Тысячу лет назад арабский мир значительно опережал западный в плане культурного, научного и экономического развития. В дальнейшем из-за ряда внутренних проблем (усиление консервативных институтов) и внешних вызовов Арбский регион стал отставать в развитии и, в отличие от ряда других стран, неполностью вступил на путь современного экономического роста. Низкий уровень диверсификации экономик, неблагоприятный инвестиционный климат, ограниченное накопление физического и человеческого капитала, а также неэффективность систем управления государств привели к значительному замедлению темпов роста производительности экономик арабских стран после первых десятилетий независимости в XX в. В Арбском регионе в последнее время наблюдается ряд серьезных социальных и политических проблем (например, «арабская весна»). Для преодоления текущих вызовов в регионе важно повысить конкурентоспособность экономик за счет активизации частного сектора и улучшения профессиональных навыков населения. Современные технологии (например, информационно-коммуникационные) также могут сыграть ключевую роль в экономическом развитии региона. Распространение мобильных телефонов, компьютеров и Интернета способствует возникновению дополнительных рабочих мест в различных сферах и появлению новых инструментов в образовании.

Ключевые слова: Арбский мир, ВВП на душу населения, экономическое развитие, физический и человеческий капитал, информационно-коммуникационные технологии, Интернет.

ARAB COUNTRIES: ACHIEVEMENTS, CHALLENGES AND CRUCIAL FACTORS OF ECONOMIC DEVELOPMENT

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A thousand years ago the Arab World significantly surpassed Western Europe in terms of culture, science and economic development. Later on, due to a number of internal issues (the strengthening of conservative institutions), as well as external challenges, the Arab States, unlike some other countries, lagged behind in development and has not fully stepped on the path of modern economic growth. The low level of economic diversification, the unfavourable
investment climate, the limited accumulation of physical and human capital, as well as the inefficiency of state management systems, have led to a significant slowdown in the productivity growth of Arab economies after the first decades of independence in the 20th century. The Arab Countries have been witnessing recently number of severe social and political problems (i.e. the «Arab Spring»). To overcome current development issues in region it is important to increase the competitiveness of their economies through activation of the private sector and upgrade the skills of population. Also, modern technologies (like the information and communication technologies) might play pivotal role in the economic development of the region. The development of mobile phones, computers and the Internet contributes to the creating of additional jobs in various areas and the emergence of new tools in education.

Keywords: Arab World, GDP per capita, economic development, physical and human capital, information and communication technologies, the Internet.

Prosperity everywhere and in particular in the MENA (Middle East and North Africa region), as we know, stems from some pivotal things – among them good governance. This was many a times underscored by gurus of economic growth. And one of the first among them was famous Scottish philosopher and economist Adam Smith. «Little else is requisite to carry a state to the highest degree of opulence from the lowest barbarism, but peace, easy taxes, and a tolerable administration of justice; all the rest being brought about by the natural course of things»1.

Today the Arab World (AW) is once again facing a severe crisis in economic and political fields. It is all visible through increasing number of civil protests since the beginning of 2018. Some of the reasons for the current protest in Tunisia were petrol subsidies cuts and increased taxes on Internet and phone calls. Neighbor country Iran also faced one of the biggest anti-regime protests in the last decade started at the end of 2017. Citizens in Algeria and Jordan have also taken part in limited number of protests over public spending cuts and rise of food prices. Seven years ago this kind of protests fueled the «Arab Spring» that aimed at changing political autocratic regimes and improving lives of locals (i.e. the AW still has an unsolved issue of highest unemployment rate among young population).

Now as well as seven years ago the society in the region find the reforms as an important goal for their countries’ prosperity. Especially among younger generation the feeling of inequality and injustice is fueling current upset mood. More over, the gap in the economic development between Arab states and other regions is becoming visible to many people due to the expansion of the Internet and other communication tools. This wasn’t the case a thousand years ago when the AW significantly surpassed Western Europe (WE) in terms of culture, science and economic development (according to our calculations by 1,

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5 times for GDP per capita and urbanization, twice for the Human Development Index (HDI; Figure 1, Table 1) and four times for literacy among adult population.

![Figure 1. Dynamics of GDP per capita in the West and in the Arab World, 1000–2016, 2011 international, $\dagger$](image)

Table 1

<table>
<thead>
<tr>
<th></th>
<th>1000</th>
<th>1800</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>A</td>
<td>B</td>
</tr>
<tr>
<td>India</td>
<td>600</td>
<td>23</td>
</tr>
<tr>
<td>China</td>
<td>650</td>
<td>29</td>
</tr>
<tr>
<td>Arab World</td>
<td>570</td>
<td>23</td>
</tr>
<tr>
<td>Western Europe</td>
<td>315</td>
<td>28</td>
</tr>
</tbody>
</table>


Notes: Human Development Index (D) is calculated here according to a following formula:

\[ D_i = \left( \frac{A_i}{A_w} \cdot \frac{B_i}{B_w} \cdot \frac{C_i}{C_w} \right)^{1/3} \cdot 100 \%
\]

where \( A_i \) is per capita GDP in constant 1980 Purchasing Power Parities (PPP); \( B_i \) is life expectancy at birth (years); \( C_i \) is literacy rate of the adult population, % – respectively for the country ‘i’ and the time ‘t’; \( D_w \) is the average non-weighted of the three indices. All the figures are related to the average level of Western Europe (as one of the most developed regions of the world by the end of the 18th century). Respectively the denominators are \( A_w, B_w, C_w \).

Later on, due to a number of internal issues (the strengthening of conservative institutions, very low level of security of property and life), as well as external invasions and conquests, AW lagged behind in development

and, unlike China, India, Brazil, Mexico, NIC (newly industrialized countries), Turkey, Malaysia, Indonesia, has not fully stepped on the path of modern economic growth. Although our take on success-failure dilemma for the Arab world is that the glass is to some extent not empty, we are witnessing over there a horrible constellation of disproportions and inequalities (Figures 2–4).

Figure 2. Shares of the Arab Countries in Some of the World Aggregates, 2016, %:
Shares of the Arab Countries in world population, total value of manufacturing exports, total world expenditures on research and development, total amount of United States Patent and Trademark Office Patents, total number of acts of terrorism, world number of refugees, battlefield deaths.

Figure 3. MENA countries, 2016: GDP per capita, thous. International, $^

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Figure 4. MENA countries, 2016: correlation between GDP per capita (right column) and UNEMPLOYMENT (left column), % \( (r = -0.56; \ p=0.008) \): 
\( r \) denotes Pearson coefficient of correlation (ranges from \(-\)1(total negative linear correlation) to \((+)\)1 (total positive linear correlation)); 0 is no linear correlation.

According to our calculations, due to very dangerous external, as well as internal determinants (driven primarily by institutional sclerosis and predominance of rent-seeking activities), political stability in the AW during 2000–2016 has eventually decreased 2.5 times and actually it does not surpass \( \frac{1}{4} \) of the world average (Figure 5).

Figure 5. Dynamics of Political Stability and Absence of Violence, 2000–2016, 0 to 100 (the more the better). 

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The low levels of (a) economic (and export) diversification, (b) the investment climate, (c) the accumulation of physical and human capital, (d) the effectiveness of management systems in the AW have resulted in a significant slowdown in growth rates of their economies productivity after the first decades of independence in the XX century, and the Arab Countries have been witnessing the aggravation of some of the most crucial social and political problems. Although the AW accounts for 5,5% of the world’s population (3% in 1950), their share does not exceed 1% of the world’s R&D expenditures, 0,3–0,4% of the world’s patent applications and global exports of high-tech products. At the same time, the AW accounts for 3/5 of all refugees and 2/3 of all deaths in the world on the battlefields.

In general, in the developing countries the compound annual growth rate (CAGR) of the absolute values of the shifts in the sectoral structure of employment doubled from 0,6% in 1950–1980 up to 1,2% in 1980–2016, on the contrary in the AW it decreased by half from 1,8 to 0,9%. During this period, CAGR of the HDI decreased three times (up to 0,9%), the CAGR of GDP per capita decreased six times (to 0,6%) (Figure 6, 7).

Compound average growth rate of Total Factor Productivity (TFP) decreased 20 times (to 0,3% in 2000-2016 (Figure 8), which is half of the average for Sub-Saharan Africa (SSAFR) and Latin America (LA), 10 times less than for the developed states, and 20-25 times less than for China, India and NICS).

Figure 6. Dynamics of Compound Average Growth Rates of GDP per capita, %; NICS is newly industrialized countries; AES – the advanced economies; RF – the Russian Federation; SSAFR – Sub-Saharan Africa; LA – Latin America; ACS – Arab Countries1

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Figure 7. (Some of the) Arab and Other Muslim Countries, 1950-2016: Dynamics of Compound Average Growth Rates of GDP per capita, %:
KSA is the Kingdom of Saudi Arabia

Figure 8. Dynamics of Compound Average Growth Rates of Total Factor Productivity, 1950-2016, %
The growth rate of Total Factor Productivity is calculated as a residual by deduction of the weighted sum of growth rates of capital and labor inputs from GDP growth rate

According to our econometric calculations the low productivity and high instability of the AW's economic systems are largely determined by their dependence on the barter conditions of foreign trade ($R^2 = 0.66$, $F - Prob. = 0.001$); low share of expenditures on higher education, research and development in the GDP (4.3% in 2010–2015, which is half of China’s and three times less than in South Korea); the reduction of quality of their public institutions (by 6% in 2000–2016) (according to our calculations, the low level of the rule of law in the AWslows the CAGR of their GDP per capita by about $1/5–1/4$)¹.

According to one of the model that we calculated, slow GDP growth in the AW can be associated by a quarter with limited growth rates of low

diversified exports (EXP), by half with relatively low level of physical and human capital formation in region (MKH) and by one-fifth with deep social differentiation (GIN) which intensifies social and political instability (in 2010–2015, the average Gini coefficient on the distribution of family income in the AW (41,5%) was higher than the world average (38%))

\[
\text{GR}_Y\_P = 0.164 \times \text{GR}_\text{EXP} + 0.150 \times \text{MKH} - 0.052 \times \text{GIN} - 0.873
\]

\[
(p = 0.0074) \quad (p = 0.0002) \quad (p = 0.0049),
\]

where \( R^2 \text{adj} = 0.809 \), \( N = 43 \), \( T = 1980–2006 \); \( \text{GR}_Y\_P \) и \( \text{GR}_\text{EXP} \) – denote CAGR of GDP per capita and exports respectively; \( \text{MKH} \) – sum of gross fixed capital formation and expenditures on education and R&D, related to GDP (%); \( \text{GIN} \) – income GINI coefficient.

One of the factors that might support economic development in the AW is information and communication technologies (the Internet, mobile phones and computers). Currently, some countries in the region have faced a period of considerable political and as a result economic instability, thus raising the issue of an instrument that would be able to stabilize the situation and help the region achieve sustainable development. It is possible that the achievements of the ICT sector will be able to partially assume this role. No doubt development of ICT might also support uprisings by proving communication tool for rebels (for instance as it was during the «Arab Spring»), but this technology itself is a groundbreaking tool for supporting economic and social growth especially in developing countries.

Almost always, as in many other sectors, the level of ICT use depends on the investments in the field, and it is quite logical to note that there is a direct correlation between the incomes of the society and the ICT. From the data below (GDP per capita in the AW and aggregate indicator for the ICT – ICT Development Index (IDI)) it is noticeable that the higher the income of the population becomes the higher the IDI becomes – correlation 0,7. Countries with the largest per capita GDP – the Gulf countries – have a high prevalence of mobile phones, computers and the Internet among residents compared to the least developed countries of the region (i.e. Mauritania and Sudan) (Table 2). All innovations in the telecommunications industry are extremely expensive for implementation, and therefore only large companies can remain in business, and in many countries, including the Arab region, the industry is partially owned by the state. Thus, the high prevalence of ICT in the richest countries can be explained.

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1 Calculated on the data from: World Development Indicators. URL: databank.worldbank.org/data (accessed 2018.03.21).
Between 2010 and 2015, the Gulf countries showed the highest dynamics of the ICT growth according to several indexes like ICT Development Index not only in the region, but also in comparison with other countries. Gulf countries have achieved a significant improvement in the growth of the base of mobile subscribers along with the spread of high-speed broadband and mobile Internet. For example, the number of mobile Internet users in Saudi Arabia increased from 2010 to 2014 from 24 to 99 people per 100 inhabitants, which may indicate a targeted policy of increasing number of users.

Despite the positive effects achieved in the region (Figure 9) in the AW the connection between GNP per capita and the ICT development index is lower than for Europe, America, Asia and the Pacific. In addition to the progress already achieved in many MENA countries, the states have significant opportunities for the future growth in case of an appropriate stimulating domestic policy.

AW has internal sources for further development and decrease level of inequality. Correlation of such indicators as CAGR of the HDI and the aggregate rate of capital investment in physical capital, education and health, based on the data from table 3 is (+0,54) substantially less than that of the
former and the average annual Internet coverage growth rate is even higher (+0.73) (Table 3).

![Figure 9. ICT Development Index and GDP per capita GDP per capita, 2014](image)

<table>
<thead>
<tr>
<th>Table 3</th>
<th>CAGR of the HDI, the aggregate rate of capital investment in physical capital, education and health and the average annual Internet coverage growth rate*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Country</td>
<td>CAGR of the HDI</td>
</tr>
<tr>
<td>Saudia Arabia</td>
<td>1.3</td>
</tr>
<tr>
<td>United Arab Emirates</td>
<td>0.97</td>
</tr>
<tr>
<td>Kuwait</td>
<td>0.77</td>
</tr>
<tr>
<td>Oman</td>
<td>1.46</td>
</tr>
<tr>
<td>Lebanon</td>
<td>1.18</td>
</tr>
<tr>
<td>Algeria</td>
<td>1.72</td>
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<tr>
<td>Jordan</td>
<td>1.2</td>
</tr>
<tr>
<td>Egypt</td>
<td>1.57</td>
</tr>
<tr>
<td>Morocco</td>
<td>2.32</td>
</tr>
<tr>
<td>Mauritania</td>
<td>2.06</td>
</tr>
<tr>
<td>Sudan</td>
<td>2.65</td>
</tr>
<tr>
<td>Tunisia</td>
<td>1.62</td>
</tr>
</tbody>
</table>

Notes: CAGR of the HDI is the compound average growth rate of the Human Development Index; Calculations are made for 12 Arab Countries for which respective and reliable data was available.

The model built on the available data for a number of Arab Countries seems to indicate that during 2000–2015 not so much accumulation of

traditional physical and human capital assets, as intensification of internet penetration plays pivotal role in economic and social modernization in the AW, gauged by the dynamics of their HDI:

$$\text{HDIGR} = 0.024 \cdot \text{MPKHK} + 0.033 \cdot \text{INTGR}$$

$$N = 12 \text{ ACs}; T = 2000-2015; R^2 \text{adj} = 0.85; \text{Prob (F-Significance)} = 3.97E-07,$$

where HDIGR is the compound average annual growth rate of the human development index; MPKHK is the aggregate rate of capital investment in physical capital, education and health as % of GDP (average for the period under investigation); INTGR – the compound average growth rate of internet users per 100 people. This equation explains 85% of the variance of the dependent variable.

Our analysis shows that the difference between Arab Countries with fast and slow dynamics of HDI can be attributed by 1/5 to higher levels of physical and human capital formation in the former and by ½ – to higher dynamics in them of internet penetration (although in some of them from the very low start)\(^1\). It should be pointed out, that the Internet use growth factor by itself encompasses many positive economic factors which are underway in the societies of the AW.

One of the examples how ICT could play vital role in helping AW to overcome current difficulties is the increasing role of mobile phones use. According to Vodafone data, from 2010 to 2015, the growth of mobile Internet usage grew 26 times worldwide. World average growth rate is 92%, and for the AW the figure is even higher – 129%. Moreover, as it is mentioned in the International Telecommunication Union (ITU) reports, the growth of the mobile broadband use in the AW is world second after SSAFR region. Currently growth in the Arab region would slow down, but remains significant. From 2016 to 2020, traffic consumption by users will grow 5 times (Figure 10). And by 2022 it is expected to become 11.6 Gb per subscriber per month\(^2\). Accordingly, the revenue from this service from mobile operators will increase up to $ 23 billion in 2020.

The development of ICT in the AW is creating work places for those who previously could not easily join the labor market – for instance in Saudi Arabia the special center (GE, Saudi Aramco and Tata Consultancy Services joint company) employing more than 1000 women who provide IT consultations became possible thanks to the high speed Internet. ICT is also supporting educational system by implementing new tools and providing

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\(^1\) Non-identified factors account for approximately ¼ of the difference between Arab Countries with fast and slow dynamics of HDI.

\(^2\) The Mobile Economy Middle East and North Africa 2017. – P. 19
opportunities for students living in distant areas. All these small steps are based on implementation of ICT in the everyday lives of people in the region.

Figure 10. Cellular internet in the Arab world

To overcome the severe current crisis in the social and political fields in the AW and to increase the competitiveness of their economies, it is extremely important to make several essential steps like carrying out liberal democratic reforms that create workable institutions that promote the diversification of their economic systems, the activation of the private sector, and the upgrading the skills of population and employment. However, all this is not so simple to implement in the conditions of instability of the world economy, expansion of competition from other countries of the world, which increase export of finished products and various services. For this, there must also be a synergy of the will of the local population and their leaders, the vertical of power with a mutual movement and desire where the new technologies (like ICT) could play pivotal role and support some kind of leap-frog development.

Список литературы

2. Мельянцев В. А. Восток и Запад во втором тысячелетии: экономика, история и современность. – М. : Издательство МГУ, 1996.


References

1. Amirov E. R. Razvitie sovremennyh informatsionno-kommunikatsionnyh tekhnologiy v arabском регионе [Development of Modern Information and Communication Technologies in the Arab Region] Ekonomika i predprinimatel'stvo, 2016, No. 12, Part. 3. (In Russ.).
5. Мельянцев В. А. Кризис в Арабском мире: экономические и социальные аспекты // Мировая экономика и международные отношения, 2011, № 10. – С. 73-83. (In Russ.).


