



## DEMOGRAPHIC BAROMETER

# HOW TO CORRELATE ECONOMIC AND DEMOGRAPHIC DEVELOPMENT OR WHAT IS DEMOGRAPHIC DIVIDEND?

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**Summary:** Demographic dividend represents an important potential for national economic growth, while promoting active policies to strengthen human capital and labour market development. Demographic dividend occurs when the proportion of working age population in the total population is 55% and above.

In the Republic of Moldova demographic dividend or "window of opportunities" records from the early 2000s, however, unfavourable socio-economic situation, mass emigration of the population have led to significant loss of economically productive population and reduced the period of demographic dividend.

Currently, there are significant reserves in the development of the demographic dividend remained in the country. About 27% of young people (15-29) are neither in employment, nor in education or training (NEET rate). This indicator is twice higher than the EU average.

Health indicators such as infant mortality (9.7 ‰ in 2015) and children mortality under 5 years old (11.7 ‰ in 2015) remain high compared to European countries. Premature mortality of the working age population leads to loss of human potential and reduces from demographic dividend.

Increase of retirement age (up to 63 years for women and men) contributes to extend the period of demographic dividend. It is important to obtain a real extent of the period of enrolment in the labour market, by increasing the employment rate to all ages, including pre-retirement ages.

Among the main directions of policy are: increasing investment in youth education and health, economic modernization, growth of employment rate and decline of NEET rate, facilitating transition of young people from school to work.

### WHAT IS DEMOGRAPHIC DIVIDEND?

Demographic dividend represents an important potential for economic growth due to changes of the age structure, especially when the share of working age population (producer population) is higher than share of the dependent age population: children and elderly.

The transition from high birth and death rate to lower rates cause changes in the age structure of the population, thus, the share of working age population

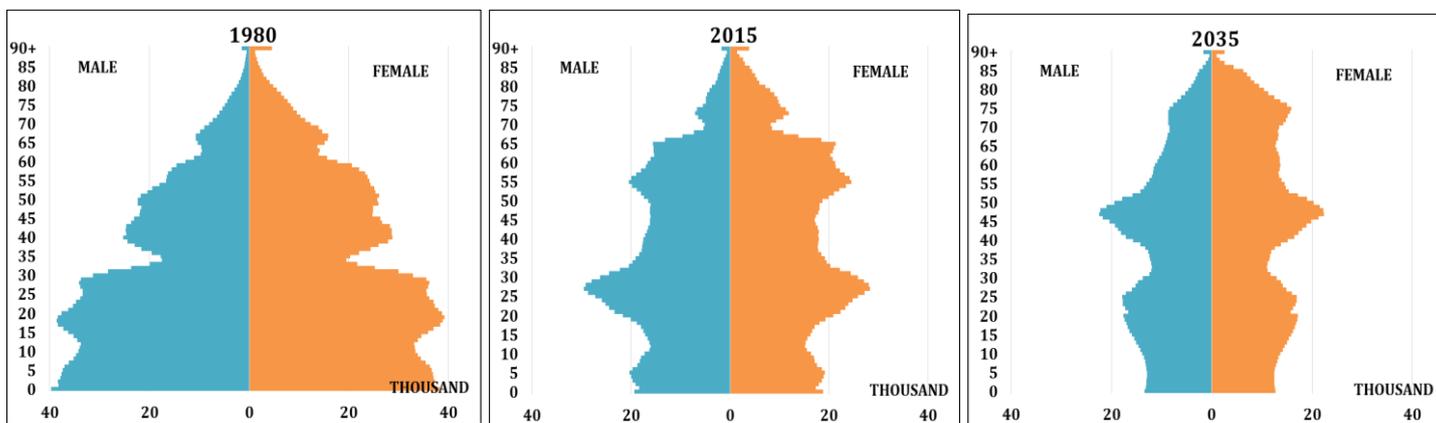
increases and share of the dependent age population decreases. Demographic dividend occurs when in the age structure economically productive people constitute 55% or more. While promoting special policies, demographic dividend can bring significant economic benefits to society. Thus, researches proved that the demographic dividend had an important role in the occurrence of "economic miracles" of the countries of East Asia, so-called Asian tigers [3].

### HOW FORMED DEMOGRAPHIC DIVIDEND IN THE REPUBLIC OF MOLDOVA?

In 1980, the pyramid population by ages and sexes had a progressive character at the bottom (children and youth) was large, due to the high level of fertility in 1965-1980. Top of the pyramid was narrow – low number of older people. For 35 years, the age structure of the population has changed considerably. As a result, the decrease of fertility, by 2015 the number of children

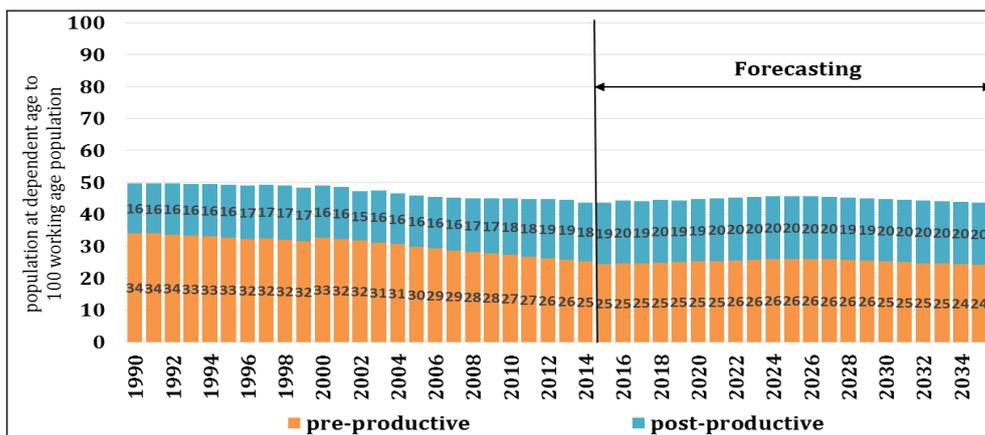
was halved, and the population aged 60 and over has increased. Simultaneously decreased the number of working age population, particularly due to emigration. By 2035, a large increase proportion will have elderly population in the structure of the population, while the percentage of children and people of working age will fall<sup>1</sup> (Fig. 1).

<sup>1</sup> Demographic prognosis of Centre for Demographic Research, medium scenario [1].



**Fig. 1. Pyramids by ages and sexes of the Republic of Moldova population, 1980, 2015 and 2035 (thousand persons)**

Source: Centre for Demographic Research data [6].



**Fig. 2. Demographic burden of population in pre-productive and post-productive age to 100 working age population**

Source: Estimated on the Centre for Demographic Research data [6].

Note: Pre-productive age was considered 0-18 years in 1990-1999 and 0-19 years in 2000-2035. Post-productive age was retirement age.

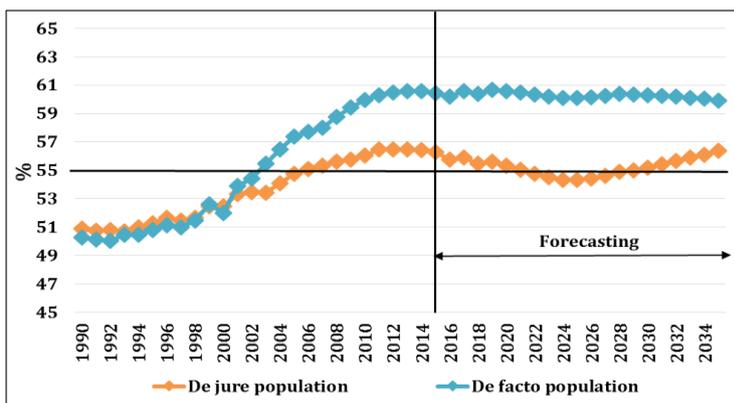
Currently, the population structure is favourable for socioeconomic development of the country (Fig.2). Total demographic burden<sup>2</sup> in the early 90s of last century constituted 50 people in the dependent age to 100 people of working age. The share of the population under and over working age decreased in early 2000, and will continue until the end of the forecast period.

### WHAT IS DEMOGRAPHIC DIVIDEND PERIOD IN THE REPUBLIC OF MOLDOVA?

In estimating the demographic dividend, the most important is to set thresholds considered the beginning and the end of productive age. Lower threshold represents the age of starting economic activity, and higher threshold is the age for its completeness. In the analysed period, the age of beginning the economic activity was considered 19 and 20 years since have increased schooling years and the age of enrolment in the labour market. In calculating the higher threshold, was taken into account the previous<sup>3</sup> and recent<sup>4</sup> changes of retirement age.

Demographic dividend calculated in relation to the *de jure* population<sup>5</sup> opens since 2003, takes several decades and does not close to the end of the forecast period - 2035. Estimated demographic dividend for the *de facto* population<sup>6</sup> of the Republic of Moldova demonstrates that the period is shorter and starts in

2006, but not exceeds with much of 55% (about 1-1.5%). Such changes in the population structure is an exceptional accumulation of human resources (Fig. 3).



**Fig. 3. The dynamics of the working age population in the total population, 1990-2035**

Source: Estimated based on NBS and CDR data [6].

<sup>2</sup> Demographic burden represents the ratio of people in the dependent ages to those in the working age (economically productive population).

<sup>3</sup> In 1999-2002 retirement age for women increased from 55 to 57 years and for men from 60 to 62 years.

<sup>4</sup> Beginning with 2017 retirement age for women will increase from 57 to 63 years and for men from 62 to 63 years.

<sup>5</sup> National Bureau of Statistics data, including migrants who were abroad more than 12 months during a calendar year.

<sup>6</sup> Centre for Demographic Research data, without migrants who were abroad more than 12 months during a calendar year.

## HOW IT IS VALUED DEMOGRAPHIC DIVIDEND IN THE REPUBLIC OF MOLDOVA?

In the Republic of Moldova, the demographic dividend period fitted with socioeconomic crisis, which reduced from the opportunities given by it.

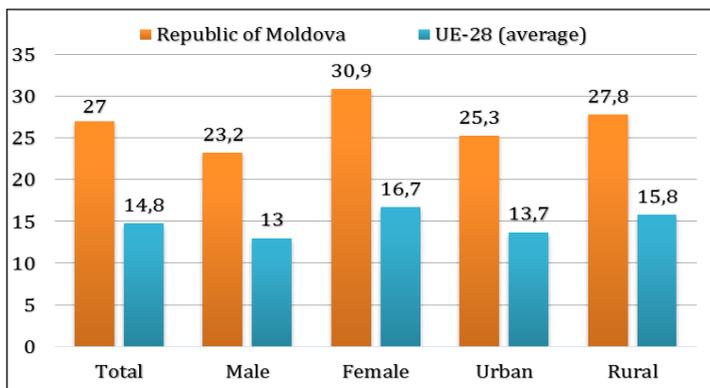
**The standard of living of the population.** By 1990, Moldova's economy has experienced several periods of economic decline that affected the living standards of the population. Currently, GDP per capita is estimated at

\$5.4 thousand, while the percentage of population below the absolute poverty threshold is 11.4%. Overall, people's living conditions are still very low, only 66.7% of the population has access to improved sanitation. The degree of urbanization of the country – is considered an important indicator of economic development, it is only 42.4%, while in developed countries it exceeds 80%. (Table 1).

**Table 1. Living standard indicators and economic welfare of population, 2015**

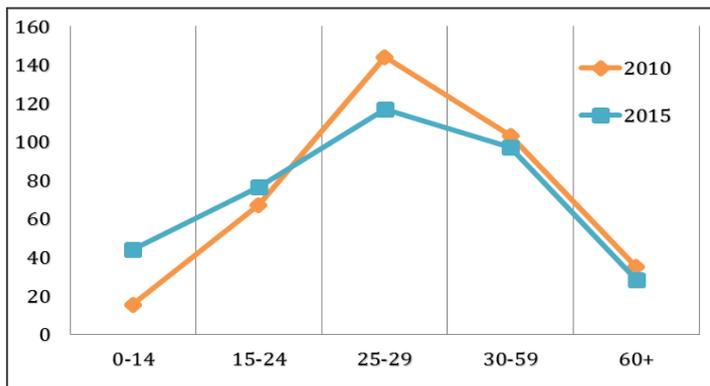
Population below the absolute poverty threshold (%), 2014	11.4
Gini Index (%), 2014	26.8
GDP per capita at PPP (current international \$)	5 400
Share of population with sanitation access (%)	66.7
Share of urban population (%)	42.4

Source: Estimates of NBS of Moldova and World Bank.



**Fig. 4. Youth rate NEET (15-29 years) by sex and area, in the Republic of Moldova and EU-28, %**

Source: M. Buciuceanu-Vrabie [2, p.31].



**Fig. 5. Emigration rate of population of Republic of Moldova, 2010 and 2015 (per 1000 population of the same age)**

Source: Estimated based on SIIAMA and NBS of Moldova data.

High **mortality** of children and working age people (especially of men) leads to the loss of human potential (Table2).

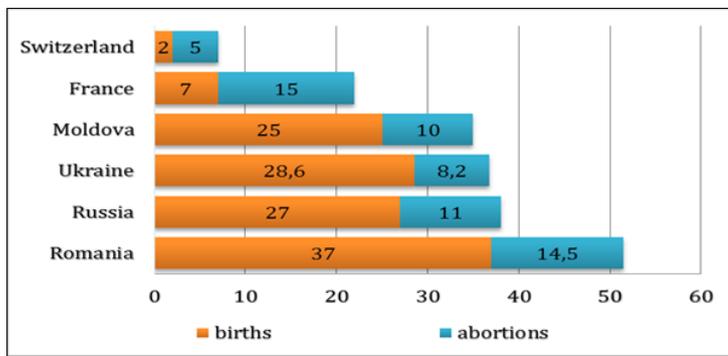
**Table 2. Mortality indicators and life expectancy at birth in Republic of Moldova and EU, the average for 2010-2015**

	RM	UE-28 (average)
Infant mortality (per 1 000 live births)	11	3.7
Mortality of children under 5 years (per 1 000 live births)	13	5.6
Life expectancy at birth (years): women	75.4	82.3
men	67.2	76.4

Source: UN Population Division estimates.

**Employment.** During 2000-2015 the share of working age population increased from 55% to 61%, but the employment rate of the population decreased from 54.8% to 40.3%. NEET rate (young people neither in employment, nor in education or training) in the Republic of Moldova is about 27%, much higher than in EU (Fig. 4). The NEET rate is higher in rural areas and among females.

Massive **emigration** of economically productive population (Fig. 5) decrease the opportunities of demographic dividend, which is utilized by foreign countries (Russia, Italy, etc.) that have managed to use the excess of workforce from Republic of Moldova. The resulting benefits are labour migrants' remittances [8] but their effect refers to a short time. However, emigration has contributed to harnessing of the demographic dividend by familiarizing people with democratic values, good practice in various areas, human capital accumulation, etc. [7].



**Fig. 7. Teenage pregnancy rate, at 1000 females aged 15-19 years**

Source: O. Gagauz [5, p.23].

**Sexual reproductive health.** Childbirth at the age of adolescence presents a risk factor in terms of welfare, obtaining a profession and enrolment in the labour market. Republic of Moldova recorded relatively high rates of teenage pregnancy – 35 cases per 1 000 females aged 15-19 (Fig.7). At the same time, the highest proportion of females with unmet need for contraception is at 15-19 years – 23.4% [4].

**Table 3. Incidence through HIV/AIDS, syphilis and gonorrhoea, 2013 (per 100 000 population)**

	HIV/AIDS	Gonorrhoea	Syphilis
Sweden	4,8	12	3
Czech Republic	2,2	12	6
Malta	8,5	14	9
Moldova	17,3	27	64

Russia	55,6	36	29
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Sursa: WHO Regional Office for Europe

There is a high incidence of sexually transmitted infections, particularly among young people [1, p.144]. Compared with developed countries, Republic of Moldova is among the countries with a high prevalence of morbidity through gonorrhoea, syphilis and HIV / AIDS (Table 3).

### HOW TO OBTAIN HIGH BENEFITS FROM DEMOGRAPHIC DIVIDEND?

To obtain high benefits from demographic dividend is needed measures related to the development and harnessing of human capital directed to the following areas:

**Population health.** The increase of health investments will decrease overall mortality level and will bring greater contributions to economic growth of the country.

- Quality health care for children;
- Ensuring access of adolescents and youth to sexual and reproductive health and family planning;
- Improving the health of the working age population to maintain them healthy in the labour market.

**Education.** Increasing investment in education and increasing the degree of enrolment in vocational and tertiary education of young people from vulnerable groups will contribute to increase human capital and will help to overcome poverty.

- Increase the quality of education according to the labour market requirements;
- Encourage young people to follow professional and specialized studies;
- Promoting the concept of lifelong learning to maintain professional competitiveness in all categories of population.

**Employment.** A higher number of working age population more educated and healthier can bring economic benefits only if they will be integrated into the labour market. Non-occupation of the population in the labour market will lead to increase the degree of poverty and intensification of migration flows.

- Increase of employment rate;
- An easier transition process from school to work;
- Supporting entrepreneurship and increase youth access to financial funds.

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