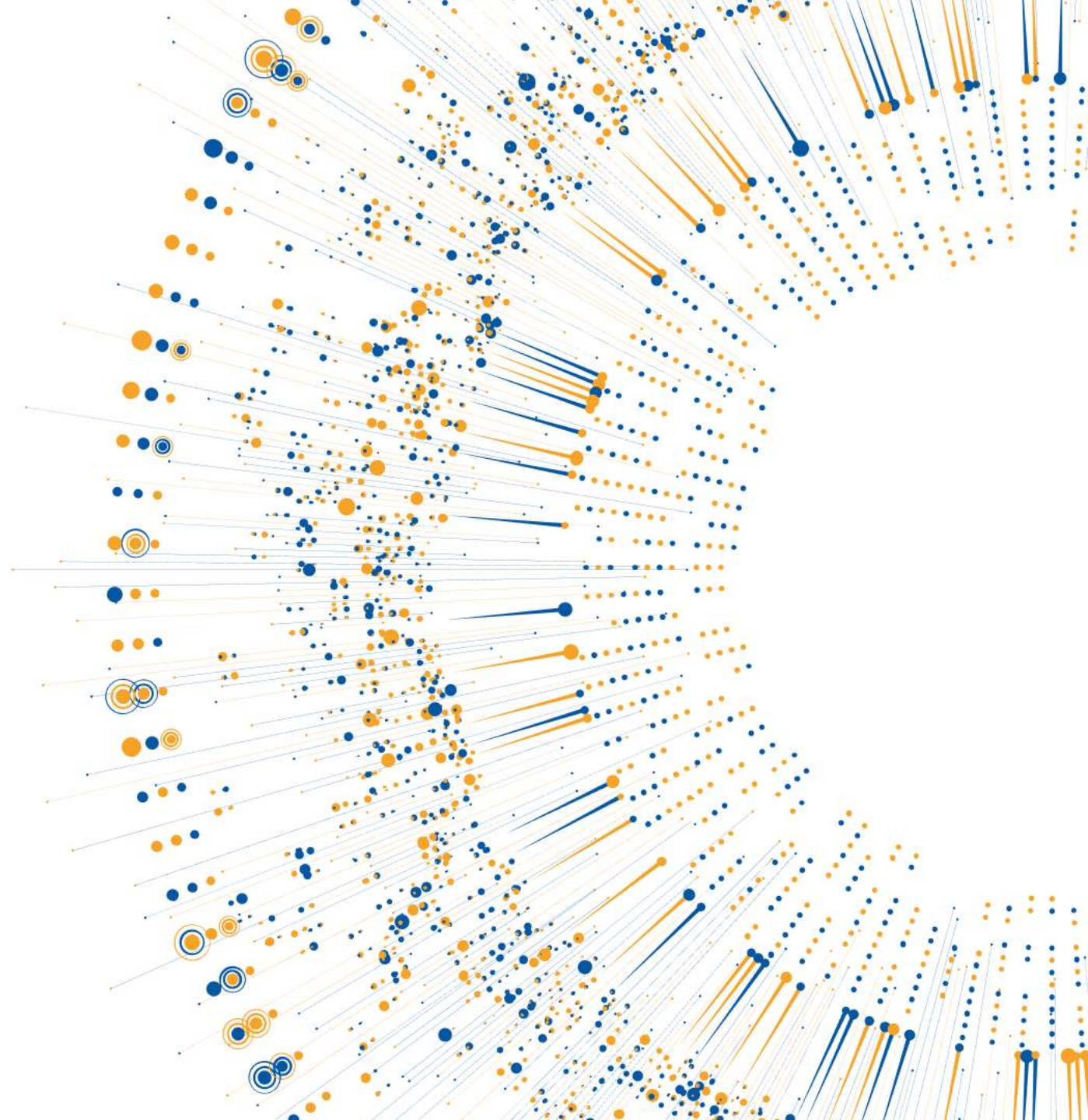




БЮРО НАЦИОНАЛЬНОЙ СТАТИСТИКИ
АГЕНТСТВА ПО СТРАТЕГИЧЕСКОМУ
ПЛАНИРОВАНИЮ И РЕФОРМАМ РЕСПУБЛИКИ
КАЗАХСТАН

Multidimensional child poverty in Kazakhstan

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The Reason

Global recognition of the multidimensional nature of children's poverty and deprivation approach.

Many developed index building methodologies allow to express children's deprivation with uniformed number indications.

Two reasons to use the multi dimensional deprivation indices for measuring child poverty:

- First of all, according to the research the household resources are not distributed fairly, and the share of family resources allocated to children compared to other household members depends on the household priorities;
- Second, material wellbeing of children does not only depend on the household resources, but on the state and public resources and infrastructure as well, such as access to the health and education services, water supply system, sanitation system and other resources .
- It's important that indicators of multidimensional child poverty do not replace monetary poverty indicators, but rather compliment them.

Bristol Approach

- ❑ One of the most known indicators of multidimensional child poverty. It was developed by the research group of Bristol University at the request of UNICEF in 2003. It was later used as the most important indicator of child poverty in the Global Child Poverty and Inequality Research.
- ❑ Based on the theory of relational deprivation developed by the famous British scientist Peter Townsend, it is closely connected with the extended definition of poverty.

This method includes 8 dimensions – food, safe drinking water, sanitary conditions, health, housing, education, information and basic services access.

The advantage Bristol Approach is its theoretical foundation and human rights based approach.

The disadvantage is that since it's an international index, the indicators might be less applicable in richer countries, for example food and sanitary conditions. Also it does not contain dimensions that are more applicable in richer countries, for example internet access.

Alkire & Foster Approach

- ❑ Well-known method of building multidimensional poverty indices. It became particularly known after UNDP adapted it as the method for estimating multidimensional poverty index.
- ❑ The Alkire-Foster method is used to identify multiple deprivations and allows flexible approach to selection of dimensions, each of which can be measured by several indicators. Every dimension and every indicator within the dimension is usually assigned with the same weight.
- ❑ The Alkire-Foster method is special because it measures 2 poverty dimensions at the same time – incidence (% of poor people) and intensity (average % of aspects where poor people are suffering deprivation) – and combines them into a single indicator according to the formula: $MPI = Incidence * Intensity$.

European Union Deprivation Indices

❑ It uses AROPE – At Risk of Poverty and Exclusion

AROPE is the main indicator for the monitoring of targeted poverty indicator because it considers additional measures of household resources, some of which (for example preservation of heat in the house) are directly related to the child's wellbeing.

❑ After considering all dimensions, in 2018 EU has adopted index of deprivation that is specific for children. It identifies a materially deprived child when the child is deprived in at least 3 dimensions out of 17 due to financial difficulties. These dimensions include:

- New clothes,
- Two pair of properly fitting shoes,
- Fresh fruit and vegetables every day,
- Meat, chicken, fish or vegetarian equivalent of them daily
- Books at home appropriate for child's age,
- Outdoor leisure equipment,
- Indoor games,
- Indoor games
- Regular leisure activities
- Celebrations on special occasions
- Invitation of friends to play and eat from time to time
- Participation in school trips and school events that cost money
- Holidays
- Arrears
- Keep home adequately warm
- Access to a car for private use
- Replace worn-out furniture
- Access to internet

Criteria for selecting MCPI methodology for Kazakhstan

- The methodology should be suitable for the current level of social and economical development of Kazakhstan and children's situation in the country.
- MCPI should be simple enough to be understood by the state agencies and policy makers, as well as by the public.
- MCPI should be published annually, so the best way is to utilize the data that are already being collected during regular household surveys to the maximum .
- This index should use internationally comparable indicators.

Bristol Approach

- The methodology is related to the basic children rights and SDG and can be adapted for the national specifics of Kazakhstan. It recommends to use the following 7 dimensions:
 - Food
 - Access to Pure Water
 - Sanitary Services
 - Health Protection Services
 - Education
 - Housing
 - Information

Access to health facility and education were not included as these deprivations were not relative to the country as a whole.

Bristol Approach

Dimension	Indicator	Threshold values
Food	% of children not having healthy food	Children in the age of 1 to 17 who do not eat fruit and vegetables every day, as well as meat, chicken or fish or it's vegetarian equivalent
Water	% of children living in the households with unsatisfactory drinking water	Children in the age of 1 to 17 who live in the household where the drinking water quality is between 1-3 on 10 point scale.
Sanitary services	% of children living in the households that do not have bathroom and showering room	Children in the age of 1 to 17 who live in the households that do not have bathroom and showering room or sauna.
Health	% of children that in the last 12 months at least once were not able to receive treatment or medications.	Children in the age of 1 to 17 who in the last 12 month at least once could not receive necessary treatment or medications.
Education	% of children that cannot afford extra curriculum activities, such as learning practical arts, music or tutoring	Children in the age of 3 to 17 who cannot afford extra curriculum activities
Housing	% of children that do not have suitable place for studies or doing homework	Children in the age of 6 to 17 who do not have an appropriate place for studying or doing homework
Information	% of children living in the households without access to internet (including mobile phone)	Children in the age of 6 to 17 who live in the households without access to Internet (including mobile phone)

Bristol Approach – The Estimation Results

Dimensions	Total	Urban	Rural
	%	%	%
Children can eat fruit, vegetables, meat, chicken, fish daily	10.7%	7.5%	15.4%
Satisfactory quality of the drinking water	8.0%	11.8%	2.2%
Availability of bathroom, showering room or sauna	2.5%	.9%	4.9%
Children could receive necessary treatment or medication within the last 12 months	2.1%	2.5%	1.5%
Children can afford extra curricular activities	11.3%	9.7%	13.8%
Availability of the appropriate place for studying and homework	6.2%	5.5%	7.2%
Access to internet, including mobile phone	2.8%	2.5%	3.3%
Share of multidimensional poor children	10.1%	8.5%	12.6%

Bristol method provides lower results of multidimensional child poverty – 10.1% in the country. The dimension of food (10.7%) and education (11.3%) make the biggest contribution to the poverty rate. Multidimensional poverty for families with child with disabilities is twice bigger than for other families.

Alkire-Foster Method – The Estimation Results

Dimension	Indicator	Deprivation Criteria
Education	Level of satisfaction with the quality of education	The household is considered deprived if the level of satisfaction is 1-3 out of 10.
	Level of the population satisfaction with education	The household is considered deprived if the level of satisfaction is 1-3 out of 10. .
	Attendance of kindergarten facilities	The household is considered deprived if at least one child in the age between 1 and 6 does not attend kindergarten because it is expensive (1), too far (2), relatives are taking care of them (5), do not have residency (7)
Health and Environment	Level of satisfaction with the health protection services	The household is considered deprived if the level of satisfaction is 1-3 out of 10.
	Level of satisfaction with the access to the health services	The household is considered deprived if the level of satisfaction is 1-3 out of 10.
	Not being able to receive health protection services	The household is considered deprived if at least one member in the age of 15+ who was ill during the last year, could not get access to health services because the services are too expensive (3), the medications are too expensive (4), too long queues (5), no available specialist (6), the medical facility is too far away/not able to get there (7), the medications are not available (8), the quality of the health services is too low/do not trust them (9)
	Level of satisfaction with the purity of air (no pollutions, smoke, dust)	The household is considered deprived if the level of satisfaction is 1-3 out of 10. .
	Level of satisfaction with the cleanliness of the surrounding area (no waste or garbage)	The household is considered deprived if the level of satisfaction is 1-3 out of 10.
	Source of drinking water	The household is considered deprived if they get their water from water cisterns (1) or from the river/pond/lake (4) если домохозяйства получают воду из автоцистерн (1) или из реки/пруда/озера (4)
	Level of satisfaction with the quality of drinking water	The household is considered deprived if the level of satisfaction is 1-3 out of 10.

Alkire-Foster Method – The Estimation Results

Dimension	Indicator	Deprivation Criteria
Housing and Living Conditions	Inappropriate space of the housing (square meters per person in the housing)	The household is considered deprived if there is less than 15 sq.m. per each person.
	Heating fuel	The household is considered deprived if the household uses solid or liquid heating fuel
	Access to sewerage (sanitary system)	The household is considered deprived if they have the outhouse without the stove (1) or no toilet (2) or sewerage caisson (3)
	Personal internet access	The household is considered deprived if the household does not have personal access to internet
Living Standards, Access to Finances	Arrears	The household experienced difficulties paying the following bills two for more than two times: rent, mortgage, communal payments, loan installments, other installments
	Unemployment	The household is considered deprived if at least one person over 15 years old does not work (3)

- The analysis of the indicators showed that only three indicators reflect children’s situation in the household. And all of these indicators describe education system.
- Besides that the level of satisfaction with the quality and availability is the main indicator that reflects the perception of pre-school, secondary, high and higher education. This way these indicators cannot be seen as the child poverty specific measures.
- None of the dimensions have indicators that target child deprivation, so it makes this approach less sensitive to the children situation.

Alkire-Foster Method – The Estimation Results

Dimension	Indicator	Total %	Urban %	Rural %
Education	Level of satisfaction with the quality of education	3.9%	3.0%	5.1%
	Level of the population satisfaction with education	5.1%	3.7%	7.0%
	Attendance of kindergarten facilities	9.5%	10.5%	8.3%
Health and Environment	Level of satisfaction with the health protection services	6.2%	6.0%	6.4%
	Level of satisfaction with the access to the health services	6.1%	5.7%	6.6%
	Not being able to receive health protection services	6.5%	6.7%	6.2%
	Level of satisfaction with the purity of air (no pollutions, smoke, dust, мудаэ)	4.5%	7.4%	.8%
	Level of satisfaction with the cleanliness of the surrounding area (no waste or garbage)	1.4%	1.9%	.7%
	Source of drinking water	2.7%	0.0%	6.3%
Housing and Living Conditions	Level of satisfaction with the quality of drinking water	7.3%	10.3%	3.5%
	Inappropriate space of the housing (square meters per person in the housing)	49.5%	53.3%	44.5%
	Heating fuel	23.9%	6.2%	46.7%
	Access to sewerage (sanitary system)	56.8%	26.0%	96.5%
Living Standards, Access to Finances	Personal internet access	2.0%	2.3%	1.5%
	Arrears	5.7%	4.6%	7.1%
Living Standards, Access to Finances	Unemployment	8.4%	6.5%	10.7%
	Multidimensional Poor	12.0%	6.5%	19.1%

- The estimation of child poverty according to Alkire-Foster Method mostly reveals basic deprivations at the household level.
- Every eighth child (12%) is multidimensionally poor, and the indicators of housing and living conditions make the biggest contribution to that.
- Other basic needs have relatively low deprivation – less than 10%.
- Multidimensional poverty in rural areas (19.1%) is three times bigger than in urban areas (6.5%).

European Union Deprivation Indices

Since the list of 17 indicators that are part of EU Index was developed and tested in EU countries, we made several statistical tests with the 2023 Population Living Standards Survey data before we applied this methodology to the context of Kazakhstan.

- Relevancy test

The goal is to identify how well each of 17 indicators reveal the child wellbeing based on the population opinion.

Indicator	% of the households considering this indicator important for the wellbeing of the child/family	Data source
New (unused) properly fitting clothes	91.9	2023 Population Living Standards Survey
Two pair of properly fitting shoes (one for each season) for every child in the household	93.1	
Fresh fruit and vegetables every day	95.2	
Food with meat, chicken, poultry or fish (or equivalent vegetarian food) at least once a day	94.5	
Educational games and books for each child in the household, appropriate for their age.	90.1	
Outdoor leisure equipment (for example a bicycle, roller skates, sport equipment, etc.)	84.8	
Indoor games (for example educational cubes, board games, computer games, etc.)	86.1	
Regular leisure activities	87.7	
Celebrations on special occasions (birthdays, etc.)	85.4	
Invitation of friends to play and eat from time to time	76.8	
Participation in school trips and school events that cost money	81.3	
Holidays with parents outside of home, at least one week a year	86.4	Multidimensional Deprivation Survey, UNICEF, 2022
Personal access to internet	87.0	
Being able to pay arrears (household bills)	89.8	
Enough means to keep the house warm during winter period	93.0	
Availability of a car or being able to use taxi when necessary	75.6	
Being able to replace worn-out simple furniture when necessary	75.4	

European Union Deprivation Indices

- Monetary Income correlation test

The Subjective Wellbeing of the Household Indicator was selected as proxy indicator of the monetary income.

Indicator		Subjective estimation of the household wellbeing					
		Low	Bellow middle	middle	Above middle	Sufficient	High
New properly fitting clothes	Not deprived	25.6%	83.0%	96.2%	97.0%	97.2%	96.2%
	Deprived	74.4%	17.0%	3.8%	3.0%	2.8%	3.8%
Two pair of properly fitting shoes	Not deprived	25.6%	75.8%	95.4%	96.3%	98.1%	98.1%
	Deprived	74.4%	24.2%	4.6%	3.7%	1.9%	1.9%
Eat fresh fruit and vegetables every day	Not deprived	25.6%	73.5%	95.5%	97.1%	99.0%	99.1%
	Deprived	74.4%	26.5%	4.5%	2.9%	1.0%	.9%
Food with meat, chicken, poultry or fish at least once a day	Not deprived	30.8%	80.7%	96.4%	97.1%	99.0%	99.1%
	Deprived	69.2%	19.3%	3.6%	2.9%	1.0%	.9%
Educational games and books for each child in the household	Not deprived	46.2%	77.1%	94.7%	96.0%	98.2%	97.2%
	Deprived	53.8%	22.9%	5.3%	4.0%	1.8%	2.8%
Outdoor leisure equipment	Not deprived	28.2%	72.2%	93.2%	95.3%	97.6%	95.3%
	Deprived	71.8%	27.8%	6.8%	4.7%	2.4%	4.7%
Indoor games	Not deprived	33.3%	76.2%	94.3%	95.6%	97.7%	94.3%
	Deprived	66.7%	23.8%	5.7%	4.4%	2.3%	5.7%
Regular leisure activities	Not deprived	69.2%	83.0%	93.8%	95.9%	97.2%	90.6%
	Deprived	30.8%	17.0%	6.2%	4.1%	2.8%	9.4%
Celebrations on special occasions	Not deprived	53.8%	80.3%	95.0%	96.1%	97.4%	90.6%
	Deprived	46.2%	19.7%	5.0%	3.9%	2.6%	9.4%
Inviting friends over to play and eat	Not deprived	51.3%	86.1%	94.6%	96.4%	97.2%	89.6%
	Deprived	48.7%	13.9%	5.4%	3.6%	2.8%	10.4%
Participation in school trips and school events that cost money	Not deprived	59.0%	78.5%	93.6%	95.7%	97.4%	89.6%
	Deprived	41.0%	21.5%	6.4%	4.3%	2.6%	10.4%
Holidays with parents outside of home, at least one week a year	Not deprived	38.5%	68.2%	90.4%	94.3%	97.2%	89.6%
	Deprived	61.5%	31.8%	9.6%	5.7%	2.8%	10.4%
Personal access to internet	Not deprived	20.5%	52.0%	76.6%	77.6%	85.8%	91.5%
	Deprived	79.5%	48.0%	23.4%	22.4%	14.2%	8.5%
Being able to pay arrears (household bills)	Not deprived	0.0%	15.7%	69.0%	88.7%	89.2%	82.1%
	Deprived	100.0%	84.3%	31.0%	11.3%	10.8%	17.9%
Enough means to keep the house warm during winter period	Not deprived	0.0%	3.6%	94.9%	100.0%	99.8%	100.0%
	Deprived	100.0%	96.4%	5.1%	0.0%	.2%	0.0%
Being able to replace worn-out simple furniture when necessary	Not deprived	0.0%	11.2%	77.4%	100.0%	99.8%	100.0%
	Deprived	100.0%	88.8%	22.6%	.0%	.2%	0.0%
Car	Not deprived	3.6%	9.3%	27.8%	35.3%	43.9%	32.2%
	Deprived	96.4%	90.7%	72.2%	64.7%	56.1%	67.8%

European Union Deprivation Indices

- Monetary Income correlation test

The Subjective Wellbeing of the Household Indicator was selected as proxy indicator of the monetary income.

Indicator		Subjective estimation of the household wellbeing					
		Low	Bellow middle	middle	Above middle	Sufficient	High
New properly fitting clothes	Not Deprived	25.6%	83.0%	96.2%	97.0%	97.2%	96.2%
	Deprived	74.4%	17.0%	3.8%	3.0%	2.8%	3.8%
2 pairs of properly fitting shoes	Not Deprived	25.6%	75.8%	95.4%	96.3%	98.1%	98.1%
	Deprived	74.4%	24.2%	4.6%	3.7%	1.9%	1.9%
Eat fresh fruit and vegetables every day	Not Deprived	25.6%	73.5%	95.5%	97.1%	99.0%	99.1%
	Deprived	74.4%	26.5%	4.5%	2.9%	1.0%	.9%
Food with meat, poultry or fish at least once a day	Not Deprived	30.8%	80.7%	96.4%	97.1%	99.0%	99.1%
	Deprived	69.2%	19.3%	3.6%	2.9%	1.0%	.9%
Educational books and games for every child in the household	Not Deprived	46.2%	77.1%	94.7%	96.0%	98.2%	97.2%
	Deprived	53.8%	22.9%	5.3%	4.0%	1.8%	2.8%
Outdoor leisure equipment	Not Deprived	28.2%	72.2%	93.2%	95.3%	97.6%	95.3%
	Deprived	71.8%	27.8%	6.8%	4.7%	2.4%	4.7%
Indoor games	Not Deprived	33.3%	76.2%	94.3%	95.6%	97.7%	94.3%
	Deprived	66.7%	23.8%	5.7%	4.4%	2.3%	5.7%
Regular leisure activities	Not Deprived	69.2%	83.0%	93.8%	95.9%	97.2%	90.6%
	Deprived	30.8%	17.0%	6.2%	4.1%	2.8%	9.4%
Celebrations on special occasions	Not Deprived	53.8%	80.3%	95.0%	96.1%	97.4%	90.6%
	Deprived	46.2%	19.7%	5.0%	3.9%	2.6%	9.4%
Invite friends over from time to time	Not Deprived	51.3%	86.1%	94.6%	96.4%	97.2%	89.6%
	Deprived	48.7%	13.9%	5.4%	3.6%	2.8%	10.4%
Participation in school trips and school events that cost money	Not Deprived	59.0%	78.5%	93.6%	95.7%	97.4%	89.6%
	Deprived	41.0%	21.5%	6.4%	4.3%	2.6%	10.4%
Holidays with parents outside of home, at least one week a year	Not Deprived	38.5%	68.2%	90.4%	94.3%	97.2%	89.6%
	Deprived	61.5%	31.8%	9.6%	5.7%	2.8%	10.4%
Personal access to internet	Not Deprived	20.5%	52.0%	76.6%	77.6%	85.8%	91.5%
	Deprived	79.5%	48.0%	23.4%	22.4%	14.2%	8.5%
Being able to pay arrears (household bills)	Not Deprived	0.0%	15.7%	69.0%	88.7%	89.2%	82.1%
	Deprived	100.0%	84.3%	31.0%	11.3%	10.8%	17.9%
Enough means to keep the house warm during winter period	Not Deprived	0.0%	3.6%	94.9%	100.0%	99.8%	100.0%
	Deprived	100.0%	96.4%	5.1%	0.0%	.2%	0.0%
Being able to replace worn-out simple furniture when necessary	Not Deprived	0.0%	11.2%	77.4%	100.0%	99.8%	100.0%
	Deprived	100.0%	88.8%	22.6%	.0%	.2%	0.0%
Car	Not Deprived	3.6%	9.3%	27.8%	35.3%	43.9%	32.2%
	Deprived	96.4%	90.7%	72.2%	64.7%	56.1%	67.8%

- ✓ It is clearly that indicator values directly depend on the income
- ✓ Groups with the least income are dominating
- ✓ As the household wellbeing grows, the number of deprived persons is going down.

European Union Deprivation Indices – The Estimation Results

Indicator	Total	Urban areas	Rural areas
	% of deprived children	% deprived children	% deprived children
New (unused) properly fitting clothes	7.3%	5.6%	9.9%
Two pair of properly fitting shoes (one for each season) for every child in the household	8.8%	6.7%	12.1%
Fresh fruit and vegetables every day	8.6%	5.9%	12.6%
Food with meat, chicken, poultry or fish (or equivalent vegetarian food) at least once a day	7.9%	5.3%	11.9%
Educational games and books for each child in the household, appropriate for their age.	9.4%	6.7%	13.4%
Outdoor leisure equipment (for example a bicycle, roller skates, sport equipment, etc.)	12.0%	8.5%	17.3%
Indoor games (for example educational cubes, board games, computer games, etc.)	11.4%	7.7%	17.0%
Regular leisure activities	11.2%	9.7%	13.6%
Celebrations on special occasions (birthdays, etc.)	9.5%	7.5%	12.4%
Invitation of friends to play and eat from time to time	9.4%	8.3%	11.1%
Participation in school trips and school events that cost money	8.5%	6.6%	11.5%
Holidays with parents outside of home, at least one week a year	16.7%	13.4%	21.6%
Personal access to internet	2.8%	2.5%	3.3%
Being able to pay arrears (household bills)	26.6%	24.4%	30.0%
Enough means to keep the house warm during winter period	6.5%	6.2%	7.0%
Availability of a car or being able to use taxi when necessary	68.8%	69.4%	68.0%
Being able to replace worn-out simple furniture when necessary	18.9%	18.3%	19.9%

- Availability of a car indicator produced the biggest value, which means that two thirds of children live in the households with no cars.
 - The second biggest indicator is being able to pay arrears.
 - Every fourth child lives in a household that experienced difficulties with paying their arrears at least twice.
 - The most favourable indicator is access to internet, only 2.8% children of school age do not have access to internet
 - Food Security Indicators are also pretty favourable generally in the country. Although if we make a disaggregated analysis by areas, the number of children experiencing deprivation in the indicator of fresh fruit and vegetables and meat in rural areas (around 12%) is twice bigger than in urban areas (6%).
- The share of multidimensional poor children is 28.5% generally in the country, every third child in the rural area, and every fifth child in the urban areas is deprived by more than three indicators (poverty line). One fifth of children (19.8%) do not experience any deprivations.

European Union Deprivation Indices – The Estimation Results

Conclusions:

- ✓ 44% of the monetary poor children are also multidimensionally poor.
- ✓ Child living in the low income family does not necessarily experience multiple deprivations.
- ✓ Even in the households with enough monetary means, almost one third of children (28.5%) are multidimensionally poor.
- ✓ Deprivation value of the 17 indicators for monetary poor children is 2-3 time higher than for children from the families that live in material wellbeing.
- ✓ Every second child (43.8%) lives in the family with arrears which affects child's access to healthy food, recreation, good living conditions and other rights.
- ✓ Every fifth of the poor children cannot afford healthy and proper diet.
- ✓ Every fifth child from poor families does not have access to books and other educational material necessary for their comprehensive development.

It is important to carry out the analysis of the monetary and multidimensional poverty, that are complimentary to each other.

Comparing the poverty measuring methodology

	Alkire-Foster (2022)	Bristol (2023, I quarter)	EU Index (2023, I quarter)	Monetary Poverty (2023, I quarter)
Kazakhstan	12.0%	10.1%	28.5%	7.3%

Conclusion:

- EU Child Deprivation Index methodology is recommended for further usage in measuring multidimensional child poverty
- This particular index, more than others, captures child deprivation, corresponds to the country context and sets higher living standards for children. It is comparable and consistent with the National MPI and monetary poverty, allows to compare with other EU countries, excludes overlapping with the administrative data in the Digital Family Map or Child Wellbeing Index.

We are expressing our gratitude to

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Thank you for your attention!