fiscal deficits. On the other hand, although such sectors are able to absorb large percentages of the labor force, their capacity for generation of value-added is limited.

The next section will explore the underlying causes of the current economic slowdown and the possible policy responses in this regard.

4. FAILED DIVERSIFICATION: SUBSIDIZED ECONOMIES AND AVENUES FOR REDRESS

Although the recent international oil price shock has significantly deteriorated economic stability in oil-countries, it should not be taken as the main cause. Instead, the price shock has played the role of *litmus test*, which revealed the weak points of the economies and the failure of governments to achieve sustainable and well-diversified economies. The latter also revives a question regarding how the economies were able to prosper throughout the last decade before the price shock occurred in 2014.

4.1. Causes of Unsustainable Diversification

This section assesses the approach of “*subsidized economies*” and whether this notion can be implemented with regards to Azerbaijan, Kazakhstan and Turkmenistan. This term refers to an economy where economic growth and well-being is mainly consumption-driven. That is, the natural resource windfalls encountered by a resource-rich country fuel the government expenditure and private consumption as a result of a large volume of monetary injections to the economy. As an economy becomes subject to an international shock or the revenue flow seizes, the economy rapidly tumbles into economic downturn and the recent economic prosperity is radically reversed.

Kazakhstan

Kazakhstan encountered the adverse consequences of the oil shock in early 2014, when the first devaluation of the Kazakh tenge had taken place. Another factor of the drastic economic slowdown was tight connectedness to Russian economy, which also suffered from the price decline (Shekkan, 2015). The worsening current account deficit hit 2.2 billion USD amid the price shock, and further deteriorated the economic situation.

The trend of slowing growth of oil-GDP in recent years and its eventual truncation to negative growth was parallel to the non-resource GDP growth trend. The close correlation can be clearly observed between crude oil prices and the evolution of non-resource GDP. Starting from 2013, this indicator is following the downward trend in parallel to plunging oil prices: the total non-resource GDP shrunk to 165.72 bln. USD in 2014 and eventually to 150.75 bln USD.

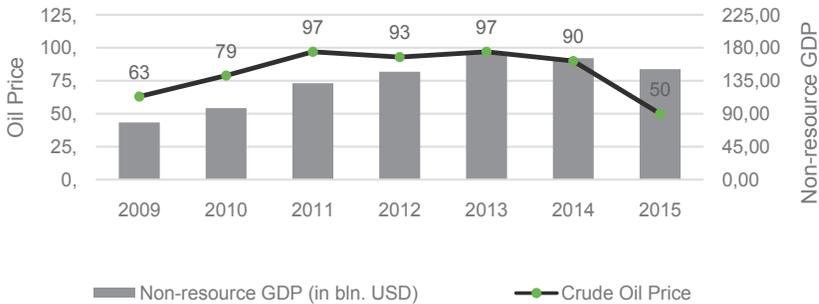


Figure 3. Non-resource GDP and crude oil prices (in bln USD)

Another indicator exhibiting close links to oil prices is government expenditure. During the commodity price boom in 2009-2013 years, the government expenditure has increased correspondingly hitting the highest point of 44 bln USD in 2013, whereas in 2014 and 2015 the total government expenditure has started to decline, although at the smaller pace in comparison with oil prices.

The structure of government expenditure is also noteworthy. The large part of the government expenditure is constituted by the current expenditure mostly directed to short-run consumption and economic activities. The investment expenditure – expenditure type which represents the contributions to the economic infrastructure and capacity building, hence can contribute to long-run economic development – occupies only the small share of total expenditures. Hence, the growth of the economy fostered by the constantly expanding government expenditure was mainly current consumption-driven with the latter being closely linked to high oil commodity prices.

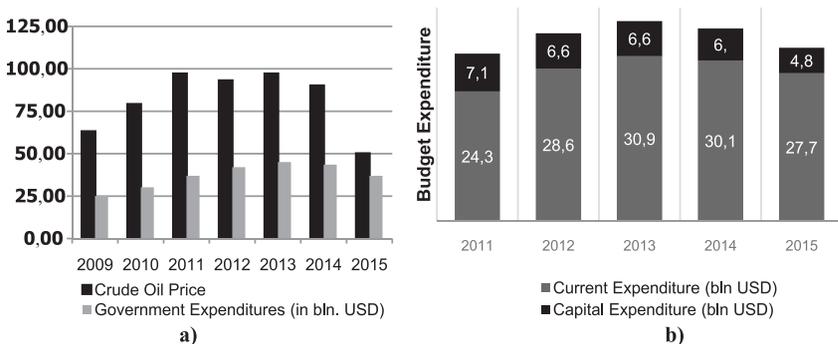


Figure 4. Government expenditure and crude oil prices in Kazakhstan (in USD)

The structure of total investments in the economy reveals the persistence on the resource-reliance of the Kazakh economy. Still, the largest share of total investments is devoted to mining sector, the lion's share of which can be attributed to oil and gas sector. Although this share has somewhat shrunk by 2.8 percentage points in 2015 in comparison with 2010, the importance of this sector has not diminished. The share of manufacturing sector is small; a light increase to 11.8% in 2015 in total investments can be attributed to the relative decline in the share of mining and quarrying due to the slackening oil prices. In contrary, the non-tradable sector such as transportation is the main destination of non-resource investments in the economy; it constitutes 15.8% and 16.2% in 2010 and 2015, respectively. This share exceeds the total share of manufacturing and agricultural sectors. Another sprouting sector is the services in real estate transactions.

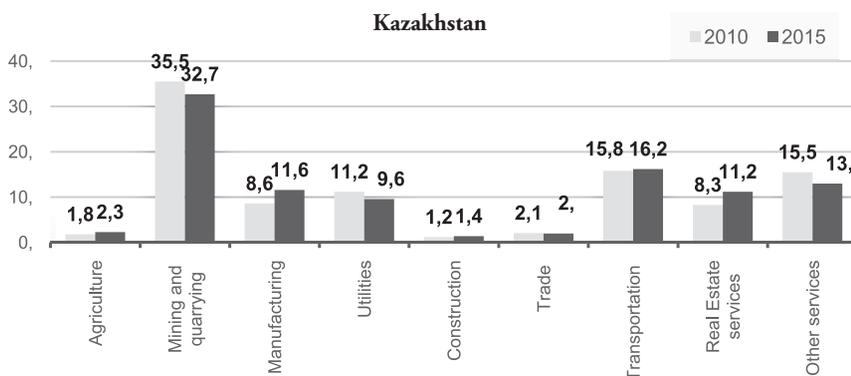


Figure 5. The structure of investments in 2010 and 2015 (in %)

Azerbaijan

With the large oil revenues flow in the second half of 2000's, Azerbaijan has stepped into the rapid economic growth and flourishing economic activities. However, the oil price shock encountered in early 2014 marked an end for this remarkable growth. Slackening oil revenues, two subsequent devaluations and melting international reserves as a result have shown how vulnerable the economy of Azerbaijan was. In order to solve this economic conundrum, the review of the recent economic prosperity must be carried out in detail.

From Figure 6 below, it is obvious that the recent growth of non-oil sector closely follows the pattern of changing oil prices. During the years of price

burst in commodity markets, the non-resource output also exhibits increasing trend; however, in 2015, it marks 8,7 bln USD reduction in comparison with 2014. As seen from the Figure, the non-resource GDP shows the lagged reaction to the declining oil prices in 2014 which gives a ground for stating that the reverse causality is not valid: the oil prices has substantial impact on the growth of non-oil sector as well alongside with oil sector.



Figure 6. Crude oil prices and non-resource GDP

A close pattern between the oil revenues and government expenditure on one hand, and the between the government expenditure and non-oil GDP on the other hand is also remarkable. Again, the government expenditure in 2006-2012 period follows the growth pattern of oil revenues; the larger the oil windfalls, higher the growth of government expenditure. The trend is broken in 2013; the growing oil revenues do not contribute to the fiscal expansion probably due to pattern of slowing oil prices and the mobilization of revenues towards maintaining the established exchange rates.

On the other hand, almost similar trend of government expenditure and non-oil GDP growth is striking implying that the thriving non-oil sector might be the result of fiscal expansion. The latter has largely contributed to the increase of general income levels and the current consumption and triggered the expansion of such non-tradable sectors such as trade, real estate services and mainly construction.

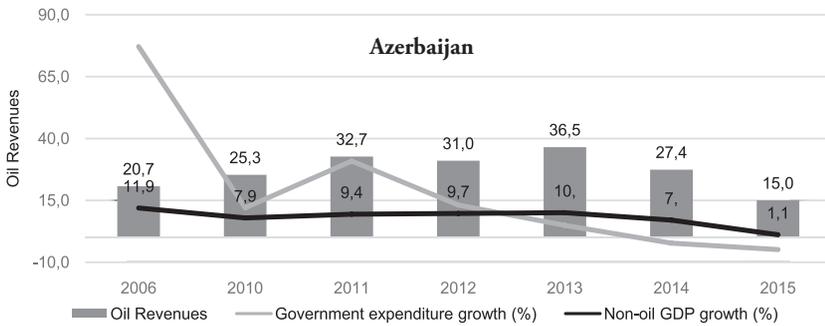


Figure 7. Oil Revenues, Government Expenditure and Non-oil GDP growth

The analysis of the structure of government expenditure reveals the lack of foresight in government expansion policies. For the years of high oil prices, both variables continue to increase, although investment spending was growing at much higher pace. Such that, the investment expenditure has expanded by 36.1% on average, the average growth of consumption expenditure has only amounted to 8,9%.

On the other hand, the share of investment expenditure was also rising in comparison with consumption expenditure. 2012 was the highest year of investment expenditure; however, 2015 marked an end of investment expansion. Instead, the consumption expenditure exceeded investment spending twofold probably due to government efforts to foster the demand in order to sustain the existing level of consumption.

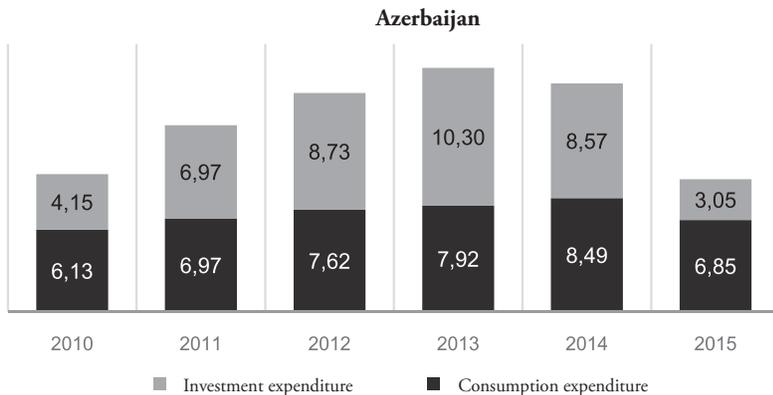


Figure 8. Structure of Government Expenditure (bn USD)

The structure of total investments in the country reveals the unsustainable structure of the economy. As seen from the figure below, the investments devoted to mining sector have been expanding since 2010 and constituted 44,7% in 2015. That is, almost half of the total investments was oriented towards the hydrocarbon sector alone. In contrast, other tradable sectors such as agriculture and manufacturing industry have attracted only 4,4% and 5,1% respectively in 2010. These number have even halved as of 2015 constituting 2,3% for agriculture and 2,6% for manufacturing. Given the importance of manufacturing sectors in value generation and employment creation, the strikingly low level of investments into this sector is alarming.

Contrary to the mentioned above, non-tradable and unproductive sectors have been thriving throughout the period considered. The share of construction sector in total investments has constantly risen and abruptly jumped to 13,4% in 2015. This sector alone exceeds the total investments directed towards the agriculture and manufacturing industries. Another flourishing sector in this period was transportation and storage; this sector amounted for 24,7% in 2010 and almost halved in 2015. Notwithstanding this, its share is still high in comparison with other sectors.

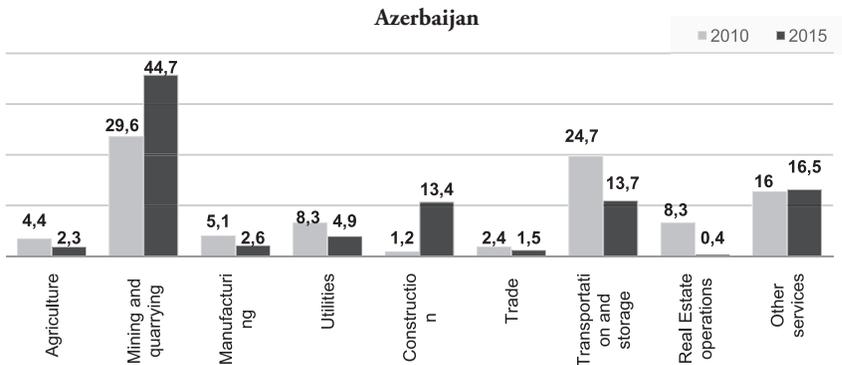


Figure 9. Structure of total investments (%)

Turkmenistan

As discussed in the previous chapter, Turkmenistan has exhibited the lowest levels of economic and export diversification among the three countries considered which gives the ground to assume that economy of the country

is more susceptible to external shocks accompanying oil-rich countries in last two years.

As seen from the HHI index, the economy of Turkmenistan is poorly diversified and the level of economic concentration has persisted throughout the period considered. So, the economy is expected to exhibit higher level of dependence on oil revenues. Due to the lack of adequate statistical data, the analysis of the economy of Turkmenistan is rather limited in comparison with other countries; however, the available information allows to track the general trends in the economy.

The trends oil-GDP and non-oil GDP growth rates accompanied by crude oil prices for the corresponding period are plotted in Figure 10. The most surprising moment in the graph is the evolution of oil prices and oil GDP which have totally diverse trajectories. Although the rise on oil prices in 2011 have boosted the growth of oil sector, the subsequent price increases has not exerted the same impact on the growth rate of this industry. However, the impact of latest price shocks is clearly observed on last two years.

On the other hand, permanently high levels of crude oil prices have also led to the development of non-oil sector as seen from Figure 10. Although the growth of this sector has not altered significantly, the numbers were around 10-12%, which is considered to be remarkably high. Nevertheless, the growth has slackened in 2015 following the plummeting energy prices.

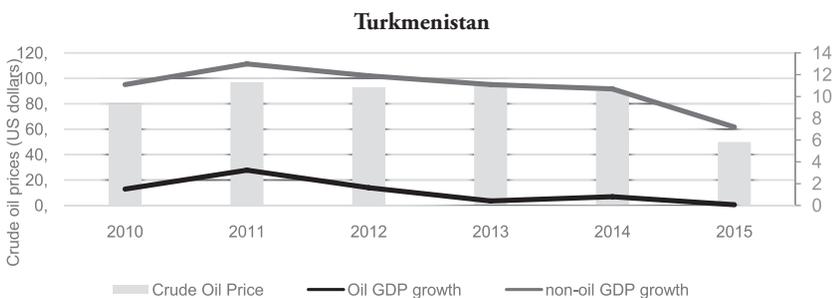


Figure 10. Crude Oil Prices, oil GDP and non-oil GDP growth rates

On the other hand, unlike other countries considered, the effect of fluctuating oil prices is not reflected on the government expenditure growth. Given that the oil industry is mainly owned by the state sector and oil revenues is considered to be one of the main budget revenue sources, the higher

growth of budget expenditure was observed in 2015 in comparison with 2014 despite the plunging energy prices. This at the first glance irrelevant expenditure expansion can be sustained with the attempt of Turkmenistan authorities to stabilize the economy and stimulate the aggregate demand and consumption with fiscal stimulus, hence, increasing the demand for local currency. On the other hand, the reduction oil revenues were partially offset by the increasing tax revenues from non-hydrocarbon sector, another measure taken by the government in order to maintain the necessary level of budget expenditure.

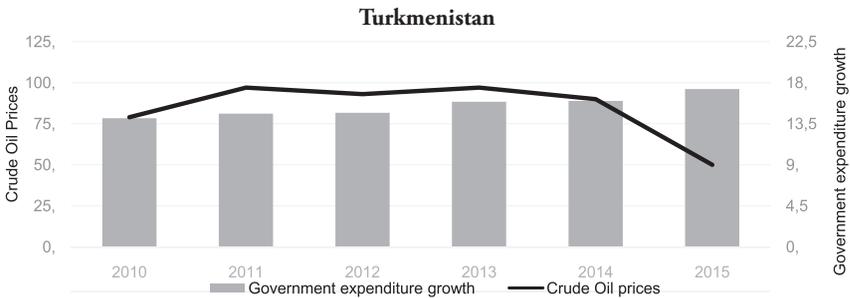


Figure 11. Government expenditure growth and crude oil prices

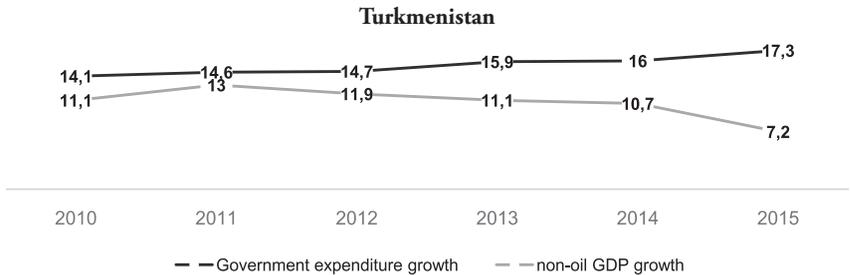


Figure 12. Government expenditure growth and non-oil GDP growth (in %)

Considering all the mentioned above, it can be concluded that, these economies have failed to implement successful and sustainable economic diversification policies during the oil boom period, the symptoms of which have surfaced amid the recent energy price shock. The index of economic and export diversification poses Kazakhstan in the better position in comparison with other two countries, however, the level of concentration is still high in relation to developed and sustainably developing countries. These countries

are highly dependent on hydrocarbon sector and thus, sanguine prospects regarding the economic recovery of these countries is hard to suggest.

On the other hand, the achieved level of diversified economic activity was largely driven by government expenditure and private consumption. The expansion of sectors such as trade, construction and real estate operations were mainly fueled by the general increase in income levels and large-scale state intervention. The latter has led to the establishment of “*subsidized economies*” in these states, where the economy is largely consumption driven financed by the resource windfalls.

Another issue is related to the type of sectors in which the economic activity was observed to expand. The growth in non-resource sectors was driven by non-tradable and unproductive sectors, while the share of agricultural and manufacturing sectors remained very low or even stagnated. Non-tradable sectors mainly hinge on current consumption and spending and not capable of generating long-term growth. The valued added created by these fields of economic activity are low; moreover, such sectors are not self-sustaining in terms of expanding the activities and attracting the necessary financial resources. Hence, with the seize of resource windfalls and the general slackening of economic performance, the deterioration of these sectors is inevitable as was the case in these countries.

Above mentioned points are not directed towards denouncing the expansion of non-tradable sectors observed in recent years. Several scholars have emphasized the importance of infrastructure and market access issues in stimulating the economic and export diversification in particular. These factors are very important in terms of reducing costs of transportation, facilitating the more feasible business conduct and trade relations. However, although giving an impetus for economic expansion, these sectors always remain auxiliary to main tradable sectors, such as agriculture and manufacturing industries.

Several scholars have conducted comprehensive research regarding the economic development in these countries. Esanov (2012a) has stated that the poor progress of economic diversification Kazakhstan and Azerbaijan can be attributed to the weak development of institutions and lack of adequate human resources. Pomfret (2012: 7) presented comparative analysis of re-

source-rich post-soviet countries concluding that large oil revenues have generated the problem of rent-seeking and revenue sharing, which had a negative effect on the development of institutions and created hurdles for efficient policy-making.

Country-case studies also prevail. Esanov (2012b: 27) also recognized that, the diversification of economy remains one of the major challenges of the country's economy. Misaligned market reforms and state policies such as the adoption of East Asian diversification model were one of the main factors hindering the investments into manufacturing industries in this regard. The problem of mismanagement of oil windfalls hindering economic diversification was mentioned by Dabrowski (2016: 314) as well.

While analyzing the possible implications of Dutch Disease in relation to Azerbaijan, Hasanov (2014:494) concludes that, the economy is subject to de-industrialization during oil boom period. However, this is rather *relative de-industrialization; that is, tradable industrial sectors exhibit lower growth in comparison with resource and non-tradable sectors. On the other hand, the author observes spending effect: labor and other resources have flown from tradable to non-tradable sectors as a result of fiscal expansion. Hasanov and Huseynov (2013:606-607) state that, the appreciation of real effective exchange rate observed during oil boom have adversely affected the export capacity of non-oil tradable sectors: 1% increase in real effective exchange has deteriorated non-oil production by 0,61-0.65% in the long-run.*

The necessity of economic diversification is emphasized by some authors. Felipe (2015: 7) recognized the economic diversification as one of the main targets of economic and structural transformation yet to be achieved. Moreover, while analyzing the impact of recent oil price shock, Dabrowski (2016: 314) and Aleksandrova (2016: 452) emphasize the importance of economic diversification in stabilizing macroeconomic situation and sustaining economic growth.

In the light of above mentioned regarding the ill-conducted economic measures and the resulting macroeconomic stability and poor diversification necessitates the development of adequate and feasible policy tools in order to facilitate the economic recovery and further diversification given the deteriorated revenues of these countries.

4.2. Future Steps for Economic Diversification

The analysis of the current state in considered economies and the lackluster prospects of world economy narrows the avenues for redress. However, some policy options are still topical in addressing the economic recovery and diversifying economic activity away from resource sectors.

Development of production linkages. This step includes revealing comparative advantages and the development of forward and backward linkages in those industries (Kaplinsky and Farooki 2011: 19). Such that, resource-rich Azerbaijan, Kazakhstan and Turkmenistan can develop their industrial production via fostering the production linkages for commodities sector, e.g. oil and gas sector; that is, vertical diversification can be pursued such as oil processing, as well as chemicals and plastics sectors.

On the other hand, comparative advantage potential of other sectors must also be considered. For instance, the development of agricultural sector and processing of the products obtained from agricultural sectors may offer wide prospects for meeting local demand and reducing import dependence of these countries.

Some research works have already been conducted in this regard. By input-output analysis for several manufacturing sectors in Azerbaijan, Sabiroglu and Bashiroglu (2012: 78-79) concluded that agricultural, chemical and food industries respond to demand increase in multiplied manner and are capable of meeting the local demand. On the other hand, Aslanli et al. (2013: 112) have also sustained the diversification potential of the above mentioned sectors and given the labor-intensity of these sectors, the stimulation of diversification in these sectors may also induce employment and further expansion of local demand.

Facilitating access to finance. This is especially topical for the establishment of manufacturing industries. This is especially the case for small and medium enterprises. By facilitating the access to monetary resources and reducing the cost of lending (Abdygaliyeva et al. 2007: 40), the private and state financial institutions may foster the industrial manufacturing. On the other hand, the temporary support for exports of small and medium enterprises is one of the policy avenues for promoting export diversification. Such incentives are also in place; both in Azerbaijan and Kazakhstan, special insti-

tutions aiming the development of SME sector have been established and contributed to eliminating obstacles in this sphere throughout the period of existence. However, the objectives and tools must be more precise and targeted in case of industrial diversification.

Building efficient and transparent institutions. As mentioned in previous chapter, the role of institutional capacity and governance mechanisms are undeniable in the level of diversification of economic activity. The enforcement of rule of law and development of adequate and long-term legislation of regulating the performance of market participants is very important in protecting against unfair competition, the consumer interests, workers' rights and the expansion of successful enterprises. On the other hand, short-term concessions and exemptions of infant enterprises from specific law enforcements can facilitate their operation.

Building Human capital. As mentioned in Esanov (2012b: 15), the lack of adequate skilled labor force and specialists is one of the main factors hindering the successful implementation of diversification policies. Hence, the development of current education and research programs at higher education and research institutions via prudent state financing may facilitate the education of new generation of scholars and practitioners who will be capable to contribute to economic diversification within the country.

Promoting non-oil foreign investments. Foreign investments can also play a prominent role in developing non-oil tradable sectors. The financing and organizational skills brought by foreign investors would be highly beneficial for capacity building of local manufacturing sectors. The accession of Kazakhstan to World Trade Organization and development of strategic roadmap of national economy of Azerbaijan envisaging the attraction of foreign investments can be regarded as favorable steps in this regard.

5. CONCLUSION

The recent commodity price shock has exerted substantial impact on the economies of resource-rich Caspian Basin countries. As a result of sharp decline in oil prices, the economies were deprived of their large oil revenues, which in turn, deteriorated the trade balance of these countries. The unpreparedness of countries to the external shock has led to sharp devaluations in Kazakhstan, Azerbaijan and Turkmenistan.

The analysis of statistical evidence has shown that the considered resource-rich economies of Caspian Basin have exhibited poor level of economic and export diversification. The calculated HHI has shown that economies are moderately diversified in terms of economic activity; however, the exports are highly concentrated on a handful number of product groups. As expected, oil gas sector constitutes a substantial part of the economic activity in these economies except for Kazakhstan; this share is even higher for total exports. Given the poor level of economic and export diversification, it is no surprise that the economies have become highly vulnerable to the commodity price shocks observed in world markets since the early 2014.

On the other hand, it has also been found that the thriving non-resource sectors in these economies were highly dependent on resource windfalls which countries have encountered starting from early 2000's. Such that, large oil and gas revenues presented new avenues for the government to expand aggregate demand in the countries, especially for non-tradable sectors such as trade, construction and transportation, as well as the real estate services. While these sectors are usually consumption driven, the subsequent seize of resource revenues have deteriorated the development of these sectors and the economies were incapable to maintain the economic prosperity *subsidized* by large resource revenues. In the other hand, the share of tradable and high-productivity sectors such as agriculture and manufacturing have remained small or even slackened.

In conclusion, it can be said that, although limited, the countries still possess the potential to foster economic development. Firstly, by establishing and supporting production and fiscal links, the governments can foster the multi-chain manufacturing industries, which can create self-sustaining production and employment opportunities. This can mainly be done in sectors with comparative advantage such as food industry, chemicals and plastic products. Secondly, facilitating the access to finance for non-oil sectors will also stimulate the investments in productive, tradable sectors; the role of SME must be taken into consideration in this regard. In order to achieve the first two propositions, the establishment of prudent and comprehensive legislation is necessary the Moreover, development adequate human capital and skilled labor training is of great importance in order to foster economic diversification. Last, but not least, attracting foreign investments to non-oil tradable sectors may become an additional impetus for economic diversification.

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Petrol Zengini Türk Ülkelerinde Volatilité, Çeşitlendirme ve Petrol Krizi

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Öz

Makale üç petrol-zengini Hazar havzası ülkelerinde: Kazakistan, Azerbaycan ve Türkmenistanda ekonomik ve ihracat çeşitlendirmesinin mevcut seviyesini analiz ediyor ve Petrol fiyatlarındaki son dönem krizine karşı bu ekonomilerin yüksek hassasiyeti ile ilgili nedenleri ortaya çıkarmaya çalışıyor. Diğer taraftan, bu ekonomiler sözde subside edilen ekonomiler açısından değerlendirilmektedir; bu türden ekonomiler kamu harcamaları ve cari tüketim harcamaları ile tahrik edilir. Bu durumda kamu harcamaları ve cari tüketim karşılaşılan büyük petrol gelirleri sonucunda parasal enjeksiyonlarla körükleniyor.

Anahtar Kelimeler

Ekonomik çeşitlendirme, petrole bağımlılık, subsidize edilen ekonomiler, Kazakistan, Azerbaycan, Türkmenistan

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Волатилизация, диверсификация и нефтяной шок в богатых ресурсами тюркских странах: пути восстановления

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АННОТАЦИЯ

В статье анализируется текущий уровень диверсификации экономики и экспорта в трех богатых ресурсами странах Каспийского бассейна - Казахстане, Азербайджане и Туркменистане, а также делается попытка выявить основные причины высокой уязвимости этих стран в связи с недавним падением цен на нефть. С другой стороны, экономика оценивается в свете так называемой дотационной (субсидируемой) экономики, т.е. экономики, в основном обусловленной государственными расходами и текущими расходами на потребление. Последние в этом случае в основном подпитываются денежными вливаниями в результате больших непредвиденных ресурсов, с которыми сталкиваются экономики.

Ключевые слова

экономическая диверсификация, зависимость от нефти, субсидируемые экономики, Казахстан, Азербайджан, Туркменистан.

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