

MEGATRENDS

IMPACT OF MEGATRENDS ON
REPRODUCTIVE RIGHTS AND
FAMILY PLANNING



Bishkek 2021



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The United Nations Population Fund, Kyrgyz Republic 720040, Bishkek,
160 Chuy Avenue, Tel: +997312611211.

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AUTHORS:

Jyldyz Kuvatova

Tchoro Seiitov

Gulkhumar Abdullaeva

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LIST OF ABBREVIATIONS

AUCA	American University of Central Asia
BFHI	The Baby-Friendly Hospital Initiative
CANFS	Civic Alliance for Nutrition and Food Security
CHC	community health committees
CS	contraceptives
CSO	civil society organizations
DHS	Demographic and Health Survey
EB	exclusive breastfeeding
EHC	eHealth Center under the Ministry of Health and Social Development of KR
FAO	Food and Agriculture Organization of the United Nations
FMC	family medicine center
FPRH	family planning and reproductive health
GoKR	Government of the Kyrgyz Republic
HPU	health promotion units
ICPD	International Conference on Population and Development (Cairo, 1994)
ICT	Information and Communication Technologies
IHS	Integrated Household Survey
IUD	intrauterine device
IYCF	Infant and Young Child Feeding
KFPA	Kyrgyz Family Planning Alliance
KR	Kyrgyz Republic
KSSDA	Kyrgyz Software and Services Developers' Association
M&E	monitoring and evaluation
MDGs	Millennium Development Goals
MICS	Multiple Indicator Cluster Survey
MHKR	Ministry of Health of the Kyrgyz Republic
NCD	non-communicable diseases
NHDR	National Human Development Report
NSC	National Statistics Committee
PHC	primary health care
RHA	NGO Reproductive Health Alliance
RN	rational nutrition
SDGs	Sustainable Development Goals
SPMF	State Property Management Fund of the Kyrgyz Republic
STI	sexually transmitted infection
UNFPA	United Nations Population Fund
UNICEF	United Nations Children's Fund
USAID	United States Agency for International Development

VHS	village health committees
WFP	UN World Food Programme
WHO	World Health Organization
WRA	women of reproductive age
RH	reproductive health

GLOSSARY

Strategic foresight: Strategic foresight is a structured and systematic way of using ideas about the future to anticipate and better prepare for change. It is about exploring different plausible futures that could arise, and the opportunities and challenges they could present. We then use those ideas to make better decisions and act now.

Foresight can support government policy-making in the following main ways:

- **Better anticipation:** to better anticipate changes that could emerge in the future
- **Policy innovation:** to reveal options for experimentation with innovative approaches
- **Future-proofing:** to stress-test existing or proposed strategies and policies.¹

Foresight does not predict the future, but rather explores the range of plausible futures that may emerge. It is one of the best tools to support open policymaking. **Forecasting** is the process of making predictions about the future, based on past and present data and the analysis of trends.²

A megatrend is a general direction of development, consisting of several phenomena, or a wide-ranging process of change. They are often considered to occur at the global level and development is often believed to continue in the same direction. Megatrends are not surprising: they are familiar things, changes that are already happening today and highly likely to continue happening tomorrow. They provide a useful view of broad future changes that can be narrowed down by focusing on more detailed trends, weak signals and the analysis of tensions.³

¹ <https://www.oecd.org/strategic-foresight/>
#:~:text=Strategic%20foresight%20is%20a%20structured,better%20decisions%20and%20act%20now

² <http://canadabeyond150.ca/blog/2018/03/foresight-vs-forecast/>
#:~:text=Foresight%20does%20not%20predict%20the.and%20the%20analysis%20of%20trends

³ <https://www.sitra.fi/en/articles/what-are-megatrends/>

FOREWORD

In the backdrop of global changes, one of the key aspects of family planning programme implementation is to understand the global megatrends that shape economic and social landscape of the country. This study is about the implications of global megatrends for family planning in the long run and is focused on specifics of strategic planning in reproductive health taking account of the impact of selected megatrends. The most interesting aspect of this study is not about the mainstream trends whose developments do not raise any doubts, but about rather subtle, yet barely noticeable, trends that will help adjust communication strategies for FPRH and introduce changes to family planning programmes, making some of the latter a subject matter of the dialogue with various actors in this sector.

This Review has been initiated by the *Kyrgyz Family Planning Alliance* (KFPA) with a technical support of the *United Nations Population Fund* (UNFPA) to identify priorities in the area of **family planning and reproductive health** (FPRH) in a rapidly changing world as a matter of foresight for the future of the family and public health model. Current global changes are evident in today's emerging megatrends that have an impact on all aspects of FPRH. This document is produced by the experts in strategic communications and gender – Jyldyz Kuvatova, economics and demography – Tchoro Seitov, and statistics – Gulkhumar Abdullaeva.

The Review is the first step towards establishing a culture of “strategic foresight,” which is the combination of “futures thinking” and strategic management.⁴ The significance of this culture for the public health management and governance has transpired in the context of the pandemic when “the world has suddenly changed” and the new challenges had to be addressed in a completely different environment. Such abrupt changes are likely to become “a new normal” starting from today. It means that the “strategic planning” methods acceptable and practicable in a more stable and linear world, are gradually replaced by “strategic foresight” with a higher level of creative approaches. From now on, it will require to take account of the emergence of unexpected or new factors with disruptive effects (“black swans,” disruptive innovations, etc.). Thus, the strategy and foresight go hand in hand and are constantly checked against the development dynamics of new technologies that can improve and enhance foresight and the prototyping of the end products and services through “user experience” (i.e., citizens’ or taxpayers’ experiences).

Thus, the “foresight” skills and methods are becoming one of the core leadership competencies at various levels and in various areas. UNESCO considers “futures literacy” as one of the essential skills of 21st century, defining it as universally accessible “skill that builds on the innate human capacity to imagine the future, offers a clear, field tested solution to poverty-of-the-imagination.”⁵ In such work, it is important to delve into a wide range of diverse knowledge areas and this review has not been an exception.

Authors express their gratitude to the *Kyrgyz Family Planning Alliance* team – Baktygul Bozgorpoeva, head, and Venera Nasirova, project coordinator; UNFPA Country Office specialists – Nurgul Smankulova, national programme analyst on reproductive health and Asel Turgunova, programme associate on reproductive and sexual health for overall leadership for the review process and expertise on FPRH. Authors were greatly inspired by knowledge and experience of numerous experts and practitioners of the country in a variety of areas, who shared their vision and (“user”) experience during the review process. Special thanks go to Bahtiyar Stanbekov, Director of eHealth Center (EHC) under the Ministry of Health and Social Development; Larisa Murzakarimova, deputy director of EHC under MoH&SD; Aikanysh Saparalieva, general manager of *Glovo Kyrgyzstan* company; Talant Sultanov, co-founder of the

⁴ Pictet Asset Management. (2019). *Using the future. Embracing uncertainty, improving decision making and democratizing tomorrow* Copenhagen Institution for Future Studies. <https://am.pictet/-/media/pam/pam-common-gallery/article-content/2019/pictet-asset-management/understanding-megatrends/using-the-future.pdf>

⁵ <https://en.unesco.org/futuresliteracy/about>

Kyrgyz Internet Society; Bakytbek Satybekov, expert in public finance, budget transparency and accountability; and Galina Chirkina, director of *Reproductive Health Alliance*. We thank everybody who made this review an intellectually experience.

Collective expertise and experience of specialists from a wide variety of industries in the megatrends review process in the future can become an integral element for “contingency planning.” Such a collaboration tests reliability of the strategies that often helped in managing crises and minimizing the inevitable losses through planning with often limited resources. At the same time, megatrends allow to see a longer-term trajectory for development of industry and expand the thinking horizons in a specific place and time, which also depends on collective understanding and vision of challenges. Therefore, there is a hope that this review will become the first and, perhaps the turning point, for revision of methods for planning of the future. The future that does not unfold linearly. It always has a number of alternatives. In this sense, “planning” is rather resembling the “creation of the future” through the choice and combination of different trajectories available to the understanding of society and people who make decisions for and on behalf of this society.

INTRODUCTION

Family is a starting point in the life of every individual. One of paramount aspects of healthy, successful and strong family relations is family planning, which is normally understood as **the ability of an individual or a couple to anticipate and have the desired number of children and spacing and timing of their births**. The right to family planning – for responsible and mature parenthood – is an internationally recognized right of every person. Family planning is based on birth of wanted children in the optimal timing for a woman and a man, and on opportunity to define spacing between the births of their children. By planning a birth of every child, the couple reduces the risk of unwanted pregnancy and risks of maternal mortality. This addresses the issue of abortion as a birth control method resulted from an unintended pregnancy.⁶

A thought-out system, cultural values and principles of family planning have impact on reproductive health of men and women and on society in general in the long haul. Analysis of megatrends and scenario planning for FPRH development has to go through the lens of five factors:

- 1) Planned childbirth
- 2) A wanted child
- 3) Birth intervals (“intergenetic interval”)
- 4) Access to FPRH services
- 5) FPRH policy

The right to family planning is one of the fundamental rights and freedoms of every individual. Protection and implementation of this right is the responsibility of governments. *The 1994 Cairo Conference* called on all countries to take measures on meeting the population’s needs in family planning. In Kyrgyzstan, **family planning and reproductive health** of women and men is the mandate of the healthcare system, specialized international and non-governmental organizations, with meager engagement of education system and mainstream culture. State policy of the Kyrgyz Republic recognizes an individual⁷ as a key source of county’s development in a series of strategic documents.⁸

Full realization of human potential depends on a number of factors reflected in the *National Human Development Reports* (NHDR) regularly supported and published the UN,⁹ and in other studies and analytical documents of the national statistical system, international and non-governmental organizations. They contain major indicators of human development reflecting situation on family planning and reproductive health in the country, among others. However, they still don’t give a full picture of how rapidly a changing world and global **megatrends** driving these changes govern and will increasingly continue to have an impact on the situation and, by implication, on the life, lifestyle, culture and future of every family and every individual. Thus, the “macro” level may, sometimes dramatically, change what happens at the “micro” level.

⁶ Currently, the majority of couples in the world use family planning methods for birth control, including contraceptives.

⁷ The country does not have competitive reserves of oil, gas, and access to the sea, etc.

⁸ In line with the Programme of the Kyrgyz Republic Government on Public Health Protection and Health Care System Development for 2019-2030: Healthy Person – Prosperous Country,” endorsed by the Resolution # 600 of 20 December 2018, taking into account the lessons learnt from implementation of the *National Strategy of Reproductive Health Protection in the Kyrgyz Republic till 2015* (Decree of President of the Kyrgyz Republic #387 of 15 July 2006) and commitments on Family Planning 2020 made in November 2018.

⁹ NHDR publications have been launched in the Kyrgyz Republic in 1995.

As of late 2020, the following five global megatrends can shed light on the situation in FPRH in the Kyrgyz Republic:

- 1) Demography and external migration
- 2) Urbanization and internal migration
- 3) Healthy lifestyle and increasing longevity
- 4) Technology and economic development
- 5) Governance and inequality

MEGATRENDS

Megatrend is a global shift in external space, social and economic environment with a significant impact on people's lives. It's a global development trend of rather qualitative nature. Once shaped, megatrends begin to have an impact on a wide range of activities, processes and ideas (views) in societies and regions for decades to come. These are global changes with local consequences, a systemic shift, whose presence can only be identified through its manifestations or consequences, phenomena.

The 2000s have seen a number of attempts to conceptualize megatrends from different angles.¹⁰ These works highlighted the global changes that are no longer in doubt, related to social, economic and technological nature and presented a large layer of data indicative of specific megatrends and their possible impact on the development of industries and humankind. These works allow foreseeing strategic consequences and present trends in their interdependency through systemic view of development of an increasingly interpenetrating ecosystem of humanity. All sectors started engaging in megatrends – scientific, public, community¹¹ and private¹² sectors, which indicates the scale and awareness of the changes that have already happened “today.”

The term “megatrends” has been first used by John Naisbitt in the paper of the same name in 1982, which identified 10 megatrends (see Box 1). Not all of those forecasts have materialized, but even in the backdrop of the tumultuous processes that have since reshaped the globe’s political map, the major trends have been absolutely correct: emergence of the information society, digitalization and global digital economy.

In the context of these global changes, the family as the source and the beginning of an individual's life is also constantly changing in quality and quantity as a societal institution. As a result, approaches to family planning, reproductive health of women and men, sexual education are also transforming, changing their design, content, focus and priorities. If we understand the impact of global megatrends (“new reality”) on the private aspect of an individual's life, and, in turn, the way they are shaped by the demographic (with a share of a “family” variable), social, technological and political factors, then it will help better see the “blind spots” of policy, programmes and initiatives on family planning and reproductive health in the Kyrgyz Republic. It will also help in planning of the next steps in streamlining and improvement of practices in the rapidly changing context of technological progress, breakthrough technologies that disrupt the

¹⁰ Lustig, P. & Ringland, G. (2018). *Megatrends and How to Survive Them. Preparing for 2032* (1st ed.). Cambridge Scholars Publishing; European Environment Agency. (2015). *Global megatrends assessment: Extended background analysis complementing the SOER 2015 'Assessment of global megatrends.'* <https://www.eea.europa.eu/soer/2015/global/action-download-pdf>

¹¹ Planning Institute Australia. *Journey towards 50 million.* (2016). *Through the lens: megatrends shaping our future.* <http://www.planning.org.au/documents/item/7504>

¹² Price Waterhouse Coopers. (2016). *Five Megatrends and Their Implications for Global Defense and Security.* <https://www.pwc.com/gx/en/government-public-services/assets/five-megatrends-implications.pdf>

industrial society's lifestyles, social norms, values and attitudes, also specific to traditional societies.¹³

Box 1. Ten megatrends of John Naisbitt that shaped the nature and the image of a “new society”

- 1) **Shift to an information society from an industrial one.**
- 2) **Shift towards the dualism of “technical progress – peace of mind” (the more amazing the technology is, the greater the desire for spirituality and simplicity).**
- 3) **Globalization of the world economy and USA’s engagement in this process.**
- 4) **Shift from the short-term to long-term perspectives.**
- 5) **Shift from centralization to decentralization.**
- 6) **Shift from “reliance on institutions and organizations” to self-reliance.**
- 7) **Shift from representative to participative democracy.**
- 8) **Shift from hierarchies to networking.**
- 9) **Economic growth of the south-west of the US and decline in the north-east.**
- 10) **Shift to “a free society with multivariate**

Given the specifics of these issues, the authors identified the five megatrends mentioned above in the context of Kyrgyzstan.¹⁴ As of today, the most comprehensive overview of global development trends is set forth in the *technical document of European Environment Agency*¹⁵ and *Report of the UN Economist Network for the UN’s 75th Anniversary “Shaping the Trends of Our Time.”* Understanding the dynamics of interaction between different trends will help identify the leverage points¹⁶ for adaptive and flexible management of public health resources in the context of the Kyrgyz Republic. Megatrends send signals on development directions of a system and its components and, by implication, on challenges and opportunities

on the ways up and forward. Understanding their direction and interactions contributes to adaptive management of systems and subsystems (for instance, healthcare system, education system, etc.).

¹³ Of note, in Kyrgyzstan the “neo-traditionalists” (with a conservative bias) are engaged in ideological competition with a modern mindset. The latter is focused on making the country to integrate into the global trends with an adequate set of values, behavioral norms and competencies (to be able to collaborate, and at times – to compete, with other actors of the global ecosystem).

¹⁴ UNDESA. (2020). *Shaping the Trends of Our Time*. <https://www.un.org/development/desa/publications/wp-content/uploads/sites/10/2020/09/20-124-UNEN-75Report-2-1.pdf>

¹⁵ European Environment Agency. (2015). Global megatrends assessment: Extended background analysis complementing the SOER 2015 ‘Assessment of global megatrends.’ <https://www.eea.europa.eu/publications/global-megatrends-assessment-extended-background-analysis>

¹⁶ “Leverage points” within a complex system (a corporation, an economy, a living body, a city, an ecosystem) are those places where even a small shift in one thing can produce big changes in the entire system. For more information: <http://donellameadows.org/archives/leverage-points-places-to-intervene-in-a-system/>

Table 1. Comparative table of trends

European Environment Agency (2017)	United Nations Department of Economic and Social Affairs (2020)
<ol style="list-style-type: none"> 1) Global population trends 2) Urbanization 3) Changing disease burdens and risks of pandemics 4) Accelerating technological change 5) Continued economic growth? 6) An increasingly multipolar world 7) Intensified global competition for resources 8) Growing pressures on ecosystems 9) Increasingly severe consequences for climate change 10) Increasing environmental pollution 11) Diversifying approaches to governance 	<ol style="list-style-type: none"> 1) Climate change, natural capital and pollution 2) Demographic trends in an aging world 3) Urbanization 4) Emerging and frontier technologies 5) Inequalities

FAMILY

In the backdrop of the changes of the traditional lifestyle caused by the aforementioned megatrends (migration, urbanization, technologies), the family has also changed, but did not become insignificant. Despite the diversity of family forms, “couples who live with children of any age, including adult offspring, represent 38.4 per cent of all households globally, making this the most prevalent household type in most regions.”¹⁷

One more trend demonstrates that because of increasing longevity, the intergenerational interactions and linkages have also increased in families.¹⁸ These relations became the vital resource of increased family solidarity and mutual assistance. Moreover, dwindling government support for social service systems in many parts of the world results in a situation when families are more important for health and well-being of people, especially for children, terminally ill people, disabled persons and the elderly.¹⁹ COVID-19 has vividly illustrated the role of the family in a crisis. This fact makes to believe that the requisite programmes and policies that strengthen and support family and family planning mitigate the risks of various crises and their components: a demographic shift, migration, urbanization, climate change, and (breakthrough) latest technologies.

It has long been known that strengthening and development of measures for family support leads to the growth of social and economic capital and, simultaneously, to improvement of citizens’ and community well-being. Such coordinated efforts help to cover the most vulnerable groups of population across the globe and help them realize their rights, opportunities and deliver on their full potential. However, this task requires a **systemic approach** which can identify the complex ways of intersection and interaction of different factors and trends that lead to a desired configuration to solve these problems. Such **systemic approach** should become a

¹⁷ UN Women. (2019). *Progress of the world's women in 2019-2020: Families in a changing world*, p. 61. <https://www2.unwomen.org/-/media/headquarters/attachments/sections/library/publications/2019/progress-of-the-worlds-women-2019-2020-en.pdf?la=ru&vs=3512>

¹⁸ Ibid.

¹⁹ Trask, B.S. (2010). *Globalization and families: Accelerated systemic social change*. Springer; Trask, B.S. (2014). *Women, work and globalization: Challenges and opportunities*. Routledge.

priority of public policy, aimed at implementation of *the 2030 Agenda for Sustainable Development and SDGs* (Agenda 2030). Policy development requires understanding of not only horizontal and vertical structures in public health systems, but also systemic interdependencies between policy and trends, initially within the country as a standalone system. Meanwhile, it is also important to keep in mind that this system is continuously interacting with other “external” systems and is incessantly changing under their influence. Understanding megatrends is some sort of a vision of “underflows” changing the whole architecture of the system (industry, institutions, etc.).

Family planning as one of the most effective strategies for improving of the public wellbeing is a leverage point for the system, which can lead to a solution of issues of **human rights, women’s empowerment, poverty reduction** and **sustainable development**.

The 1989, 1999 and 2009 population censuses in the Kyrgyz Republic demonstrate a slight increase in the average family size across the country (from 4.7 people in 1989 to 5.0 – in 2009). Within this period, this indicator has increased only in urban settlements (from 3.9 to 4.0 people) due to migration of rural population to urban areas. In rural areas it did not change (5.2 people).²⁰

Table 2: Changes in family size
(population censuses, as a percentage of the total number of families)

	Total families	including families consisting of, # of people					
		2	3	4	5	6	7 and more
1989							
Total population	100	17.1	17.3	20.8	15.3	10.9	18.6
Urban population	100	23.6	22.7	24.6	13.6	7.2	8.3
Rural population	100	12.0	13.3	17.9	16.5	13.8	26.5
1999							
Total population	100	14.5	15.9	20	18.2	13.9	17.5
Urban population	100	22,3	21,9	22,6	15,9	9.1	8.2
Rural population	100	9.5	12.1	18.3	19.6	17.0	23.5
2009							
Total population	100	12	14,5	19,1	19,4	14,9	20,1
Urban population	100	19.0	20.3	22.3	17.4	10.3	10.7
Rural population	100	7.7	10.9	17.2	20.5	17.7	26.0

The most common type of family both in urban and rural areas is a family consisting of a couple with children – 45 percent out of the total number of families (in 1989 – around 60%, 1999 – 47%).²¹ The 2009 population census shows a prevalence of nuclear households in Kyrgyzstan – it’s predominantly a married couple with children that accounted for about 56 percent of households. The proportion of extended households consisting of two and more nuclear families comprised 34 percent of households. Single-person households (one-person households) comprised 9 percent, and composite households consisting of non-relatives – approximately 2 percent.

²⁰ *Comprehensive* (general censuses) or *sample household surveys* are key sources for data on composition, structure and size of families and households. The major part of Kyrgyzstan’s population lives in families. In 2009, there were 1,310,000 families (1,031 mln), with an average size of five people (4.7 people – in 1999) (as per population census data and data from housing funds as of 2009).

²¹ As per population census results and data from the housing census of 2009.

Out of the total number of families, 811.3 thousand or 79 percent had children under 18 years old (in 1989 – 77%, 1999– 81%). In 2009, single-child families accounted for 29 percent out of the total number of families having children under 18 лет years old (with two children – 30%, with three – 23%, with four – 12%, with five and more – 6%).

Table 3: Families with children under 18 years old, by size
(population and housing censuses data as of 2009)

	No. of families, thous.	including family members, thous. people	Families consisting of (number of people), thousand							Average family size, people
			2	3	4	5	6	7 and more		
								no. of families	incl. family members, thous. people	
All families	1,030.5	5,143.4	124.0	149.3	196.9	199.6	153.2	207.5	1,742.8	5.0
Families with children under 18	811.3	4,477.7	24.3	93.1	161.2	182.6	146.4	203.7	1,713.9	5.5
including:										
1 child	236.3	956.3	24.3	78.7	54.8	41.6	21.9	14.9	112.6	4.0
2 children	245.5	1,242.8	-	14.4	100.4	53.0	39.5	38.2	296.4	5.1
3 children	182.2	1,102.3	-	-	6.0	86.0	37.5	52.8	423.6	6.0
4 children	95.6	683.8	-	-	-	2.0	47.0	46.6	392.0	7.2
5 and more children	51.7	492.5	-	-	-	-	0.5	51.2	489.2	9.5

Over a 30-year period, a share of families with 1-3 children has grown (74.4% – in 1989 and 81.8% – in 2009) and a share of families with four and more children has declined (from 26% – in 1989 to 18% – in 2009). An increase in birth of children with a short intergenetic interval is a disturbing trend: from 2006 to 2019, the percentage of children born at interval from “1 year and less to 2 years” has increased from 28.8 to 32.1 percent, and “from 1 year and less to 3 years” from 47.5 to 52.1 percent.

The family institution in the Kyrgyz Republic is changing and not least due to the influence of global megatrends. Exploring the so-called “Kyrgyz” family in the global context has a number of challenges. Nevertheless, some studies of Kyrgyz families, somehow or other, have already delved into the issues of shaping and changing family values on the threshold of epochs. Some studies claim that democratization and diffusion of Western, egalitarian models of family relationships have a stronger effect on parenting roles than religious traditionalism.²² Changes in society’s values and democratization have also influenced the decline in traditional marriage practices (“ala-kachuu” and arranged marriages)²³ – as a matter of modernization of marriage behavior in the region. Despite transformation of family values, the family remains a physical, social and biological need, which is being adapted to modern life conditions because of a variety of socioeconomic factors (poverty, unemployment, labor migration, etc.). It can lead to the prolongation of reproductive life and marriage age due to obtaining education, career growth

²² Wejnert, B., & Djumabaeva, A. (2005). From Patriarchy to Egalitarianism: Parenting Roles in Democratizing Poland and Kyrgyzstan. *Marriage & Family Review*, 36(3-4), 147-171. doi:10.1300/j002v36n03_08

²³ Nedoluzhko, L., & Agadjanian, V. (2015). Between Tradition and Modernity: Marriage Dynamics in Kyrgyzstan. *Demography*, 52(3), 861–882. doi:10.1007/s13524-015-0393-2

and improving material well-being.²⁴ There is a growing tendency for birth of children born to single mothers and out of wedlock (in unofficial unions).²⁵

Table 4: Families with children under 18 years old, by size
(The 1989 all-Union population census)

	No. of families, thous.	incl. family members, thous. people	Families consisting of (number of people), thous.						7 and more		Average family size, people
			2	3	4	5	6	No. of families	incl. family members, thous. people		
All families	856.2	3,998.9	145.9	148.2	178.1	130.6	93.9	159.5	4.7		
Families with children under 18	662.2	...	26.7	103.2	160.6	123.9	90.8	157.0	5.3		
including:											
1 child	178.3	...	26.4	89.9	36.0	17.5	6.0	2.5	3.4		
2 children	192.7	...	0.3	13.2	119.1	31.4	17.9	10.8	4.5		
3 children	121.6	...	-	0.1	5.5	72.4	20.9	22.7	5.6		
4 children	77.4	...	-	-	0.05	2.6	44.7	30.0	6.7		
5 and more children	92.2	...	-	-	-	0.03	1.3	90.9	8.7		

Globally, impact of megatrends on family and on an individual is not sufficiently explored, let alone the development of relevant programmes and policies supporting family and individual. Radical and rapid changes (transformations) of external environment and their consequences for families, including the recent COVID-19 pandemic, has not yet become the subject of rigorous and evidence-based empirical analysis. Even prior to the pandemic, in terms of ethnographic, anthropological, economic and other approaches, the picture of the family way of life and its interaction with a variety of shifts in the environment has not been crystal clear.²⁶ Up to now, in a majority of countries, family planning policy and programmes were developed in a less complex context of family life patterns than in the context shaped by 2020: different levels of migration, changes in mortality dynamics and birth rate, technologies, intergenerational ties, correlation between the unitary family with intergenerational family forms, etc. Today, there is a specific need to understand which programmes and policies might provide an adequate response to key social and family changes in the context of a dynamically developing world with numerous issues of social, political, ecological and other nature. For example, the highest population growth in Kyrgyzstan for more than 1.1 million people from 2010 to 2020 in the country's demographic history raises a number of FPRH issues to deal with in the next decade. One of the gravest challenges is lack of contraceptives for women under 30 for planning the birth of the children, and for older women – for limiting family size and the necessity to enter the labour market. Other challenges and opportunities in FPRH identified in this review of megatrends are set forth in respective sections.

²⁴ Исманова, Н.А. (2020, 12 марта). *Дисфункциональность института семьи в условиях трансформации кыргызского общества* [Доклад]. Евразия и глобальные социально-экономические изменения. VII Международный конгресс социологов тюркского мира, Казанский федеральный университет. https://dspace.kpfu.ru/xmlui/viewer?file=159438:F_Congress2020_452_459.pdf&sequence=-1&isAllowed=y.

²⁵ Усубалиева, А. А., & Лирова, Г. Р. (2018). Феномен сознательного одинокого материнства в современном Кыргызстане. *Вестник Кыргызского Национального Университета имени Жусупа Баласагына*, (2), 110-113.

²⁶ Fingerman, K. & Birditt, K. (2020). A decade of research on intergenerational ties: Technological, economic, political and demographic changes. *Journal of Marriage and Family*, 82, 383-403.



I: DEMOGRAPHY AND EXTERNAL MIGRATION

The global demographic trends identified from the mid-20th century²⁷ are *declining fertility* and *population ageing*, which has led to the need in fundamental revision of approaches in social protection and pension systems.²⁸ The gradual decline in birth rates, population ageing and an increased share of such population are observed in all countries across the world and represent a significant social transformation.²⁹

Table 5. Fertility, mortality and life expectancy indicators for the Kyrgyz Republic
(per 1,000 population), source: NSC KR

Indicators	1989			1999			2009			2019		
	M	F	All	M	F	All	M	F	All	M	F	All
Mortality	7.8	6.7	7.2	7.4	6.2	6.8	7.6	5.8	6.7	5.8	4.5	5.2
Fertility	32.1	29.0	30.5	22.3	20.7	21.5	26.3	24.1	25.2	27.7	26.0	26.9
Life expectancy, years	64.3	72.4	68.5	64.9	72.6	68.7	65.2	73.2	69.1	67.6	75.8	71.5

International Conference on Population and Development (ICPD) in 1994 has substantially changed the ideology in the area of *population and development*, because instead of purely demographic approach to family planning, it promoted the adoption of the human rights-based approach to take account of the needs, aspirations and a situation of every woman. In turn, on the global level it led to improved indicators of the progress of society and civilization. In societies, where women and girls lack an opportunity to realize their right to family planning, more children are born in material hardship, which harms their health and lower odds for better lives for themselves and their families.

The Kyrgyz Republic reached the stage when mortality of population has dropped with the fertility rate remaining high (Diagram 1).³⁰ For the past years, the dynamics of population growth, by world standards, remains quite high – over two percent, due to the natural population growth. The fertility decline in the country has started in 1960s and in the long term, it will inevitably continue due to the changes such as urbanization, women entering the workforce, a higher educational attainment of population (longer education periods), contraception use, realization of reproductive rights and family planning.

²⁷ Vollset, E.V., Goren, E., Yuan, C.W., Cao, J., Smith, A., Hsiao, T., Bisignano, C., Azhar, G., Castro, E., Chalek, J., Dolgert, A., Frank, T., Fukutaki, K., Hay, S., Lozano, R., Mokdad, A., Nandakumar, V., Pierce, M., Pletcher, M., Robalik, T., Steuben, K., Wunrow, H., Zlavog, B., & Murray, C. (2020). Fertility, mortality, migration, and population scenarios for 195 countries and territories from 2017 to 2100: a forecasting analysis for the Global Burden of Disease Study. *Lancet*, 396, 1285-1306.

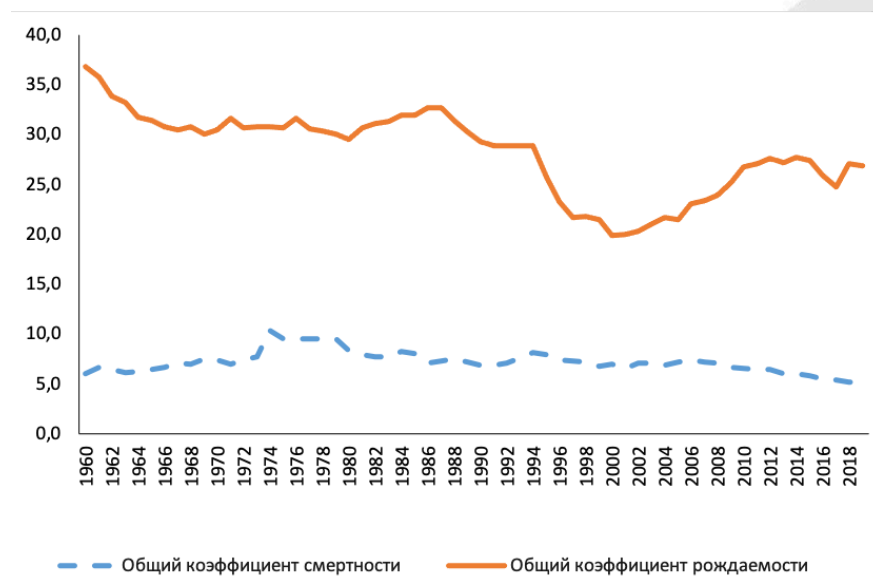
²⁸ Increasing longevity and accumulation of savings for old age lead to capital accumulation and economic growth.

²⁹ <https://www.un.org/ru/sections/issues-depth/ageing/index.html>

³⁰ According to NSC KR, the mortality rate of the population was 5.2 deaths per 1,000 and total fertility rate was 3.3 children per woman in 2019.

A country with increasing number of working-age population and declining fertility can get the demographic dividend. Such countries as Ireland, Southeast Asian countries, including China can serve as exemplary countries that have gained benefits from demographic dividend. According to some estimates, East Asia has achieved the most impressive economic growth, attributed to the demographic dividend.³¹

Diagram 1. Dynamics of birth and death rates in the Kyrgyz Republic, source: NSC KR



In the Kyrgyz Republic, due to the prevailing characteristics of the population structure there is a demographic window of opportunity. Natural decline in fertility and mortality results in increase in the number of working-age population. Appropriate socioeconomic policies and investments into young working-age population can help reap the demographic dividend. Family planning measures can play a vital role in using a demographic window of opportunity and

receive the demographic dividend.³² One of the challenges in this area is the country's poverty level. Despite the Kyrgyz Republic's formal a "lower-middle-income" country status,³³ in practice the level of multidimensional poverty or "deprivation" in FPRH may mean that families, hard-pressed to go for a *one-time child birth benefit*, are often exposed to perverse incentives, thus endangering the mother and child health, neglecting a healthy spacing between births and long-term interests of families.

Over the past 20 years, the population of the Kyrgyz Republic has increased by 1.6 million people. As per statistics, nearly 50,000 couples get married in the country annually. Along with population growth there is an increase in demand for family planning and reproductive health services, including the need to inform the greater number of people. Such an unmet need may affect the quality of life down the road.

Women are a more vulnerable group due to their reproductive role and gender inequality in society. Negative implications of a failure to observe proper spacing between pregnancies, inadequate support during pregnancy, at the time of childbirth and in the postpartum period cause health problems.

According to DHS KR 2012, MICS 2014 and MICS 2018 findings, not all men and women in Kyrgyzstan have an equal **access** to reproductive rights and family planning because of their economic and social status. Contraceptive use is positively associated with the progress of

³¹ Bloom, D.E., Canning, D., & Sevilla, J. (2003). *The Demographic Dividend: A New Perspective on the Economic Consequences of Population Change*. RAND.

³² Акимова, Н. (2019, 11 апреля). Демографические дивиденды – это результат предпочтений поколений. *Акчабар. Финансовый портал №1*. <https://www.akchabar.kg/ru/article/economy/demograficheskie-dividendy-eto-rezultat-predpochtenij-pokole/>

³³ The household survey identified a 20.1 percent poverty rate in 2019, calculated using consumption expenditure, which is lower than that of the previous year by 2.3 percentage points.

human development index among women,³⁴ and planning childbirth – with opportunity of increasing the time for paid work. Women that are more educated use contraceptives more frequently.

Thus, enhancing reproductive health of women contributes to economic empowerment of not only a woman but also the entire family in the long run. One of strategies for preparation for the “ageing” trend may include the insurance of universal access to sexual and reproductive health for younger generations, as well as introducing effective family planning tools.³⁵ Since it is a healthy population that can ensure sustainability of the process without additional cost for treating the diseases caused later in life due to neglecting them at a young age.³⁶

The demographic trend in today’s world is interconnected with migration. According to research, “feminization of migration flows, in particular, leads to changes in family planning strategies, and sexual and reproductive behavior.”³⁷ Labour migration became a fundamental part of life in many families of the Kyrgyz Republic. Migrant women alter their reproductive behavior, reducing the number of planned births and delaying pregnancy to a later age, as they lack opportunities to give birth to children in labour migration. It is not only about a postponement of births, but also about attitudes towards limiting the total number of children.³⁸ Thus, women start thinking about **planning** and looking for reproductive health services, which can be challenging due to the lack of **availability**.³⁹

Although migration is one of the factors of demographic dynamics in the country, its qualitative characteristics are understudied, let alone family planning and reproductive health issues from the gender vantage point.

Box 2. Example of FP policy in China

A priori, impact of family planning is unknown and has different effect depending on the context and type of research. Despite the fact that ageing and the effects of family planning are one of the major factors related to living standards of the population, this issue is insufficiently explored due to duration of the cohort of influence of family planning processes in old age. A series of studies suggest that parents with fewer children can reallocate more resources to themselves, investing into mental and physical health, education and business. In China, where the “later, longer, fewer” family planning policy was first introduced in 1970s, research demonstrates that parents exposed to family planning, have a higher level of physiological fitness at old age, but at the same time, they have the symptoms of severe depression compared to parents who are not exposed to this policy.

³⁴ Finlay, J., & Lee, M. (2018). Identifying Causal Effects of Reproductive Health Improvements on Women’s Economic Empowerment Through the Population Poverty Research Initiative. *Milbank Quarterly*, 96(2): 300-322. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5987803/>

³⁵ International Planned Parenthood Federation. (2018). *IMAP Statement on sexual and reproductive health and rights of the ageing population*. <https://www.ippf.org/sites/default/files/2018-03/IMAP%20Statement%20-%20SRHR%20of%20the%20ageing%20population.pdf>

³⁶ From the family planning and reproductive health vantage point, a country that postpones ensuring universal access to sexual and reproductive health services, will have additional health expenditures in the coming years and will miss economic benefits from the demographic dividend expected in Kyrgyzstan until 2080 (UNDESA, 2020, p. 55).

³⁷ Пешкова, В., & Рочева, А. (2013, 20 мая – 2 июня). Мигрантки из Средней Азии в большом городе и беременность: выбор, проблемы, перспективы. *Демоскоп Weekly*, 555-556. <http://www.demoscope.ru/weekly/2013/0555/analit03.php>

³⁸ Тюрюканова, Е.В. (ред.) (2011). *Женщины-мигранты из стран СНГ в России*. Макс пресс. <https://publications.hse.ru/mirror/pubs/share/folder/pfwv3yiwye/direct/81010041.pdf>

³⁹ Access can be geographic, financial, informational, etc.

Reproductive attitudes of women in migration have three trajectories depending on adaptation to the host social environment:

- 🕒 maintaining reproductive attitudes adopted in the country of origin;
- 🕒 copying reproductive behavior from the citizens of the host country;
- 🕒 non-observance or alteration of reproductive calendar due to “the stress of adaptation.”⁴⁰

Migration affects reproductive behavior of women and families, reducing the number of planned births – through delaying of pregnancy and changing attitudes towards limiting the total number of children.⁴¹ It's caused first and foremost by financial reasons. In addition there is a lack of sexuality education, low awareness of family planning and reproductive health matters. In young age, this is not a priority.

Because the labour migrants from Kyrgyzstan are the least protected category of population in destination countries, their access to medical services is limited due to the lack of a residence permit or temporary residence permit. At the same time, higher levels of education, income, holding a citizenship by women migrants or their family members/relatives enhances or facilitates access of women to health care services.⁴² According to a survey of Kochkin et al.,⁴³ migrants are aware of and use the services of medical centers in Moscow established by doctors from Kyrgyzstan.

Researchers note poor awareness of migrants of sexual and reproductive health issues.⁴⁴ Women migrants from Central Asia face difficulties if they insist that their regular sexual partner uses condoms.⁴⁵ Low awareness about sexual life, persistence of sexual behavior models, small share of mixed marriages and limited access to health services are associated with low contraceptive use among migrant women.⁴⁶ The number of abortions can indicate extent of unwanted pregnancies, which, in its turn, is a sign of unavailability of contraceptives for migrants.

A lack culture for using protection (condoms) leads to an increased risk of sexually transmitted infections (STI) for migrants. In addition, migrants can become vehicles of HIV infection upon their return to their home country.⁴⁷ This alarming trend related to literacy, responsibility and access to contraceptives is already increasing the number of “newly detected” HIV-infections

⁴⁰ Казенин, К.И., Козлов, В.А., Митрофанова, Е.С., Варшавер, Е.А., и Рочева, А.Л. (2019). Рождаемость среди иностранных трудовых мигрантов в России и влияющие на нее факторы. *Вестник Института экономики Российской академии наук*, 1: 100-111. http://mer-center.ru/_ld/1/134_rozhdaemost-sre.pdf

⁴¹ Тюрюканова, Е.В. (ред.) (2011). *Женщины-мигранты из стран СНГ в России*. Макс пресс. <https://publications.hse.ru/mirror/pubs/share/folder/pfwv3yiwye/direct/81010041>

⁴² Рочева, А. (2014) «Понаехали тут» в роддомах России: исследование режима стратифицированного воспроизводства на примере киргизских мигрантов в Москве. *Журнал исследований социальной политики*, 12(3), 367-380. http://mer-center.ru/_ld/0/21_50324883.pdf

⁴³ http://mer-center.ru/_ld/0/27_50325579.pdf

⁴⁴ Ryazantsev, S.V., and others (2014). Transformation of sexual and matrimonial behavior of Tajik labour migrants in Russia. *Asian Social Science*, vol. 10, No. 20, pp. 174-183; Amirhanian, Y.A., and others. (2011). Male labor migrants in Russia: HIV risk behavior levels, contextual factors, and prevention needs. *Journal of Immigrant and Minority Health*, vol. 13, No. 5, pp. 919-928; Yevsyutina Yu.V. (2015). Rezul'taty issledovaniya «Osvedomlennost' migrantov o tuberkuleze i VICH» [Results of the study "familiarity of migrants about tuberculosis and HIV"] (presentation of the results of the research by Poletayev D. and Florinskaya Yu. Familiarity of migration about tuberculosis and HIV". Moscow, January 2015) Available from <https://internist.ru/publications/detail/rezultatyissledovaniya-osvedomlennost-migrantov-o-tuberkuleze-i-vich/> (accessed 10 July 2017).

⁴⁵ Агаджанян, В., и Зотова, Н. (2014). Миграция и риски ВИЧ-инфекции: женщины - выходцы из Средней Азии в Российской Федерации. *Демографическое обозрение*, 1(2): 85-109. <https://cyberleninka.ru/article/n/migratsiya-i-riski-vich-infektsii-zhenschiny-vyhodtsy-iz-sredney-azii-v-rossiyskoy-federatsii/viewer>

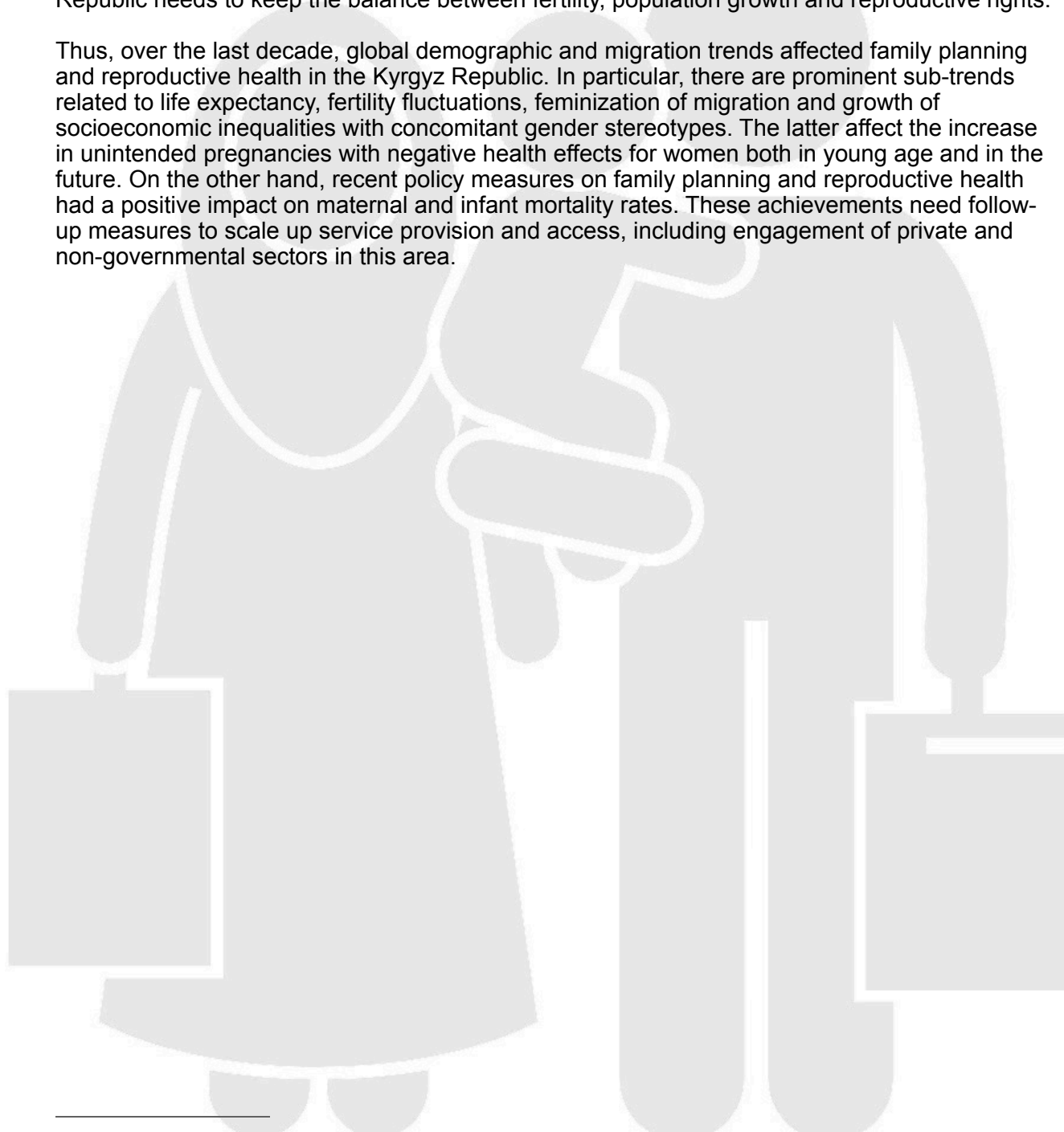
⁴⁶ Пешкова, В., & Рочева, А. (2013, 20 мая – 2 июня). Мигрантки из Средней Азии в большом городе и беременность: выбор, проблемы, перспективы. *Демоскоп Weekly*, 555-556. <http://www.demoscope.ru/weekly/2013/0555/analit03.php>

⁴⁷ Министерство здравоохранения Кыргызской Республики. (2019). *Сборник «Здоровье населения и деятельность организаций здравоохранения Кыргызской Республики»*. <https://tinyurl.com/y5gj324j>

among migrants who returned to the Kyrgyz Republic: in 2019 – more than 71 percent through sexual contact.⁴⁸

Empirical evidence suggests that with overall increase in gender equality, growing importance of self-realization and freedom of choice, women decide to have fewer children.⁴⁹ The global fertility rate declined from 3.2 live births per woman in 1990 to 2.5 in 2019 with projected further decrease to 2.2 children in 2050.⁵⁰ In the Kyrgyz Republic, fertility rate has fallen from 3.6 live births per woman in 1990 to 2.4 in 2000 with further growth to 3.3 in 2019. Considering demographic safety of the country and the densely populated neighboring countries, the Kyrgyz Republic needs to keep the balance between fertility, population growth and reproductive rights.

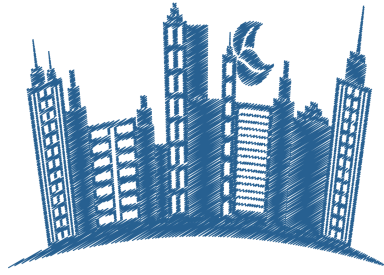
Thus, over the last decade, global demographic and migration trends affected family planning and reproductive health in the Kyrgyz Republic. In particular, there are prominent sub-trends related to life expectancy, fertility fluctuations, feminization of migration and growth of socioeconomic inequalities with concomitant gender stereotypes. The latter affect the increase in unintended pregnancies with negative health effects for women both in young age and in the future. On the other hand, recent policy measures on family planning and reproductive health had a positive impact on maternal and infant mortality rates. These achievements need follow-up measures to scale up service provision and access, including engagement of private and non-governmental sectors in this area.



⁴⁸ Сардор, Кыргызстан, 24 года. (2020, 9 декабря). Пусть люди нас не боятся, ВИЧ просто так не передается. *Региональная экспертная группа по поддержке мигрантов*. http://migrationhealth.group/sardor-kyrgyzstan/?fbclid=IwAR3xGNZzYy3zmhaxGQXF97muMkRfRkYU_g52AXV8kfvFA-xb4SkLQao5iA

⁴⁹ Chin, Lee, Son & Sung, 2012; Keck & Saraceno, 2013.

⁵⁰ UN Population. United Nations Department of Economic and Social Affairs. (2019). *World Population Prospects 2019: Highlights*. https://population.un.org/wpp/Publications/Files/WPP2019_10KeyFindings.pdf.



II: URBANIZATION AN INTERNAL MIGRATION

Just like everywhere else in the world, urban population in the Kyrgyz Republic is growing due to internal migration. Large cities, provincial and district centres of the republic attract⁵¹ working-age population of the reproductive age because of education, employment, improvement of living conditions, better access to social and cultural services, etc.

With change of place of residence (mainly from rural to urban), engagement in labour, educational and other routine processes, people's *need to get information about their reproductive rights, family planning, as well as met need for contraceptives* either changes or develops. As a result, municipal social services should be ready to satisfy the need in family planning and reproductive health. Apart from that, internal migrants can alter their reproductive behavior in accordance with their environment and their own resources.

It is generally assumed that urbanization leads to fertility decline through various social mechanisms. This is particularly evident among the second and third generations of migrants who have moved to the cities, thanks to access to information, a higher level of education and quality of life. For instance, women with the highest educational attainment have the lowest average number of children, which decreases with the increase in the size of the human settlement.⁵² Over the last ten years, in the Kyrgyz Republic the number of children in urban population compared to rural population had a tendency to increase.⁵³ It can be explained by the observation that mass displacement of population from less affluent areas to urban areas do not change reproductive attitudes,⁵⁴ to some extent confirming a hypothesis that psychological attitudes change only in one generation which has lived in a city or another country.

There is a positive correlation between urbanization and economic growth: almost all countries have reached 50 percent urbanization by the time they attain middle-income status.⁵⁵ Urbanization is one of the most complex megatrends because of a broad range of related areas. It brings both many risks and many opportunities. A number of factors of other megatrends affect the sustainability and effectiveness of urbanization processes, such as good governance and equitable development (equity) (megatrend 5), demography and migration (megatrend 1), health (megatrend 3), as well as technological and economic ingredients (megatrend 4).

⁵¹ Interprovincial migration gravitates toward Bishkek City and Chuy Province.

⁵² Белов, А. А. (2019). Урбанизация и образование как факторы возрастной специфики репродуктивного поведения. *Журнал Белорусского государственного университета. Социология*, 2, 119-127. Доступно по <https://journals.bsu.by/index.php/sociology/article/view/1633>

⁵³ For more details see UNFPA report (2017). Population Situation Analysis in the Kyrgyz Republic.

⁵⁴ The distinctive features of the urban mode of life, often been described sociologically as consisting of the substitution of secondary by primary contacts, the weakening the bonds of kinship, and the declining social significance of the family, the disappearance of the neighborhood and undermining of the traditional basis of social solidarity. All these phenomena can be substantially verified through objective indices. Thus, for instance, low and declining urban-reproduction rates suggest that the city is not conducive to the traditional type of family life, including the rearing of children and the maintenance of the home as the locus of the whole round of vital activities (see Wirth, L. (2016). *Urbanism as a way of life*. http://www.yorku.ca/lfoster/2006-07/sosi3830/lectures/LouisWirth_Urbanismasawayoflife.htm).

⁵⁵ UNDESA. (2020). *Shaping the Trends of Our Time*. p.78. <https://www.un.org/development/desa/publications/wp-content/uploads/sites/10/2020/09/20-124-UNEN-75Report-2-1.pdf>

Table 6. Total fertility rate of urban and rural population in 1989, 1999, 2009, 2019 in the Kyrgyz Republic, source: NSC KR

#	Years	Urban areas	Rural areas	Birth rate in urban areas as % to rural areas
1	1990	2.48	4.50	55.1
2	1999	1.77	3.23	54.8
3	2009	2.63	3.04	86.5
4	2019	3.61	3.23	111.8

Bishkek's infrastructure, the key magnet for population from all regions of the country, is developing chaotically. It limits opportunities for addressing family planning and reproductive health issues. First, the lack of accurate data on population's needs, especially in "informal settlements" hampers development of policies and resources management and planning for these services. This, in turn, complicates access to healthcare and counselling services.

Second, rapid and spontaneous growth of urban population does not match the pace of building a family planning and reproductive health infrastructure. Taking account of a larger share of internal migrants in city populations, such lack of infrastructure substantially increases their vulnerability.⁵⁶ Absence of family planning and reproductive health interventions through a healthcare system in informal settlements (antenatal care, gynecological and urological services, awareness raising, and lack of qualified medical staff) in the medium term may affect maternal mortality level and lead to declining reproductive health of the population.

On the other hand, a lack of physical resources (equipped health clinics, availability of doctors) can partially be compensated through social and technological innovations – digitalization of health care services (telemedicine, mobile applications, online doctor consultations) and provision of digital consultations on family planning and reproductive health. Such objectives will be much more effective if they are implemented along with development of high-school curriculum on sexual and reproductive health. Thus, urbanization affecting fertility should be studied along with education.⁵⁷

The era of digital medicine calls for new legal norms, a certain regulatory framework. The legal framework on telemedicine will make it attractive for private investments (megatrend 5).

Bishkek 19 FMCs (family medicine centres) provide consultations and contraceptive services, including through its branches in new unplanned residential areas. However, the quality of these services is not yet monitored because of the lack of statistics on those FMCs that provide consultations and contraceptive services in Bishkek, Osh and the provinces. Without appropriate urban and spatial planning, new residential areas (some of them – former informal settlements) end up excluded from the city infrastructure network of healthcare services. Bishkek city has 50 new unplanned residential settlements with a population size of 250,000 people.⁵⁸

Urban environment and living in new residential areas increases vulnerability of women and girls without access to public transport, essential services (for instance, clean drinking water, healthcare and the like), and safe urban spaces free of harassment on the streets and in public

⁵⁶ United Nations Economic and Social Council. (2019). Review and appraisal of the Programme of Action of the International Conference on Population and Development and its contribution to the follow-up and review of the 2030 Agenda for Sustainable Development. Report of the Secretary-General. <https://www.un.org/en/development/desa/population/publications/pdf/trends/ConciseReport2019/English.pdf>

⁵⁷ Шамурзаева, А.С. (2017). Миграция и урбанизация в Кыргызстане. *Вестник КРСУ*, 17(6)

⁵⁸ Кактус. (2017, 28 августа). Жизнь за чертой. Как живет людям в новостройках вокруг Бишкека? *Kaktus.media*. https://kaktus.media/doc/362102_jizn_zh_chertoy_kak_jivetsia_ludiam_v_novostroykah_vokryg_bishkeka.html.

places.⁵⁹ The issues of access to healthcare services in new unplanned residential communities can be solved through self-organization of citizens into associations to approach municipal authorities and other civil society organizations with request to improve their living conditions as has already been done in other countries. Brazil, India, Kenya, the Philippines and other countries have already gone through such an experience of engaging municipal governments, women's organizations and workers of informal economy sector into collaborative efforts in this area.⁶⁰ On the other hand, capacity for self-organization of residents /citizens may lead to creation of new forms of family planning and reproductive health services that can then be scaled up. Specialized NGOs, that are more flexible than governmental institutions to capture and implement the latest trends in social and management technologies, are working towards shaping *civic awareness* of the population.

In sum, the urbanization and internal migration megatrend which is globally manifested through the decline of the number of children per woman, improved educational level (formal and informal), broadened outlook and changes in inequality dynamics, has the same sub-trends in Kyrgyzstan, except for fertility. It's linked to the level and an initial stage of urbanization in the country with prevailing first generation of urban population in cities and corresponding obsolete sociocultural norms of rural population. Moving to cities broadens an outlook and raises expectations of families in family planning and reproductive health services. Self-organization of citizens, private sector and non-governmental actors come up with new ways and approaches to services delivery. Such approaches are increasing the use of media platforms to inform and solicit feedback on FPRH in new unplanned (and vulnerable) residential areas, as well as in the country in general.

⁵⁹ Data on access of women and men to essential services in MICS, IHS (integrated household surveys), and MDGs monitoring databases are available here: <http://www.stat.kg/ru/ceii-razvitiya-tysyacheletiya/>), SDGs: <https://sustainabledevelopment-kyrgyzstan.github.io/5/>), and in Compendium "Women and Men of the Kyrgyz Republic" (including section on SDG gender indicators): <http://www.stat.kg/ru/publications/sbornik-zhenshiny-i-muzhchiny-kyrgyzskoj-respubliki/>.

⁶⁰ UNDESA. (2020). *Shaping the Trends of Our Time*. p. 82 <https://www.un.org/development/desa/publications/wp-content/uploads/sites/10/2020/09/20-124-UNEN-75Report-2-1.pdf>.



III: HEALTHY LIFESTYLE AND INCREASING LONGEVITY

The global decline in fertility and mortality rates (except for countries of Sub-Saharan Africa), ageing population and epidemiological shift from infectious diseases related to malnutrition, hunger, and poor sanitation to degenerative and chronic diseases associated with increasing longevity, urban and “industrial” lifestyle, as well as the resurgence of drug-resistant infectious diseases in a global world, are also observed in Kyrgyzstan. The national healthcare programme “*Healthy Individual – Prosperous Country*” for 2019-2030 does not articulate a long-term healthcare goal in terms of *active longevity* and respective objectives focused on *healthy lifestyle, family planning and reproductive health*. It’s possibly implied though the goal stated as “strengthening of the health systems focused on the needs of population.”

Key drivers of the *healthy lifestyle and high life expectancy* megatrend include reduction of mortality rates, including infant and maternal mortality, access to medical services (health workers) and contraceptives, and healthcare sector policy.

Life expectancy of children born into smaller families is three years longer than those of born into larger families.⁶¹ In the long-term, family planning and reproductive health is a strategic area not only for maternal mortality rates, but also for the country’s *human development index*. Contraceptives use reduces the number of unwanted pregnancies and child mortality, leading to birth of planned and wanted children. Contraception helps achieve a smaller family size, which reduces the competition between siblings for attention and resources (for example, adequate nutrition and education) in the family. This appears to provide a positive healthy developmental environment that reduces mortality in the short- and long-term. Key factor of reproductive health – **increasing spacing between pregnancies** – is often overlooked when considering family planning approaches through the prism of demographic interests at the population level.⁶²

International Conference on Population and Development (Cairo, 1994) and the *Fourth World Conference on Women (Beijing, 1995)* became a starting point for the official recognition of the inseparability of a woman’s reproductive health from the social context of her life. The development of national statistical systems and an epoch of Big Data⁶³ enabled generation of datasets that consolidated national surveys from 74 countries, including Kyrgyzstan, representing three million women. It demonstrated trends for the demand and use of modern

⁶¹ Bloomberg School of Public Health. (2016, January 27). Life Expectancy Three Years Longer for Children Born Into Smaller Families in Developing World. *John Hopkins*. <https://www.jhsph.edu/news/news-releases/2016/life-expectancy-three-years-longer-for-children-born-into-smaller-families%20in-developing-world.html>.

⁶² Family planning plays a key role in a healthy and fulfilling life of women, a supportive environment for the whole family, with a serious impact on society.

⁶³ Big data is extremely large and complex data sets from many different sources. The size of these data sets is so large that traditional processing programmes are unable to handle them. They are initially “unstructured” data on socioeconomic development and the environment, generated through ICT outside of official statistics. Big data is characterized by (a) a large volume of information, (b) high velocity of information, and (c) variety and variability of data. The interaction between official statistics and big data has been seriously studied globally in recent years. The *United Nations Statistical Commission, the UN Global Working Group on Big Data for Official Statistics and UN Global Pulse’s research projects* represent the leading world centers in this area.

contraceptive methods and their interdependency with social and economic indicators.⁶⁴ Survey results showed population's met need for modern contraception in countries with improving gender equality and women's access to education.

In Kyrgyzstan, mainly women with middle and higher income levels, living in big cities have access to contraceptive methods, while women from rural areas with low income cannot afford them.⁶⁵ Despite promoting family planning programmes in the 1990s, the majority of women in Kyrgyzstan still do not have access to birth control pills.⁶⁶ Upon introduction of UNFPA's interim programme on provision of free contraceptives for low-income families in the Kyrgyz Republic, many women got access to new methods of contraception. After the completion of this programme in 2017, the Kyrgyz Government replaced UNFPA programme with introduction of 50 percent discount for contraceptive pills.⁶⁷ However, this discount covered only those covered by insurance, unavailable for rural women. This way or another, the number of people using *new methods* of contraception is growing every year. However, in the period from 1990 to 2019, contraceptive use in the country has been declining from 37.9 to 29.8 percent.⁶⁸ NSC KR also indicates the decrease in contraceptives use in the country from 2016.⁶⁹

The model of family planning and reproductive health services delivery in the Kyrgyz Republic shaped by the donor assistance to the country, which provided free contraceptives since 1990s (megatrend 5), is yet to be evaluated for its impact. In particular, it is important to understand the effects of free contraceptives on reproductive health and assess if contraceptives use has become the cultural norm after three years of programmes' completion (UNFPA, USAID, GIZ).⁷⁰

The contraceptive prevalence assessment in 2015, 42 percent of women of reproductive age (15-49 years old, married/in union) used any contraceptives methods in Kyrgyzstan. This indicator was below average among Central Asian countries. The most popular contraception methods were IUDs (22%), male condoms (10%) and birth control pills (4%).⁷¹

Meeting the need in contraceptives⁷² in the Kyrgyz Republic is challenging for a number of reasons. First, the country is not a producer of contraceptives, there is no system of a guaranteed supply of contraceptives, and a shortage of (public) resources limits procurement of goods, which makes imported contraceptives expensive for low-income families.

⁶⁴ Slaymaker, E., Scott, R.H., Palmer, M.J., Palla, L., Marston, M., Gonsalves, L., Say, L. & Wellings, K. (2020). Trends in sexual activity and demand for and use of modern contraceptive methods in 74 countries: a retrospective analysis of nationally representative surveys. *The Lancet Global Health*, 8: e567-79. Published online March 9, 2020. [https://doi.org/10.1016/S2214-109X\(20\)30060-7](https://doi.org/10.1016/S2214-109X(20)30060-7)

⁶⁵ Kyrgyz Republic. National Statistics Committee. United Nations Children's Fund (UNICEF). (2018). *Multi-indicator cluster survey. Final report*. <http://stat.kg/media/files/c50def33-f18c-44d3-aecb-1f45786034dd.pdf>.

⁶⁶ Beishenbek Kyzy, E. & Najibullah, F. (2017, June 4). End of UN Contraceptive Program In Kyrgyzstan A Bitter Pill For Many. *Radio Free Europe/ Radio Liberty*. <https://www.rferl.org/a/kyrgyzstan-contraceptive-pill-un-program/28527777.html>

⁶⁷ Бейшенбек Кызы, Э. и Наджибулла, Ф. (2017, 5 июня). Бесплатные противозачаточные в Кыргызстане заканчиваются. *Радио «Азаттык»*. <https://rus.azattyq.org/a/kyrgyzstan-besplatnye-kontraceptivy/28528581.html>

⁶⁸ World Fertility and Family Planning 2020. *Highlights*. UN Department of Economic and Social Affairs Population Division. p. 31. К 2030 прогнозируется скромный рост использования контрацептивов в Кыргызстане до 31.5% при текущих тенденциях.

⁶⁹ NSC data on the share of women of reproductive age who use contraceptives (% of overall number of women aged 15-49).

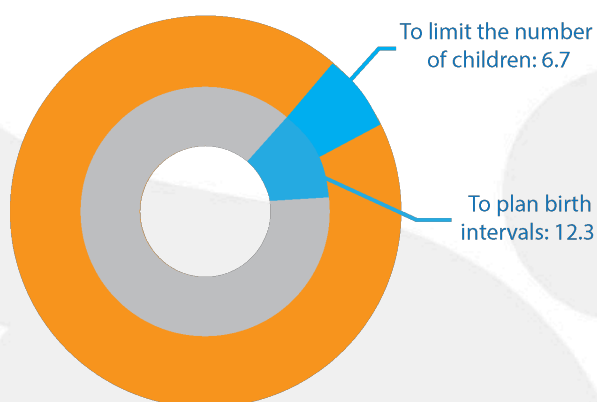
⁷⁰ Empirical data and impact evaluation of the programme are crucial for several reasons, including the need to design new programmes and approaches, as well as forecasting. For example, in Finland, free contraceptives had a positive impact on RH, the use of contraceptives has roughly doubled and abortions decreased by 16 percent. In addition, the number of unintended pregnancies decreased after the programme completion. In the US (Affordable Care Act), the model of contraceptives use and the number abortions of unwanted pregnancies remained the same upon completion of the programme.

⁷¹ United Nations, Department of Economic and Social Affairs, Population Division (2015). *Trends in Contraceptive Use Worldwide 2015* (ST/ESA/SER.A/349). <https://www.un.org/en/development/desa/population/publications/pdf/family/trendsContraceptiveUse2015Report.pdf>

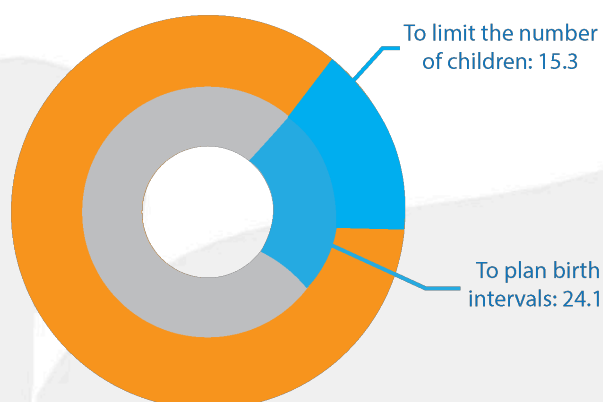
⁷² Women with unmet need for contraceptives, sexually active women of reproductive age who are currently married or in-union, but not using any contraception method, reported that they do not want any more children (limiting number of children) or wish to delay the birth of next child (planning the timing of the next pregnancy). All women's need for contraception is considered as met. Percentage of met need in contraception is defined as the share of women who are currently married or are in-union and at present are using contraceptives out of total need in contraception (total unmet need plus using contraceptives at present).

Women's need for contraception (married women or in union)

Unmet need in contraception



Met need in contraception



Source: MICS 2018

In Kyrgyzstan, as is the case in many developing Asian countries, the issue of sexuality remains a taboo.⁷³ Thus, the **sociocultural norms** of society represent a barrier to the use of sexual and reproductive health services. **Access to information** on modern contraceptive methods and mechanisms of their action plays a significant role in contraceptives use. **Women's education** is a key factor affecting effective contraceptive use.⁷⁴ Women with low income are among the majority of those with unmet need for contraceptives.⁷⁵ Therefore, government programmes on family planning should focus on health communication and education.⁷⁶ Such an approach has led to the unprecedented long-term improvement in Iran of 1990s (megatrend 5).

Access to and the use of effective contraceptives helps women and their partners realize their rights, take responsible and independent decisions on the desired number of children and spacing between pregnancies. Meeting family planning needs with modern methods averts unintended or frequent pregnancies that increase the risk of inadequate birth attendance and helps strengthen maternal and child health. Preventing early pregnancies is an essential strategy for improving maternal healthcare.

⁷³ Adhikari, R., & Tamang, J. (2009). Premarital sexual behavior among male college students of Kathmandu, Nepal. *BMC Public Health*, 9, 241. <https://pubmed.ncbi.nlm.nih.gov/19604383/>

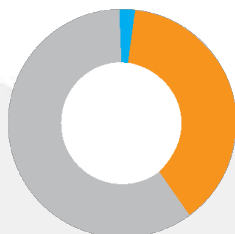
⁷⁴ Saleem, S., & Bobak, M. (2005). Women's autonomy, education and contraception use in Pakistan: a national study. *Reproductive Health*, 2(8), doi:10.1186/1742-4755-2-8. <https://pubmed.ncbi.nlm.nih.gov/16242030/>

⁷⁵ Najafi-Sharjabad, F., Syed Yahya, S.Z., Rahman, H.A., Hanafiah, M., & Manaf, R.A. (2013). Barriers of Modern Contraceptive Practices among Asian Women: A Mini Literature Review. *Global Journal of Health Science*, 5(5): 181-192. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4776867/>

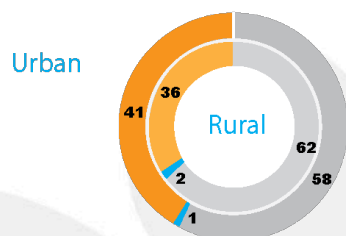
⁷⁶ Raheel, H., Karim, M.S., Saleem S., Bharwani S. (2012) Knowledge, Attitudes and Practices of Contraception among Afghan Refugee Women in Pakistan: A Cross-Sectional Study. *PLoS ONE* 7(11): e48760. <https://doi.org/10.1371/journal.pone.0048760>

Family planning methods by different by different characteristics

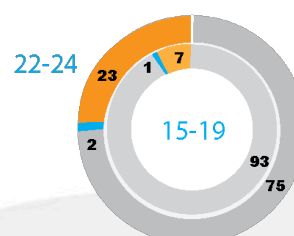
By method*



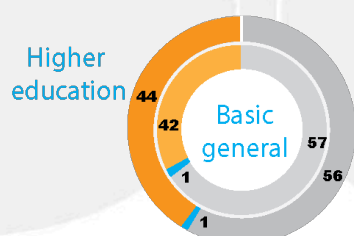
By locality



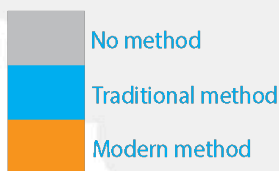
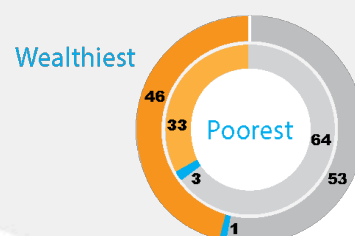
By age



By a woman's education



By wealth quintiles



Percentage of women of 15-49 years old in civil or common law marriage who use (or whose partner use) some contraception method.

*Modern methods include sterilization of women, sterilization of men, IUD, injection mortar, male condom, female condom, diaphragm, foam, cream. Traditional methods include periodic abstinence and coitus interruptus.

Source: MICS 2018⁷⁷

The unmet need for contraceptives is associated with unwanted pregnancies. For instance, in Angola, the odds of unwanted pregnancy were found to be as high as four times among women with unmet need compared with those had no unmet need.⁷⁸ Abortion can be seen as one of the primary consequences of unintended pregnancy with 50 percent likelihood.⁷⁹ Yet, this does not mean that only unwanted pregnancy might be the reason for having an abortion. According to 2012 survey, in Kyrgyzstan, the most frequently cited reasons for having an abortion were maternal health concerns (44%), limiting childbearing (15.9%), delaying childbirth (14.6%) and socioeconomic concerns (10.7%) among female respondents.⁸⁰ The abortions may indicate the situation in the cultural context, access to quality healthcare, childbirth plans and family planning support in the country. However, the reasons for having abortions do not fully reflect the circumstances pushing women to the abortion decision.

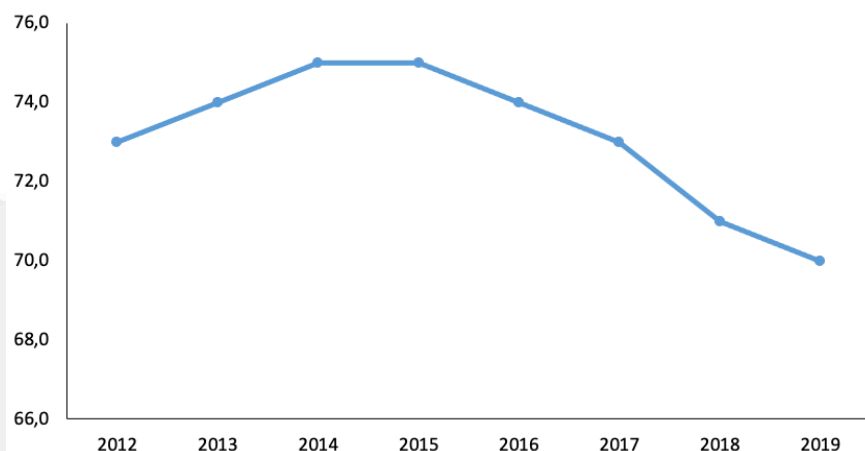
⁷⁷ Kyrgyz Republic. National Statistics Committee. United Nations Children's Fund (UNICEF). (2018). *Multi-indicator cluster survey. Final report*. <http://stat.kg/media/files/c50def33-f18c-44d3-aecb-1f45786034dd.pdf>.

⁷⁸ Yaya, S. & Ghose, B. (2018). Prevalence of unmet need for contraception and its association with unwanted pregnancy among married women in Angola. *PLoS One* 13(12): e0209801. <https://doi.org/10.1371/journal.pone.0209801>

⁷⁹ Brown, S. S., Eisenberg, L. (Eds.). (1995). *The Best Intentions: Unintended Pregnancy and the Well-Being of Children and Families*. National Academy Press. <https://www.ncbi.nlm.nih.gov/books/NBK232137/>

⁸⁰ Chae, S., Desai, S., Crowell, M., & Sedgh, G. (2017). Reasons why women have induced abortions: a synthesis of findings from 14 countries. *Contraception*, 96(4): <https://doi.org/10.1016/j.contraception.2017.06.014>.

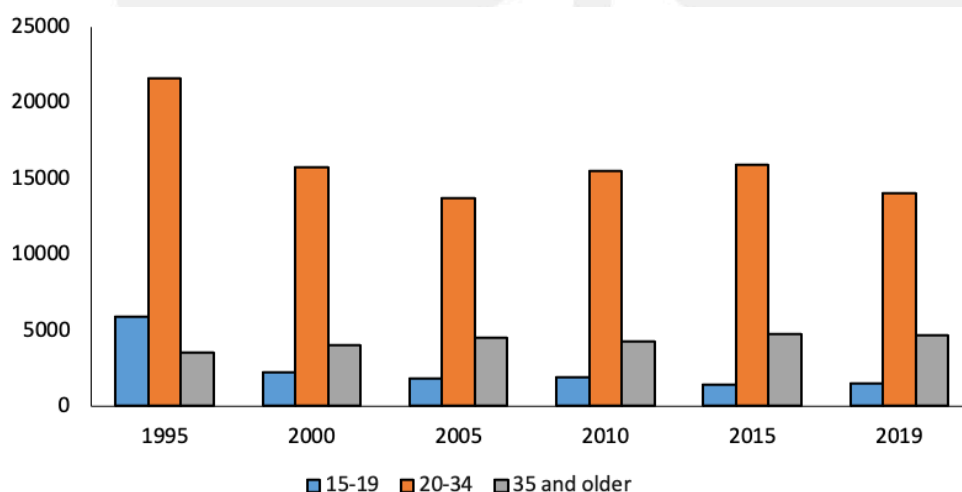
Diagram 2. Number unintended pregnancies (in thousands, women)



Unsafe abortions, carried out mainly on young or underage women, have the most precarious impact on reproductive health. However, the number of averted unintended pregnancies, unsafe abortions, and maternal deaths is declining with an increase in use of modern contraception methods in Kyrgyzstan.⁸¹ Maternal mortality is an indicator of reproductive health, and its increase, despite the

deterioration of data quality,⁸² requires close attention and immediate response now.

Diagram 3. Number of abortions by age groups, source: NSC KR



Maternal mortality rate is also related to educational attainment of women who died:⁸³

Educational attainment of women who died	% out of total number of maternal deaths
Primary education	6.8
Secondary education (11 grades)	61.5
Secondary technical education	24.0
Higher education	7.4

Social norms and stereotypes hinder the implementation of reproductive rights inextricably intertwined with reproductive health. The right to reproductive choice is a recognition of

⁸¹ Family Planning 2020. (2020). *Kyrgyz Republic. FP2020 Core Indicator Summary Sheet: 2018-2019 Annual Progress Report*. http://www.familyplanning2020.org/sites/default/files/Data-Hub/2019CI/Kyrgyz_Republic_2019_CI_Handout.pdf

⁸² Data quality degradation in recent years is also associated with reduction of identified causes of mortality based on autopsies: thus, if in 1989 causes of almost ¼ of all deaths were identified through post-mortem, in 2014-2015 autopsy was done only in 33.8 percent of cases. "Second report on confidential enquiry into maternal deaths in the Kyrgyz Republic" (2014-2015), p. 59.

⁸³ Ministry of Health of the Kyrgyz Republic. (2017). *Life of Kyrgyzstan's Mothers. Second Report on Confidential Enquiry into Maternal Deaths in the Kyrgyz Republic*. MHKR, p. 18. https://kyrgyzstan.unfpa.org/sites/default/files/pub-pdf/KRMS_RU_1.pdf.

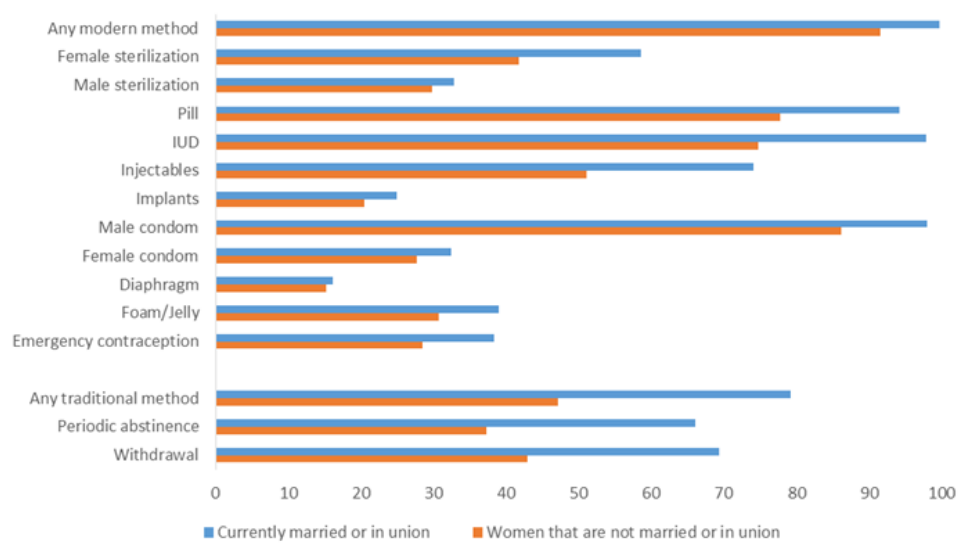
individual's right to make independent decisions on their health. Research indicates that “family planning” is most frequently understood by population as the decision to have children.⁸⁴ Such a decision is at best supported by abstinence from smoking and alcohol. Couples undergo a preconception medical checkup mainly in case of trouble getting pregnant. Usually, it is a woman who gets a checkup first. The *Voluntary National Review on the Implementation of Sustainable Development Goals in the Kyrgyz Republic* notes that “not enough attention is paid to the reproductive health of men, related oncological diseases and public awareness raising on these topics” (SDG Target 3.7).⁸⁵

From the family planning vantage point, an essential measurable criterion is **spacing between pregnancies** (births). However, the public opinion did not demonstrate the common understanding of the best interval:⁸⁶

The birth interval that is best for maternal health	1 year	2 years	3 years	4 and more years	It does not matter	Never discussed it
% of population supporting this view	4%	33%	46%	13%	3%	35%

Policy is also important shaping the system of benefits (incentives) and management decisions. For example, the honorary title Mother Heroine (“Baatyr Ene») is awarded to “women bearing and raising seven or more children.”⁸⁷ Too much of a focus on the number of children, without considering the quality of life of mother and child, and modern norms of healthy pregnancy and childbirth, outweighs the depletion of the body's resources, the difficulties of raising and providing for children. Implications of such intense “reproductive activity” for women’s health and maternal mortality rate are obvious. Policy measures should encourage increase of spacing between pregnancies up to three years at a minimum.

Diagram 4. Knowledge of various contraceptive methods



The sensitivity of contraception and sexual education in the country, urbanization, disruption of social ties and norms have left the entire generation without basic knowledge about the rules of safe sex and healthy gender relations. Given the deterioration of the education system, media and information

⁸⁴ Мирошник, М. (2015, 7 июля). Исследование: треть кыргызстанцев планирование семьи доверяют Богу. *Вечерний Бишкек*. https://www.vb.kg/doc/318354_issledovanie:_tret_kyrgyzstancsev_planirovanie_semi_doveriaut_bogy.html

⁸⁵ Government of the Kyrgyz Republic. Ministry of Economy of the Kyrgyz Republic. (2020). *Voluntary National Review on the Implementation of Sustainable Development goals in the Kyrgyz Republic*. https://kyrgyzstan.un.org/sites/default/files/2020-07/26459VNR_2020_Kyrgyzstan_Report_English.pdf.

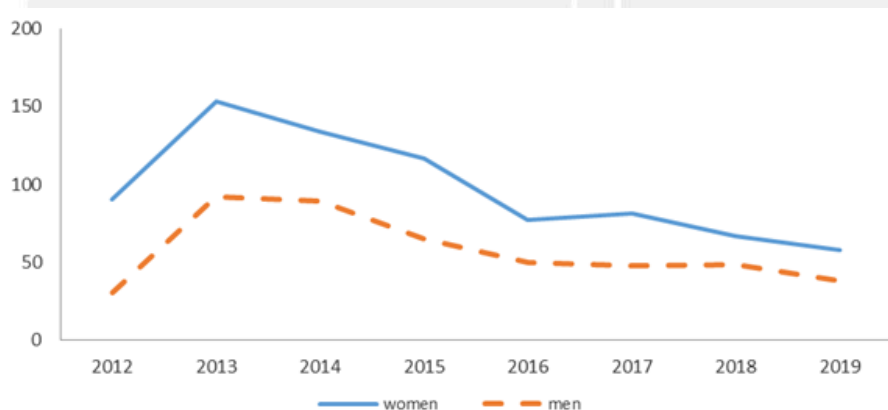
⁸⁶ A recommended minimum inter-birth interval is 2.5 years. This interval is made up of 12 months required for breastfeeding, nine months – for full recovery of a woman after delivery and breastfeeding, nine months is the duration of the next pregnancy. Less than a two-year interval between pregnancies and frequent births lead to women’s anemia, and more often complications during the pregnancy.

⁸⁷ This norm has been introduced on 1 January 2009. Prior to this, women with 10+ children (from 1996), 9+ (from 2007), 8+ (from 2008) were eligible for this award.

platforms for health communication on reproductive health are becoming a more effective vehicle. Such approach can become a catalyst for fundamental reforms in the education and healthcare systems (megatrend 5).

A focus on infertility issues is one of the priority areas of reproductive healthcare. Prevailing social norms and stereotypes make women “responsible” for infertility in couples, whereas 40-50 percent of infertility of couples is caused by male factors. The accurate assessment of causes and mechanisms of *male infertility* is not possible, since they normally visit private health clinics that do not disclose information about diseases. Research on male infertility indicates a growing trend of this dysfunction in the country and the majority of cases are registered in the southern region of the country.⁸⁸ However, given the absolute figures of infertility, there is not full confidence that men from the southern provinces are more prone to infertility because of the larger population size. Since data was collected from public health clinics, the assumption is that in rural areas people do not have access to private clinics (with higher quality standards for patient care) due to family income level and infrastructure of the region.

Diagram 5. Prevalence of male and female infertility (per 100 thousand population aged 15-49 by gender), source: NSC KR website <http://www.stat.kg/ru/ekonomicheskie-zapiski/>



In 2019, the prevalence of female infertility was 58 cases per 100 thousand female population aged 15-49. Among males, this rate was 38 cases per 100 thousand male population (Diagram 5). Evidently, the issues of men’s health should be integrated into gender health theory.

financial and human resources.⁸⁹ Given such a significant deficit of resources, family planning and reproductive health situation should be addressed in a comprehensive manner, where the system’s *leverage points* can be identified outside the *healthcare system*⁹⁰ and have a preventive role, reducing the unnecessary burdens on the healthcare system and its budget.

The healthcare system lacks infrastructure,

Thus, a comprehensive revision of life sciences approach in primary and secondary school curriculum, which should include elements of sex education, conception of human beings as part and parcel of nature and its structure. Sex education in the Kyrgyz Republic remains ideologically sensitive and politicized issue, with long-term implications for the next generation to pay the price for ignorance of the structure of the of human body and healthy sexual relations.

Government’s public health programme also aims at integration of ICT in the healthcare system, which can also be used as a *system’s leverage point*. COVID-19 pandemic has accelerated changes in telemedicine when doctors globally had to provide remote consultations. However, the telemedicine consultations have not been considered as hours spent by service providers, let alone the responsibility for online recommendations.

⁸⁸ Айбашов, М.Н., Байызбекова, Д.А., & Касымова Р.О. (2018). Ретроспективный эпидемиологический анализ распространенности и заболеваемости бесплодием среди мужского населения (подростки и взрослые) Кыргызской Республики за период 2003-2017 гг. *Современные проблемы науки и образования*, 6. <https://www.science-education.ru/ru/article/view?id=28468>

⁸⁹ The Programme of the Kyrgyz Republic Government on Public Health Protection and Health Care System Development for 2019–2030: Healthy Person – Prosperous Country.

⁹⁰ For example, in education system.

Telemedicine and ICT can support fundamental shifts in a public healthcare system, including reduction of health services costs, resources management (accounting and reporting documentation, patient registers, prescription database, electronic medical sick leave certificates), distance learning⁹¹ (e.g., simulation-based workshops on insertion of IUDs). It's a great future for family planning. Electronic public services can be turned into mobile application formats or chatbots, reducing the workload of health workers (prescribing medications, setting up appointments with doctors via smartphone, registration card at the outpatient clinic service, etc.).

A very active non-governmental sector of Kyrgyzstan supported by donors has been providing family planning and reproductive health services, particularly to vulnerable populations, for 30 years so far. In 2006, 42% of NGOs worked in the social sphere.⁹² However, there are no specific data on FPRH specialization. The most significant civic sector actors – *Kyrgyz Family Planning Alliance* (KFPA) and *Reproductive Health Alliance* (RHA) – have branches in all provinces of the country,⁹³ and have memberships in specialized networks and coalitions on safe abortion, sexual and reproductive health, women's and children's rights, among others.

The number of private maternity hospitals and centers on provision of FPRH services is yet another evidence of civil and private sectors' maturity. MHKR's data shows seven private maternity hospitals and 112 licensed private and legal entities providing private FPRH services. In the backdrop of a growing deficit of human and technical resources (megatrend 5), a new interaction paradigm for the healthcare sector's public institutions, including existing government procurement mechanisms, becomes increasingly important. Private sector often becomes a driver of innovations in the country, because it can afford importing technologies, is interested in introducing new services and nimbly adapts to the demands of the external environment.

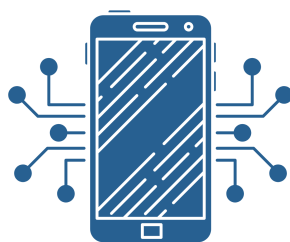
Introduction of big data in healthcare sector can enable development of individualized medicine. For instance, digitalization of healthcare sector brings about an understanding of how information about patients can identify a conflict between medications when the doctor prescribes treatment regimes. In family planning and reproductive health area, such an information can help in allocation of resources, information campaigns and policies on provision of quality services to women and men of reproductive age.

In sum, challenges of a healthcare trend related to quality of life and increasing longevity through family planning are interconnected with megatrends of technologies (megatrend 4) and policy (megatrend 5) to be touched upon in the next sections. Overall, megatrend of a healthy lifestyle and increasing longevity supported by health communication and improvements in youth's and women's education with a focus on spacing between pregnancies lead to healthy motherhood. A healthy mother is essential for wellbeing and development of a family and children, as well as for healthy ageing.

⁹¹ Simulation-based workshops in Europe on family planning: for example, the IUD is inserted by means of a computer mouse. Such trainings are practiced in Germany. In Kyrgyzstan, students still train on manikins.

⁹² Убышева, Э. (ред.). (2006). *Сектор НПО в цифрах и фактах (по результатам анкетирования лидеров НПО Кыргызской Республики)*. Ассоциация центров поддержки гражданского общества, стр. 9

⁹³ Kyrgyz Family Planning Alliance (KFPA) has two branches – in Naryn and Osh provinces, and Reproductive Health Alliance (RHA) has five acting branches in Osh, Talass Batken, Chuy and Issyk-Kul provinces.



IV: TECHNOLOGY AND ECONOMIC DEVELOPMENT

The internet development and spread in the 1990s have accelerated digital technologies. A deluge of data from social media and an increasingly dense network of connected devices allow machine-learning systems to predict and monitor the demand for goods and services. For instance, “(a)lgorithms picked up emerging patterns in Wuhan nine days before the World Health Organization officially flagged COVID-19.”⁹⁴

Key drivers for the technology and economic development trend affecting the **access** to FPRH services, **planned** childbirth and FPRH **policy** include:

- the exponential growth of big data, including in Kyrgyzstan
- rapid technological changes
- a gig economy
- population ageing and sharp increase in young population
- legacy infrastructure and institutions
- development of individualized medicine
- education

The internet giants and other companies already capture data on users and clients to analyze collected the data and offer a variety of goods and services, including those of healthcare. In the Kyrgyz Republic, data collection or information on digital footprint that could eventually be monetized has yet to be fully explored and developed. Besides, such data in the country is not sufficiently structured. “Tunduk,” an electronic interaction system, introduced in government, municipal and commercial entities and capable of generating data has not gained a momentum yet.

In high inequality countries, digital technologies help citizens and systems solve variety of issues. For instance, the shortage of health workers is offset by “remote” (online, mobile) services and telemedicine, ad-hoc consultations with available doctors.

Dynamically developing technologies,⁹⁵ automation, advanced genomics, biohacking, transhumanism, the internet of things, and the like, leave no time for slow adaptation. “(S)ignificant technology revolutions always take longer than we predict, but arrive sooner than we are fully prepared for.”⁹⁶

New technologies change management work and professional activities: in healthcare, artificial intelligence or machine learning that process big data can supplement or, in some cases,

⁹⁴ UNDESA. (2020). *Shaping the Trends of Our Time*. <https://www.un.org/development/desa/publications/wp-content/uploads/sites/10/2020/09/20-124-UNEN-75Report-2-1.pdf>, p. 105

⁹⁵ Artificial intelligence, virtual reality, augmented reality, mixed reality.

⁹⁶ “Malone’s law,” Singh, S. (2012). *New Mega Trends*. Palgrave McMillan, p. 41.

supersede doctors in making a diagnosis. At the global level, “Novartis” and “Aventis” companies develop new business models related to telemedicine and digital health.⁹⁷

Automation supported by requisite policies (megatrend 5) offers new opportunities to maintain a high level of productivity and competitiveness. It also created the phenomenon of the “gig economy” or “gignomics”⁹⁸ that undermines fundamentals of a labour market (along with those of the labour law), wiping out social security packages (holiday allowances, pensions and other entitlements) and changing ecosystem of business and government institutions. IT-sector and creative industries workers in Kyrgyzstan are employed remotely by foreign companies. The scale and the nature of such employment was not yet explored.

The Kyrgyz Republic is among the “latecomers in data production,”⁹⁹ but with quite vibrantly developing information technologies in education and civic sector. There is a growing demand for competencies in data journalism, fintech, coding and other areas of digital economy.

The first report of the 2019 National Statistics Committee on digital economy assessment provides official data, but does not cover dynamics of innovation environment in the country. From 2012 to 2018, the share of ICT-sector (the centre of digital economy) in GDP in average made up a significant percentage – 3-3.9%. The employment rate in IT and communications out of total number of employed population was 27,600 people (1.2%). Among them, the number of active or “visible” IT-community members is 5,000-7,500 people.¹⁰⁰ Real employment figures in this sector are not known and, so far, the calculation method has not been identified either.

The country cannot take full advantage of the digital technologies, economy and culture without an integrated ecosystem where everyone is connected to the system. Legacy infrastructure and institutions (education, employers, family), including healthcare, constitute serious challenges for creation of such an ecosystem.

First, the country is still exploiting the legacy of the USSR in fundamental areas of education and healthcare, i.e., schools, hospitals, their design and approaches. A number of issues related to the lack of kindergartens, overcrowded schools and hospitals (especially during the pandemic) remains unaddressed.¹⁰¹ Second, a conceptual vision of education and healthcare systems has never been formulated and is still shaped by the physical infrastructure, missing the opportunities provided by new technologies, paradigms and the digital world.

Technologies provide opportunities for virtualization of numerous services, including healthcare and sales, as well as medical services. And it doesn’t take physical (capital-intensive) infrastructure development and assets. Streamlined flows of information, tasks and patients (clients) can help manage services delivery with a minimum of fixed capital.

Box 3. Digital Kyrgyzstan

There were 3.1 million internet users and 2.5 million active users of social media in Kyrgyzstan in January 2020. There were 9.73 million mobile connections in the country in January 2020, or around 150% of total population. This capacity has been spontaneously used during the pandemic by education and healthcare systems in summer 2020.

⁹⁷ Fried, N. (2020, January 28). Shifts in pharma’s 2020 digital health landscape. *mobi health news*. <https://www.mobihealthnews.com/news/shifts-pharma-s-2020-digital-health-landscape>.

⁹⁸ The sharing economy, the open talent economy, the freelance economy or short-term contracts economy is a new format of worker-employer relationships based on freelance work or short-term contracts.

⁹⁹ UNDESA. (2020). *Shaping the Trends of Our Time*. <https://www.un.org/development/desa/publications/wp-content/uploads/sites/10/2020/09/20-124-UNEN-75Report-2-1.pdf>, p. 112.

¹⁰⁰ Soltobaev, A., (2020). *Digital skills and entrepreneurship in Kyrgyzstan. Expert Report*. UNDP Kyrgyzstan, p. 29.

¹⁰¹ The State Property Management Fund (SPMF) has never published data on inventory of the country’s physical infrastructure. But that is a matter of another research.

Digital technologies became a reality for the Kyrgyz education system and their scale and extent are yet to be explored. It happens from the levels of primary education through the levels of professional training to join the labour market. Over the recent years, the number of coding courses has been booming. *The Kyrgyz Software and Services Developers' Association* (KSSDA) is actively promoting education reform with a focus on digital technologies.

The issue of fundamental reform of education system in the Kyrgyz Republic and its paradigm has not yet been resolved. Current education system is also an obsolete institution with legacy infrastructure, which requires a new vision and understanding alternatives to the situation. On the one hand, there is a shortage of buildings for schools and kindergartens,¹⁰² And, on the other hand, the compliance of the resources and capacities of the industrial age buildings and personnel specialized in educating generations of “assembly line workers” with modern education paradigm remains questionable. Medical education reform in the country is supported by donors,¹⁰³ but its results can only be assessed after some time.

Technological development can boost economic growth. The opposite is also true. The dynamics of these two factors of the system depends on public policy, which can either support research and innovations as a driver of economic growth or not (megatrend 5). In this ecosystem, the area of family planning and reproductive health can either seize new opportunities, or struggle with new digital and information barriers, limitations in access to services, information, resources, and, as a result, face a number of novel challenges such as unwanted pregnancies, maternal mortality and lack of contraceptives.

Technology as a driver enables new ways of communication, collaboration and access to information – factors for accelerating scientific cooperation and innovations. FPRH professionals can experiment with solutions that enhance access to information and raise population's awareness (factors of “a wanted child,” “planned childbirth” and “intergenetic intervals”), including via mobile applications, chatbots and platforms. Such initiatives in the social sector have been undertaken for several years,¹⁰⁴ yet with little success. Perhaps more emphasis on promotion (marketing) of platforms could make a big difference because a highly competitive online environment demands strategic and integrated communications, coupled with health communication efforts, to get attention and buy-in from the target audience (especially of youth).

Unlike demographic projections, forecasting a country's economic development is extremely difficult.¹⁰⁵ However, the evidence suggests that economic growth is often preceded by

Box 4. The future of medicine

“If you want to think about the future of Medicine and what that entails think today about the largest car company in the world, Uber doesn't own a single car, think of the largest hotel chain in the world today, Airbnb doesn't own a single hotel, the biggest medical system in the future are going to own no hospitals it's going to be devices that are monitoring the lives of millions of patients simultaneously, that's looking to see if you have the beginning signs of the cancer emerging, to not treat the cancer, but to prevent the cancer from ever occurring, that day is definitely coming” – doctor Eric Schadt. Health Systems. Systems Thinking for Reimagining Health, <https://www.systemsinnovation.io/post/health-system-innovation>

¹⁰² The efficiency and effectiveness of the school distribution system is often questioned by the experts. Cities lack schools while in some regions schools remain empty or underpopulated.

¹⁰³ “Medical education reforms in the Kyrgyz Republic” (MER) were initiated under financial support from *Swiss Development and Cooperation Agency*, and initially project efforts were focused on undergraduate medical education reform. Since 2013, the project has launched an effort to reform postgraduate and continuing medical education.

¹⁰⁴ “Salam, Bishkek!”, “Ayimkana” to eliminate gender-based violence.

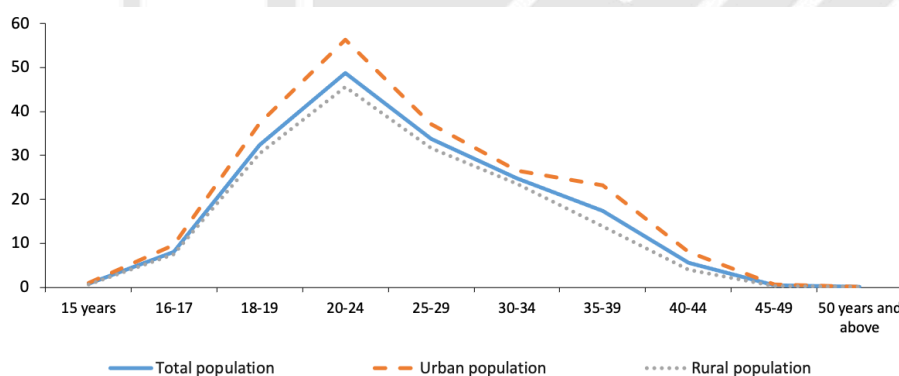
¹⁰⁵ Rosling, H., Rosling, O. & Rosling, A. (2018). *Factfulness. Ten Reasons We're Wrong About the World – and Why Things Are Better Than You Think*. Sceptre.

sustainable social progress.¹⁰⁶ Investors look for countries that have just went through decades of rapid improvement in education and child survival. In case of FPRH, the analysis of unintended pregnancies leading to children in infant homes – *Specialized Rehabilitation Centre for Children and Families*. In 2019, on average every month, 10-12 children aged 0-4 years were admitted to the Centre. Of this total, 50 percent of children were removed from their biological parents, and the share of abandoned children comprised 12 percent.¹⁰⁷ In most cases, the abovementioned 50 percent are children from socially vulnerable families. There is no precise data on whether they were born due to unwanted pregnancy or a motivation to have a child for getting a monthly benefit for low-income families with children. This could have become a mandatory requirement for statistical reporting in the offing, and a simple tracking of monthly benefit disbursements would help to obtain data on birth spacing. It could help the government develop a policy on incentives for healthy childbirth. For example, a low-income family would get better benefits for having five children with a three-year minimum interval from 20 to 39 years of age. In 2018, 12,000 children lived in orphanages in Kyrgyzstan of which only 600 were biological orphans.

The country's economic policy focus has an impact on allocation of its scarce resources and the way it identifies the *strategic leverage points* of the system's behavior. Taking account of complex determinants of productivity or four key types of capital,¹⁰⁸ a country's economic growth significantly depends on the quality of human capital.¹⁰⁹ In this vein, the *human development index* reflecting longevity, literacy level and standard of living (gross national income per capita) ensures a more adequate measurement and a longer-term foresight of *leverage points* for economic development. From the FPRH vantage point, family incomes significantly correlate with the number of children per woman.

In 2015-2019, 21-25 percent of newborns have been registered to unmarried mothers. Twenty-thousand children born out of wedlock in 2019 were registered based on the joint application of both parents, and 18,000 newborns – on the basis of mothers' applications. The latter may mean that these children will most likely be raised in a single-parent family, without a father. Most out-of-wedlock children are born to mothers younger than age 30. These children may end up in a low-income family situation and burden the state budget. Therefore, the economic policy should focus on the FPRH area with particular attention to pregnancy planning solutions and ensuring contraception in the country.

Diagram 6. Fertility of unmarried women in 2019 (per 1,000 women of respective age group). Source: NSC KR website <http://www.stat.kg/ru/publications/sbornik-zhenshiny-i-muzhchiny-kyrgyzskoj-respubliki/>



¹⁰⁶ For example, “Asian countries like South Korea, China, Vietnam, Malaysia, Indonesia, the Philippines, and Singapore, which had surprised the world with their economic progress over the past decades, actually had made *steady social progress during the decades* before their economic growth” (Rosling, H. et al, *Factfulness*) (the highlights of authors).

¹⁰⁷ Маслова, Д. и Постельняк, А. (2019, 19 октября). В Кыргызстане обещают снизить бюрократию и коррупцию при усыновлении. Как это будет. *Kaktus.media*. https://kaktus.media/doc/397898_v_kyrgyzstane_obeshaut_snizit_burokratiu_i_korruptsiu_pri_ysynovlenii_kak_eto_bydet.html.

¹⁰⁸ Human capital (knowledge, skills and health), social capital (trust, norms and institutions), industrial capital (industry) (machines, technologies and infrastructure) and natural capital (resources and ecosystems).

¹⁰⁹ World Bank. (2006). *Where is the wealth of nations? — Measuring capital for the 21st century*. The World Bank.

In 2019, 20,605 children lived in public residential institutions, including 138 children in infant homes with 28 percent of them – abandoned children (39 people). Thus, the country's infant homes accept abandoned children, most likely born as a result of unplanned and unwanted pregnancy.¹¹⁰ Up to one third of children remain in the State's custody, which needs a more detailed analysis and data to support or reject this hypothesis, because these trends will keep having an impact and remain a burden for the country's economy from the vantage point of this megatrend rollout.

Table 7. Total number of children in public residential institutions in 2019 in the Kyrgyz Republic.
Source: Statistical Database of MONEE (UNICEF project = for Eastern Europe and Central Asia and Commonwealth of Independent Countries (ECA/CIS) (<http://www.stat.kg/ru/monee-info/>)

Total number of children in all public residential institutions, including:	20,605
Number of children in infant homes	138
Number of children in children's homes (orphanage)	1,756
Number of children in residential institutions for children with physical/mental disability	3,919
Number of children in family-style group homes	98
Number of children in general boarding schools (fully supported by the state)	14,610
Number of children in other types of public residential institutions	84

Table 8. Number of children in children's homes of the Kyrgyz Republic in 2019 (people)

	By the end of the reporting period			
	Total	including the age categories:		
		0-12 months old (11 mths 29 days)	1-3 years old (2 years 11 mths 29 days)	3-6 years
Children – total, including	138	34	50	54
Girls	64	12	21	31
<i>Orphans – total</i>	2	0	1	1
including girls	0	0	0	0
<i>Left without care – total</i>	128	31	44	53
including girls	63	11	22	31
<i>Foundlings, abandoned</i>	39	12	18	9
including girls	19	5	10	4
<i>Difficult life situations</i>	89	19	26	44
including girls	44	6	12	27

A crucial factor of unwanted pregnancy in this megatrend boils down to access to resources and poverty in its multidimensional expression, which cannot be measured through cost indicators, i.e., health, living conditions, education, personal security, empowerment, etc. The results of the confidential enquiry into maternal deaths indicate that the majority of deceased women have not

¹¹⁰ "Planned childbirth" means a financial component, and "a wanted child" – an option to have both parents.

represented the poorest population groups.¹¹¹ The main factors of the fatal outcomes, except for financial hardship, are women's refusal to cooperate with health workers, concealment of diseases ("shame") and low awareness.¹¹² So, overall *sociocultural context* is not conducive to family planning and reproductive health in the country.

In the 1990s maternal mortality rate in urban areas was higher than rural by 1.1-1.2 times on average. However, from the early 2000s to 2019, maternal mortality rate in rural areas exceeded the urban rate by 1.1-1.9 times. Given a low urbanization level, with a prospect to barely reach a 50-percent threshold in 2050, this trend requires attention and an integrated approach.

Traditionally, reproduction has been mainly associated with poverty, when behavior is conditioned by deeply rooted inherited reproductive patterns ("children from large families will have many children"), low access to contraceptives, health services and using children as a workforce, and unemployment. Poverty factor in reproductive health interacts with migration factors (megatrend 1) and urbanization (megatrend 2). For example, a major cause for internal migration is deemed to be the lack of employment opportunities, while cities provide more chances to find jobs in the services sector. Statistics on women who died in 2014-2015 shows that 82.4 percent of them were housewives, only 5.4 percent had stable jobs, and in 12.2 percent of cases women were "self-employed, farmer, unskilled worker, having a one-time job," and only 17.6 percent were employed. At the same time, NSC's data shows the 49-percent share of employed women out of total population of reproductive-age women, which significantly (by 2.8 times) exceeds the proportion of employed women in the demographic structure of died women (49% versus 17.6%).¹¹³ That's why unemployment could be an important social factor of an increased risk of maternal mortality. Too often poverty also means inequality in **access** to family planning and reproductive health services.

From an economic vantage point, "conscious delay" of pregnancy and resulting family planning have been caused by women's economic behavior.¹¹⁴ Microcredits impact "planning of childbirth in families of borrowers making them delay the childbirths for an indefinite period. The birth of a wanted child doesn't seem possible because raising a child will demand significant resources required to pay off the loans."

Thus, family planning and reproductive health in the context of technological development and economic growth is fraught with risks, but also has breakthrough opportunities with effective public policy and collaboration with civic and private sectors. Iran's remarkable success in family planning, when the country achieved the fast fall in the number of babies per woman resulted from improvements in healthcare and education, particularly for Iranian women, is inspirational.¹¹⁵ In the 1990s, Iran had the biggest condom factory in the world to provide contraceptives to population and a compulsory pre-marriage sex education course for both brides and grooms. Couples had access to infertility clinics if they struggled to conceive.

Kyrgyzstan has not yet undertaken such initiatives, and the initial buds of collaboration between the government, nongovernmental and private sectors have not led to programme interventions yet. For example, research on safe abortions led to a conclusion that by 2008 abortions turned into an income-generating activity for public sector doctors.¹¹⁶ Medical abortions became an exclusive service with a price tag of almost USD100. At the time, the civil society sector tried to engage the pharmaceutical business in cooperation to provide safe abortions for all in need. To

¹¹¹ The majority of deceased women represented the lower middle income population group.

¹¹² Ministry of Health of the Kyrgyz Republic. (2017). *Life of Kyrgyzstan's Mothers*. "Second Report on Confidential Enquiry into Maternal Deaths in the Kyrgyz Republic," p. 18. https://kyrgyzstan.unfpa.org/sites/default/files/pub-pdf/KRMS_RU_1.pdf.

¹¹³ Ibid.

¹¹⁴ Алымкулова А., Эдилова М., Шайдуллаева Т. (2002). *Изучение возможностей микрокредитных групп влиять на качество услуг репродуктивного и сексуального здоровья*. Центр помощи женщинам, стр. 26.

¹¹⁵ The country achieved reduction from more than six births per woman in 1984 to fewer than three babies per woman just 15 years later

¹¹⁶ Doctors smuggled medications through Russia, which turned them into an "upmarket product."

make it happen, they needed a new clinical protocol and a more flexible work of the Department of Pharmaceutical Provision and Medical Devices under the MHKR. Collaborative efforts of the medical community, pharma companies and civil society organizations made it possible to import the medication from China at the price of USD5. As a result, the price of abortions has dropped by almost 20 times and every health clinic began using this method. Unfortunately, a combination of different factors, including the lack of MHKR's coordination and support, a stock of medical abortion drugs will be depleted by June 2021. The post-COVID situation indicates the growth in the number of abortions and its statistics will be clarified later in 2021.

Improvement in the area of family planning and reproductive health in the context of this megatrend depends on good governance and proper policy implementation by the government, including incentives and opportunities for the private sector. Its drivers – growth of big data, technology development, a gig economy, demography, legacy institutions and infrastructure, individualized medicine and education – identify new avenues for virtualization of public services and enhancing inclusive environment in healthcare, including through private and non-governmental sectors. Digital barriers and new types of inequality can be overcome via health communication, education and media platforms.

Box 5. What can and should be done in partnership with civil and private sectors

“For twenty years in a row, international organizations (UNFPA, USAID, GIZ) have been creating and maintaining demand for contraceptives in the country through training of health workers, free and countrywide supply. This was a present for pharmacological companies, which, without investing a single tyin to market development, obtained opportunity to sell their goods thanks to the established demand. In 2015, when all donor programs on provision of free contraceptives have stopped, pharmacological companies got even more benefits. At that period, the Government could have formed mechanism for support and development of socially responsible business, but this did not happen. Now, the business is already losing the market, since there are some actors in the country that are not interested in women not using contraceptives. COVID-19 pandemic has also played a certain role in this situation”. – Galina Chirkina, RHA (“Reproductive Health Alliance” NGO)



V: GOVERNANCE AND INEQUALITY

Family planning and reproductive health issues, being under the jurisdiction of the Ministry of Health, can be addressed at the level of capacities of the healthcare sector of the country. The effectiveness of the existing public sector programmes on family planning and reproductive health can be accessed in the backdrop of the overall context of maternal mortality in the country, and overall prioritization of this area in the State Programme on Healthcare System Development.¹¹⁷

Impact of governance megatrend on all FPRH factors (a planned childbirth, a wanted child, birth intervals, access and policy) is exerted via (drivers):

- 🕒 growth of civic awareness: a generational shift has triggered increasing demands for transparency and accountability
- 🌐 globalization of civil society and business, which makes them influential actors
- ⚖️ inequality, with new barriers in access to services, knowledge and decision-making
- 🗨️ clash of cultural norms: patriarchal attitudes versus modern egalitarianism.

Crisis of governance in education and healthcare systems during COVID-19 pandemic exposed the blind spots of Kyrgyzstan's social fabric, and yet consolidated the society.

In this context, the model of family planning and reproductive health transforms along with changes in social norms, cultural and generational shifts towards younger trendsetters of the coming decade. Globalization is blurring national borders, foiling attempts to control and complicating governance in the “closed system” of the nation-state.

Box 6. Innovations in governance

“Effective and innovative governments need to be agile, adaptable and responsive to the changing day-to-day needs of the people they serve. Today, private markets offer consumers unprecedented levels of choice and service responsiveness, and public services can (and should) be better attuned to citizen needs and wants. If governments do not keep up, they risk diminishing public trust in their capacity to deliver. Agile governments must operate at another level of complexity: they must also shape their environment on a large scale through mechanisms such as policy-making, taxation and service delivery”. *Future of Government – Fast and Curious. (2012). World Economic Forum.*

¹¹⁷ The Programme of the Kyrgyz Republic Government on Public Health Protection and Health Care System Development for 2019–2030: Healthy Person – Prosperous Country.

For small and dynamic countries such as Kyrgyzstan access to global knowledge, social and technological changes can help innovate in governance and in methods to transform legacy institutions based on the principles of rigid hierarchical bureaucracy, including family planning and reproductive health institutions and methods. Overall, governance institutions in the Kyrgyz Republic lag behind technological innovations and technical progress to a great extent because of insufficient attention to big data's potential and digital transformation experienced by many countries around the globe. Such delays make people suffer,¹¹⁸ and the country lose its human capital. Digitalization rapidly transforms social and governance institutions. Those who are not ready or resist such changes, transform at any rate at a huge cost.

The ICT revolution has led to exponential progress in productivity (and cost-cutting) of three aspects of management communication function - data processing, storage and distribution. This trend will be accelerating. And it means new opportunities for **redesigning the architecture and processes of resource management** towards greater efficiency, effectiveness, transparency, accountability and the reduction of redundant authorities and chain of command.

Another important shift induced by technological changes relates to changed expectations and values. Now, people see the difference between **citizens** and **consumers**. Citizens are increasingly demanding transparency and accountability from their governments,¹¹⁹ governance institutions reforms to get quality public services. It pushes the governments to seek new approaches to streamline or even fundamentally revise established and often obsolete governance processes: data collection and analysis for policy development, adaptation and introduction of best practices, communication with citizens and building trust between citizens and authorities.¹²⁰ All these processes shift the focus of reforms to public services and functions of the state machinery, moving away from the structure of government bodies and hierarchical chains with redundant decision making units.

In the Kyrgyz Republic, healthcare and family planning is mostly managed by the planning bureaucracy. Healthcare reform in the Kyrgyz Republic commenced in 1996 aiming at transforming the health system from a historical *Semashko* type of system towards a new model.¹²¹ The current Programme of the Kyrgyz Republic Government on Public Health Protection and Health Care System Development for 2019–2030: Healthy Person – Prosperous Country, taking account of the digital age, makes an emphasis on integrated implementation of ICT in healthcare *service* delivery processes, in addition to managing “the infrastructure of healthcare organizations.”¹²²

Box 7. Governance in digital epoch

Governance in the digital age flexibly combines hierarchal, market and network principles in policy development and addressing routine issues. Design thinking and behavioral economics principles are increasingly employed in development of national programmes and social projects to understand people's intrinsic motivations whose interests are affected by decision-making and whose participation is essential to implement these initiatives. Social and technological trends in management facilitate innovations in governance (megatrend 4).

¹¹⁸ During the COVID-19 pandemic crisis in the Kyrgyz Republic, the healthcare system could not “understand,” let alone calculate how much and what is available, on the one hand, and demands/needs of the large numbers infected population, on the other because of the messy data.

¹¹⁹ Bertot, J. C., Jaeger, P. T. & Grimes, J. M. (2010). Using ICTs to create a culture of transparency: E-government and social media as openness and anticorruption tools for societies. *Government Information Quarterly* 27(3), pp. 264-271.

¹²⁰ WBGU German Advisory Council on Global Change. (2011). *World in transition: a social contract for sustainability*, German Advisory Council on Global Change. https://www.wbgu.de/fileadmin/user_upload/wbgu/publikationen/hauptgutachten/hg2011/pdf/wbgu_jg2011_en.pdf

¹²¹ Health system reform followed a linear model to design long-term national programmes. Since 1996, the country has implemented three reform programmes: “Manas” (1996-2006), “Manas Taalimi” (2006-2011) and “Den Sooluk” (2012-2016, extended till 2018).

¹²² The Programme of the Kyrgyz Republic Government on Public Health Protection and Health Care System Development for 2019–2030: Healthy Person – Prosperous Country, Section 3.

Thus, technological development logic facilitates gradual introduction of “network governance” based on trust, information, communication, reciprocity, partnership, diplomacy and lack of a rigid structure.¹²³ *Buurtzorg* exemplifies a successful holacracy as a pioneering¹²⁴ healthcare organization established ten years ago with a nurse-led model of holistic care that revolutionized medical and social care. In Kyrgyzstan, the prototype of network governance could be gradually built on the basis *E-Healthcare Center* established in 2017.¹²⁵

In the area of country’s family planning and reproductive health, civil society has been playing a crucial role for almost 30 years by now¹²⁶ and the business becomes more active. A unique competitive advantage of NGOs to work informally (without bureaucracy and thanks to short feedback loops) through networks and across national borders. This is the key factor of their success in making an impact on the norms and incentives in various jurisdictions (counties, territories). The network nature of the majority of NGOs enables them to absorb a large amount of quality information and knowledge of specific contexts (culture, norms, stereotypes and power dynamics) and local contacts. The 2013 study of a significant number of registered NGOs in Kyrgyzstan identified that only 33 percent have been active in various areas.¹²⁷

The global evolution of civil society has also transformed the mission of NGOs. In the early period, NGOs focused on monitoring governments and international processes. Incrementally, NGOs became the source for shaping a new agenda and development of new policies in various areas of their competence, including collection, analysis and dissemination of information (strengthening their communication and education functions), norms and standards-setting, as well as monitoring and legal compliance.¹²⁸ In other words, civil society is already globally bypassing governments, thus facilitating systemic adaptation of governments to the new reality of humankind,¹²⁹ including goals and objectives of sustainable development.

However, despite their efficiency, neither civil society nor the business sector have the policymaking mandate that the state has. Governance is a matter of democratic legitimacy, decision-making transparency and accountability. In a parliamentary system, decision-making processes and debates happen in the public space, and politicians are accountable to the electorate.

Rapid obsolescence of governance institutions inevitably leads to deterioration of socioeconomic situation of the population. The number of early marriages, as per the NSC, have increased from 2014 by 1.4 percent, comprising 2.9 percent of women aged 20-24 years old,

¹²³ Meuleman, L. (2015) утверждает, что такая хотя форма сетевого управления существовала всегда, на передний план она вышла в управлении природопользованием в 1990-х как выражение растущего уровня образования (грамотности) широких слоев общественности и соответствующих требований участия общественности и консультаций в принятии решений. Meuleman, L. (2015). Owl meets beehive: how impact assessment and governance relate, *Impact Assessment and Project Appraisal*, 33(1), 4-15, DOI: 10.1080/14615517.2014.956436. <https://www.tandfonline.com/doi/pdf/10.1080/14615517.2014.956436?needAccess=true>

¹²⁴ Since 2009, governments of various countries have been using behavioral economics to reduce costs or enhance effectiveness of implementation of state programmes. In some countries, the Nudge Units (*Behavioral Insight Teams*) are established at the ministerial level. One example is *MineduLab* – first innovation lab for education policy in Peru, testing rigorous and leading research in education and behavioral science to address issues such as teacher absenteeism and motivation, parents’ engagement, and student performance. Nudge-departments in the ministries save costs of launching national projects and improve their efficiency (<https://blogs.worldbank.org/developmenttalk/nudge-units-where-they-came-and-what-they-can-do>).

¹²⁵ <http://cez.med.kg/>

¹²⁶ An increasing focus on the importance of network governance is due in part to the scale-up and diversification of NGOs at the global level. The number international NGOs increased from less than 5,000 in 1985 to more than 60,000 today (UIA, 2014).

¹²⁷ Association of Civil Society Support Centers. (2013). *The status and prospects of development of the non-governmental sector in Kyrgyzstan*. The Association of Civil Society Support Centers, p. 12

¹²⁸ Biermann, F., (2012). Navigating the anthropocene: Improving Earth System Governance. *Science* 335, pp. 1306-1307; Cole, D. H. (2011). From global to polycentric climate governance. *Climate Law* 2(3), pp. 395-413; Evans, J. (2012). *Environmental governance*, Routledge, New York.

¹²⁹ Delmas, M. A. & Young, O. R. (2009). *Governance for the Environment: New Perspectives*. Cambridge University Press.

who were married or in union before age 18.¹³⁰ The number of family violence cases increased from 2,339 in 2013 (including violence against women, 97%) to 7,178 in 2018 (including violence against women, 91%).¹³¹ Successful governance reform should solve these issues, which requires systems approach to analysis and design of new governance institutions. This approach allows to understand how non-linear systems change. In governance, as in a nonlinear system, changes occur simultaneously in several aspects: *elements, interconnections and goals*. And all components should be considered in their dynamics.

The traditional reform processes aim at changes in systems elements (authorities, ministries and agencies) and sometimes in interconnections (institutional and management structures). Yet, the least visible part of the system, its **function** or **goal**, often becomes a determining factor of system behaviour. And if the function doesn't change, the dismantled interconnections and replaced elements will take on the habits and behaviors of predecessors, thereby restoring the old system. Design thinking processes can help understand the ways to make it in a specific context through fast and frequent feedback loops and agile course correction. Long-term and comprehensive strategies and sector development programmes do not always allow for such agility in the implementation phase. Effectiveness and efficiency of linear and rigorous programmes and strategies in a dynamic context, where agility and decision-making speed are key success factors, may not necessarily lead to stated outcomes. *Health 2030* programme aims at innovations and improvements in the healthcare sector, but the functions of the programme's leading actor – Ministry of Health – remain unchanged: response, monitoring and planning. The programme proclaims the intention to collaborate with civic and business sectors, but does not suggest implementation mechanisms.

The second important aspect of the system is its physical elements (infrastructure) – hospitals, buildings, doctors – have a long lifecycle and, even having changed the industry's development vector, it will take some time before the results of the transformation reach a services recipient. There is a limit to the speed at which any system can change the direction of the sector's development. The country's healthcare infrastructure assessment undertaken by the World Bank in 2020 may be useful tool in designing reforms in the family planning area.

Crises nudge to innovate, detecting system bottlenecks. In the pandemic crisis, given the lack of resources, new types of social organization or self-organization of civil society and private sector started provision of healthcare services. They developed an online platform dubbed Tirek ("Support") to track the population's needs in health services versus healthcare sector capacities to deliver in real time. Unfortunately, the government has not been ready for such an innovation partnership. However, it can become a partnership prototype for the post-COVID Kyrgyzstan to take account of in further design of public services delivery through virtual platforms.

During the pandemic, family planning and reproductive health public services came to naught. There was no access to abortions, contraceptives and information. Lack of service delivery channels (at least for online consultations), information channels through social media, etc. turned out to be the system's bottlenecks. The specifics of the FPRH area needs a separate analysis of communication with target publics and logistics. The pandemic damage assessment for family planning area is also challenging because the civil registry offices have been closed, statistics on abortions remains "a grey zone," and inequality in access to health services persists. A more thorough assessment of the situation is possible with a special research in 2021.

Despite some signs of progress, **inequality persists** across the globe. Overall, global income has grown and poverty declined. The share of people in extreme poverty living below USD1.90 per day decreased from 36 percent in 1990 to 9 percent in 2018. However, these data represent the average progress indicators. They do not tell the whole story of income distribution. Inequality is the main barrier to achieving sustainable development. Its reduction became one of

¹³⁰ Национальный статистический комитет Кыргызской Республики. (2018). *Кластерное обследование по многим показателям*. НСК. <http://www.stat.kg/ru/itogovyj-otchet-komp-kyrgyzstan-2018/>

¹³¹ Национальный статистический комитет Кыргызской Республики. (2019). *Правонарушения и правопорядок в Кыргызской Республике*. НСК. <http://www.stat.kg/media/publicationarchive/74e01990-418c-4399-ad79-b235790fc8b7.pdf>

the strategic priorities for countries and international organizations, thanks to the 2030 Agenda for Sustainable Development and its pledge to “leave no one behind.”

The Gini coefficient in the Kyrgyz Republic has not substantially changed since 1995, placing the country in an average position among Central Asian countries and Russia:

Central Asia and Russia	Gini coefficient					
	1995	2000	2005	2010	2015	2019
Kyrgyz Republic	0.373	0.449	0.433	0.371	0.408	0.364
Kazakhstan	0.354	0.360	0.398	0.280	0.265	0.275
Uzbekistan	0.447 (1998)	0.361	0.353 (2003)
Tajikistan	0.295 (1998)	0.327 (2003)	0.322 (2007)	0.308 (2009)	0.340	0.447 (2018)
Russia					0.412	0.411

Inequality in access to healthcare services is key as a matter of life and death. Inequality in education affects access to knowledge and technologies that change life and long-term trajectory of the future. Analysis of trends suggests that despite the progress, at the global level humankind may not achieve its goal of eradication of severe deprivation in healthcare and education by 2030. In parallel, new types of inequalities in human development are emerging, aggravating unsolved inequalities of 20th century. In Kyrgyzstan, inequality in access to family planning is illustrated by only proxy indicators. They include the number of unintended pregnancies, abortions, abandoned children (social orphanhood). A special study of this matter would help to confirm or deny the hypothesis.

Spatial inequality in the Kyrgyz Republic, like all around the world, remains a major barrier between urban and rural regions, between districts in cities because of a lower level of public investment in infrastructure and limited access to essential services. More than half of the country’s population lives in rural areas, which remains a challenge for family planning and reproductive health. Meanwhile, urban poverty is also growing: the number of dwellers of new unplanned residential areas in Bishkek has been steadily growing since 2010 (megatrend 2).

Members of left-behind groups often suffer from multiple deprivations that cumulatively exacerbate each other’s impact and social isolation. Identification of such intersections helps focus policy makers on effective measures to eliminate deprivations to leave no one behind.

Despite overall reduction in gender inequality in healthcare and education, empowerment of women still needs attention (UNDP, 2019). For example, gender inequality is most evident in transition from a student status to that of employment, which is partially associated with the reproductive and traditional role of women in care. Data from 115 countries show an average gap of 14 percent in wages between men and women. This gap remains largely unchanged even factoring in the differences in education, age or experience.¹³² The 2018 UNDP Human Development Report notes the gender gap in wages in the Kyrgyz Republic, where women earned on average 51 percent less than men in the backdrop of the world average of 44 percent.¹³³

¹³² International Labour Organization. (2020, January 10). Gender equality in the workplace remains elusive. *ILOSTAT blog*. <https://ilostat.ilo.org/gender-equality-in-the-workplace-remains-elusive/>.

¹³³ ADB, UNDP (2020). COVID-19 in the Kyrgyz Republic: Socioeconomic and Vulnerability Impact Assessment and Policy Response. Asian Development Bank, p. 65. <https://www.adb.org/sites/default/files/institutional-document/626021/covid-19-kgz-socioeconomic-vulnerability-impact.pdf>.

Social norms and stereotypes keep creating a glass ceiling for women's participation in politics and decision-making which could empower them in society, business, politics and in life in general. Globally, despite relative gender parity at the entry level of politics, with growing influence and responsibility, women are shut out from politics. Gender gap for heads of states and governments is close to 90 percent. In terms of access to economic opportunities, women are overrepresented in vulnerable jobs such as (unpaid) domestic labour, but significantly underrepresented in managerial jobs and high-income positions. Given the current trends, it will take 200 years to close the economic gender gap.¹³⁴ Moreover, in 2020 the progress has slowed down.

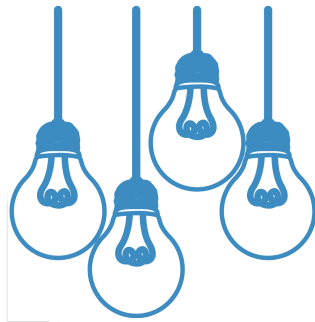
Lack of data enabling to understand and draw conclusions about inequality within and between social groups still somewhat slows down the progress. Good governance, being both the cause and the effect of having information on country's population, depends on (big) data as one of the 12 (governance) system's leverage points that can change the whole system's behavior.¹³⁵

Equality is vital for strengthening the social fabric and political stability because it facilitates trust, collaboration and development. On the other hand, inequality can harm peaceful coexistence of people in a society, creating barriers for innovations and investments. Perception of existing inequality as an evidence of unfair system erodes trust in institutions, meant to protect the rights of people and business, and leads to the growth of corruption and crime. This also has adverse effects on tax collection and, as a result, reduces state revenues and funding for public services.

In sum, the governance and inequality megatrend revolves around the growth of civic awareness, globalization of civil society and business, new types of inequalities and the clash of cultural norms. These drivers generate local and global crises and conflicts that lead to new forms of interaction between legal entities and new sociocultural norms, including the new social contract between society and government in healthcare area. Digital technologies open new avenues in education, healthcare, banking and overall provision of public services. It transforms inequality and power dynamics, including in the area of family planning and reproductive health. A future effective government creates favorable environment for public services delivery in family planning and reproductive health by civic and private sector entities, adapting to physical, social and technological needs of citizen-taxpayers. New opportunities require a redesign and a large-scale adaptation of approaches to health communications and education for new generations of managers and specialists on family planning and reproductive health through **network** organization and interaction.

¹³⁴ United Nations Development Programme. (2019). *Human Development Report 2019. Beyond income, beyond averages, beyond today: Inequalities in human development in the 21st century*. UNDP.

¹³⁵ Meadows, D. H. (2008). *Thinking in Systems: A Primer*. Chelsea Green Publishing.



RECOMMENDATIONS

The megatrends review process identified three major areas for positive changes in family planning and reproductive health in Kyrgyzstan: research, policy and a strategic partnership.

1) RESEARCH:

- a. Identify the amount of resources invested from migrant remittances and quality of FPRH services provided to *explore emerging cultural norms and forecast the likelihood of (non-)observance of intergenerational intervals and reproductive health trends in the country (with gender disaggregation)*. In 2012-2016, remittances of labour migrants from Kyrgyzstan comprised 5.6 to 7.5 percent of the total household incomes of the Kyrgyz Republic. The cost of labour migration for reproductive health and families can be identified through triangulation of qualitative and quantitative surveys. For instance, through surveys of Kyrgyz health clinics on family planning and reproductive health, online surveys through “women’s” Instagram accounts, etc. Implementation of this recommendation will be conducive in the achievement of SDGs 3, 5, 4, 8, 10 (hereinafter, all SDGs affected by recommendations will be indicated in parentheses at the end of each recommendation).
- b. Conduct regular household surveys on labour migration in all provinces of the country and abroad. Labour migration is one of the key factors of demographic dynamics in the country and its qualitative characteristics have not been sufficiently studied. NSC¹³⁶ collects the departure statistics, but the arrival statistics of still requires attention (SDGs 3, 5).
- c. Study the phenomenon of social orphanhood, abandoned children and foundlings, as well as the number of children in residential childcare institutions, as a result of unplanned and unwanted pregnancy and long-term implications of this phenomenon, including for sexuality education of young generation and issues of social and economic burden on government and society. Such a study could also elaborate on the issue of statistical data collection in infant homes on reasons for abandoning a child (for example, “birth resulted from unintended pregnancy), innovations in statistics and big data in the country (SDGs 3, 4).
- d. Explore the feasibility of a model describing the interaction between demographic and socioeconomic processes in the Kyrgyz Republic through an analysis of the reproductive dynamics of migration outflow compared to CIS countries (Tajikistan, Kazakhstan and Russia). Today, data don’t follow the logic of “specific demographic models” anymore with a growth in childbirth in an unfavorable socioeconomic environment, i.e., despite its negative attributes, processes and consequences (SDGs 1, 3, 5, 9, 10).
- e. Examine the issue of how big data can improve the quality of statistics given the lack of specific disaggregated indicators required for classification of events (for example, gender,

¹³⁶ In the Kyrgyz Republic, national sample household surveys on labour migration have not been conducted systematically because of the limited resources for such studies.

place of residence, age, etc.). Thus, when calculating the population size of urban and rural areas, all changes resulted from administrative-territorial transformations can be taken into account. In particular, transformations of rural settlements into urban and vice versa. Also, a high level of internal and external migration does not allow for effective use of existing classic systems of data collection and analysis related to natural movement of population. Such data will help develop new rapid and agile methods for FPRH needs assessment and respective services delivery to various target groups (SDGs 5, 8, 10, 16).

- f. Study causes and mechanism of infertility of women and men. Existing social norms and stereotypes attribute the cause of couple's infertility to a woman, although in 40-50 percent of cases, a cause of sterile marriages is male reproductive dysfunction. It will help integrate issues of men's health into gender health theory, thus implementing gender mainstreaming principles in reproductive health¹³⁷ (SDGs 3, 5).
- g. Research the nature and scale of remote work in IT-sector and creative industries and requirements for regulatory legal acts on teleconsultations and telemedicine to identify the capacity of innovative approaches in FPRH services provision, as well as changes in norms and behavioral strategies of youth, young families and women of reproductive age (SDGs 4, 9, 10).
- h. Examine the phenomenon of microloans for women as a factor to delaying pregnancy until repaying the loan (women of working age – aged 15-49 years) (SDGs 1, 3, 5, 10).

2) POLICY:

- a. Introduce changes in the incentives and motivation system to make women aged 20-50 years give birth to children with healthy intervals. For instance, the criteria for the honorary title "Mother-Heroine" should include mandatory criteria of intergenetic intervals to create, nurture and perpetuate the culture of reproductive health in the country (SDGs 1, 3, 16).
- b. Analyze healthy lifestyle lessons in schools, draw lessons and use it to develop the concept of sexuality education in the education system for different levels and topics (mainstreaming into all lessons, specialized lessons, etc.). For example, the concept may include training programmes and guidelines for healthcare journalism curriculum and, in particular, on FPRH. In the backdrop of deterioration in educational attainment and new trends in educational processes, it would be interesting to look into what is happening with the life sciences (in addition to traditional biology and anatomy). Reproductive health should be connected with the understanding of the nature of human being, sexuality education and have a strategic entry point. This topic is very sensitive for a patriarchal society with a tendency to return to the so-called "traditional" values, discarding opportunities of cultural modernization (SDGs 3, 4, 5, 10, 16).
- c. Support media and information platforms to raise awareness on FPRH and promote personal responsibility for reproductive health (SDGs 3, 4, 5, 16).
- d. Introduce design thinking principles¹³⁸ to the process of FPRH policy making and programme development to take account of the continuous changes in the context with actors (target groups) making decisions and changing behavior patterns (SDGs 3, 4, 5, 10, 16).
- e. In Bishkek 19 FMCs with branches in the new unplanned residential settlements provide consultations and contraceptive services. However, the quality of these services is not yet monitored. It could have been possible through an analysis or survey of FPRH services (for example, via "time tracking of consultations" as per the doctor's protocol). Such a picture would promote the policy of comprehensive coverage of the target groups in line with the leave no one behind principle. Given the lack of appropriate urban spatial

¹³⁷ Султанбеков, А.Ф. (ред.). (2009). *Внедрение гендерных подходов в процессы государственного управления и местного самоуправления Кыргызской Республики. Учебное пособие*. ПРООН, с. 127

¹³⁸ Design thinking is an approach to understanding and solving complex issues. Originally focused on the exclusive domain of engineering, design thinking has evolved from designing objects to creating innovative solutions for complex social and organizational challenges. Design thinking in governance helps equip governments with innovative approaches to face contemporary challenges (reduced trust in decision making authorities, etc.).

planning, new unplanned residential communities are not included in the urban infrastructure network of healthcare services. Bishkek city has 50 new unplanned residential settlements with a population of 250 thousand people (SDGs 3, 5, 9, 10, 16).

3) STRATEGIC PARTNERSHIP:

- a. Maintain and develop partnerships between the state, business sector and specialized non-governmental organizations with deep and extensive FPRH expertise and a wide network to initiate and support innovations in this area (SDGs 16, 17).
- b. Plan, enhance and improve access of vulnerable groups to FPRH services (especially in the new unplanned residential areas) in collaboration with non-governmental organizations working with environment and urban planning (SDGs 9, 10, 11, 17).
- c. Develop methodology and new approaches to systematization, analysis and finding solutions for FPRH issues in partnership with the state, media and IT-sector, which could be possible through structuring and systematization of data (big data). It can become a platform for behavior and social norms change initiatives in Kyrgyzstan, and will attract the private sector to the FPRH area (public-private partnership)¹³⁹ (SDGs 4, 5, 8, 10, 11, 17).
- d. Develop and implement campaigns with creative industries,¹⁴⁰ to promote new approaches and increase the number of responsible parenthood supporters. For instance, the scale-up of innovative methods and approaches to sexuality education like gender action learning system (GALS) through Kyrgyz language online platforms (www.aha.kg) and accompanying promotion via popular and viral Instagram accounts (“Young Mothers,” “Kelinki” (daughters-in-law), etc.) (SDGs 3, 4, 5, 10, 16, 17).
- e. Introduce and implement the MHKR’s programme budget in collaboration with civil society and international partners to reduce fiduciary risks, implement a family planning budget, ensure transparency and achieve target indicators of the national development and healthcare strategies (SDGs 3, 5, 16, 17).

¹³⁹ Hans Rosling – a Swedish physician and specialist in statistics, a professor of international health at the Royal Caroline Institute, elaborated on the potential of the statistics in facilitating processes to identify solutions for social, economic, environmental and other global issues in his engaging posthumously published book: Rosling, H., Rosling, O. & Rosling, A. (2018). *Factfulness. Ten Reasons We’re Wrong About the World – and Why Things Are Better Than You Think*. Sceptre.

¹⁴⁰ Creative industries refer to a variety of economic enterprises that involve the production, the creation, and the distribution of knowledge, information, services, and goods that are of some cultural value, generate national income through taxes, drive job creation and promotes regional and national development.



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