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Kyrgyz Republic
Gender Disparities in Endowments and Access to Economic Opportunities

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ABBREVIATIONS AND ACRONYMS

ADB	Asian Development Bank
BEEPS	Business Environment and Enterprise Performance Survey
ECA	Europe and Central Asia
FDI	Foreign Direct Investment
GNI	Gross National Income
IFC	International Finance Corporation
IUD	Intrauterine Device
KGS	Kyrgyz Som
KIHS	Kyrgyz Integrated Household Survey
NSC	National Statistical Committee
OECD	Organization for Economic Co-operation and Development
PISA	Program for International Student Assessment
UNDP	United Nations Development Programme
UNFPA	United Nations Population Fund
UNICEF	United Nations Children's Fund
UNODC	United Nations Office of Drugs and Crime
USAID	United States Agency for International Development
WDI	World Development Indicators
WVS	World Values Survey

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INTRODUCTION

1. In 2011, the Kyrgyz Republic celebrated its 20th anniversary of independence. Over the past two decades, the young nation has undergone a number of political, social and economic transformations. Periods of economic growth were at times disrupted by political instability and social unrest. Nevertheless, the country achieved impressive progress in poverty reduction from 62 percent in 2005 to 32 percent in 2009. Poverty reduction was largely driven by a steep decline in rural poverty rates thanks to the growth of the agricultural sector and expansion of agricultural trade opportunities.[1] Despite these positive developments, the Kyrgyz Republic remains a low income country with a GNI per capita of US $870 in 2009. Scarcity of formal sector jobs, limited social assistance programs as well as deterioration of the quality and accessibility of public services remain important issues of public concern. These socioeconomic problems also have a differential impact on men and women.

2. The paper aims to provide an overview of the gender disparities in three major domains - human capital, labor market and entrepreneurship. In doing so, it builds on the framework of the World Bank's regional gender report *Opportunities for Men and Women: Emerging Europe and Central Asia* (World Bank, 2011*)* and *The World Development Report on Gender and Development* (World Bank, 2011*)*. The analysis relies on diverse data sources, including the Kyrgyz Integrated Household Survey (KIHS), the Business Environment and Enterprise Performance Survey (BEEPS), the World Values Survey, the UNICEF Transmonee database as well as the World Development Indicators and publications produced by the National Statistical Committee (NSC) of the Kyrgyz Republic. Whenever possible, gender outcomes in the Kyrgyz Republic are compared with the average for Europe and Central Asia (ECA) region.[2]

3. The findings of the paper suggest that there are indeed gender differences in human capital indicators and access to economic opportunities in the Kyrgyz Republic. The main findings could be summarized as follows:

- **Prime-age male and female mortality rates can be reduced by addressing avoidable causes.** Women's risk of death in their prime has increased over the last decade as maternal mortality rates have risen despite almost all births occurring under the supervision of medical personnel. Concurrently, men's life expectancy has fallen relative to women's potentially a result of life style choices by men such that they are more likely to suffer from tuberculosis, sexually transmitted diseases and HIV/AIDS; they are also more likely to abuse drugs and alcohol.

- **Women acquire more education than men in post-secondary education levels, yet they are more likely to pursue educational fields that lead to less remunerative occupations.** The gender gap in education qualification is growing with relatively fewer men than women attending secondary professional vocational school and universities. But differences in specialization emerge in tertiary education in favor of men which then become reflected in the labor market.

- **Women's employment and wage rates are lower than men's despite their higher human capital—potentially reflecting the absence of any formal child care services.** Despite

[1] The World Bank. The National Statistical Committee. 2011. The Kyrgyz Republic: Growth, Poverty and Inequality 2005-2008

[2] Due to the focus of this report on gender disparities in human capital, labor market and entrepreneurship, it does not address such important topics from the gender perspective as international and internal migration, domestic violence against women, trafficking of women, and the vulnerability of children to violence. In order to learn more about these gender issues in the Kyrgyz Republic, the reader may wish to check the following reports: Moldosheva (2008), Nedoluzhko and Agadjanian (2009), Alymkulova and Dosalieva (2010).

women's higher human capital endowments, women earn on average 30 percent less than men. Only half of women (ages 15-64 years) are in the labor force indicating a substantial economic loss to society. Women pursue jobs that are relatively less remunerative than men's which may reflect these jobs' greater compatibility with family and house responsibilities.

- **Women's risk of old age poverty is high due to inadequate pensions in old age.** Though women are more likely to be in the formal sector, their pensions will be lower than male pensioners due to their lower average wages and fewer years of service resulting from the lower retirement age and generous maternity leave. Given women's longevity, this could increase their likelihood of old age poverty.

- **Women are less likely to be in positions of economic power or owners of capital.** Women comprise about a fifth of all entrepreneurs in the Kyrgyz Republic and are under-represented in management positions in business and government. Entrepreneurship represents one important route to the acquisition of assets, yet women lag behind men significantly in this area.

4. This report is a part of the larger cooperative effort by DFID, ADB, UNDP and WB to conduct a country gender assessment. This joint gender assessment work has the objectives of analyzing the gender dimensions of development of the country and proposing a conceptual framework which will assist in explaining gender inequality and recommending public actions for consideration by policy makers and civil society. This report is an input into the larger country gender assessment. In agreement with the other partners, the scope of this report is limited to quantitative analysis of the gender aspects of the human capital development, labor market disparities, entrepreneurship, career advancement and wage differentials, using nationally representative household survey data. The joint country gender assessment study will have a broader scope covering such topics as, conflict, labor migration, climate change, and political economy. The forthcoming joint report will provide a useful framework for understanding the underlying causes as well as consequences of gender inequality in the Kyrgyz Republic.

5. The rest of this paper is organized as follows: section I provides an analysis of gender disparities in human capital focusing on education and health outcomes, section II describes men's and women's employment patterns, section III discusses differences in earnings, section IV focuses on men's and women's entrepreneurship and possibilities for career advancement in business and politics and section V provides concluding observations.

I. GENDER ISSUES IN HUMAN CAPITAL

1.1. Under the socialist regime, the Kyrgyz Republic benefited from high levels of investment in human capital. For decades, the population had universal access to pre-school, school and university education and a broad network of healthcare institutions. Such investments resulted in large payoffs for men and women – universal literacy rates, nearly universal secondary education completion rates, a critical number of university graduates to satisfy the needs of the economy and good health indicators. However, the difficulties with economic and political restructuring after independence and high levels of outmigration of qualified personnel resulted in rapid deterioration of human capital indicators relative to the rest of ECA; although the Kyrgyz Republic's achievements remain high when compared to other low income countries of the world thanks to the country's initial endowments.

A. Education

Primary and Secondary Education

1.2. The gender gap in primary school enrollment is negligible. In 2009, the net primary school enrollment rates were 86 percent for girls and boys down from 90 and 94 percent respectively in 1996. The current primary school enrollment rates in the Kyrgyz Republic are below the respective averages for the Europe and Central Asia region of 95 percent for boys and 92 percent for girls. The moderate enrollment rates in the country require further analysis as they could indicate that about 14 percent of the population of primary school age children is not in school. However, the completion rates for the Kyrgyz primary school students of 97 percent and 98 percent respectively are high and comparable to the regional average (WDI). Therefore, relatively low net male and female primary enrollment rates may be probably associated with the high incidence of under-aged and over-aged enrollment caused by the early and late school entry. This can be checked by calculating gross enrollment ratios using KIHS for 2009. Using KIHS can be also beneficial because it allows getting disaggregated indicators for urban/rural areas, different regions and consumption per capita quintiles.

1.3. Net primary school, gross primary school, and gross basic secondary school enrollment ratios based on KIHS 2009 are presented in table 1.[3] There are not clear patterns with regards to gender gaps across urban/rural residence and different regions. The most important observation is that gross primary enrollment is close to 100 percent both for boys and girls regardless the place of residence and the region (the only exception is Issyk-Kul region). Gross primary enrollment higher than 100 percent supports the hypothesis about the high incidence of under-aged and over-aged enrollment.

Table 1: School Enrollment by Residence and Regions in 2009

		Net enrollment ratio in primary education	Gross enrollment ratio in primary education	Gross enrollment ratio in basic secondary education
Republic	boys	89.0	100.6	102.9
	girls	91.8	100.5	97.6
Urban	boys	93.5	100.7	102.2
	girls	90.5	98.0	113.2
Rural	boys	86.6	98.7	103.2
	girls	92.3	101.5	96.7
Bishkek	boys	91.5	95.4	101.0
	girls	91.9	94.9	101.7
Issyk-Kul	boys	87.4	88.6	107.1
	girls	88.5	92.3	106.2

[3] Data from KIHS and WDI are not fully comparable. Net primary enrolment rate in primary education is the number of children of official primary school age (7-10 years) who are enrolled in primary education (1-4 grades) as a percentage of the total children of the official school age population (7-10 years). Gross primary/basic secondary enrolment rate is the number of individuals who are actually enrolled in schools in 1-4/5-9 grades by the number of children who are of the corresponding school enrollment age (7-10/11-15 years).

Jalal-Abad	boys	92.2	108.8	103.4
	girls	89.9	98.5	98.0
Naryn	boys	98.9	118.2	93.3
	girls	96.8	107.2	100.5
Batken	boys	83.6	93.9	96.2
	girls	89.1	113.9	90.8
Osh	boys	85.2	95.4	107.0
	girls	90.5	100.5	90.9
Talas	boys	86.4	96.5	98.1
	girls	97.8	100.8	109.1
Chui	boys	93.8	99.3	100.3
	girls	96.3	101.5	101.4

Source: KIHS 2009

1.4. There is little variation in gross primary school enrollment rates across consumption per capita quintiles (Table 2), which is similar to the situation observed in other ECA countries. Yet, boys from the poorest families seem to be more likely to go to school than girls from the same consumption per capita quintile.

Table 2: Gross Primary and Basic Secondary Enrollment Rates by Consumption per Capita Quintiles, %

a) Primary (1-4 grade) Enrollment

Consumption per Capita Quintiles	Mean Primary Enrollment Boys	Mean Primary Enrollment Girls
1 Poorest	105.5	96.6
2	99.4	105.7
3	99.5	98.3
4	85.7	110.0
5	86.4	101.2

Source: KIHS 2009

b) Basic Secondary (5-9 grade) Enrollment

Consumption per Capita Quintiles	Mean Secondary Enrollment Boys	Mean Secondary Enrollment Girls
1 Poorest	96.6	93.5
2	105.7	99.7
3	98.3	98.2
4	110.0	98.5
5	101.2	98.1

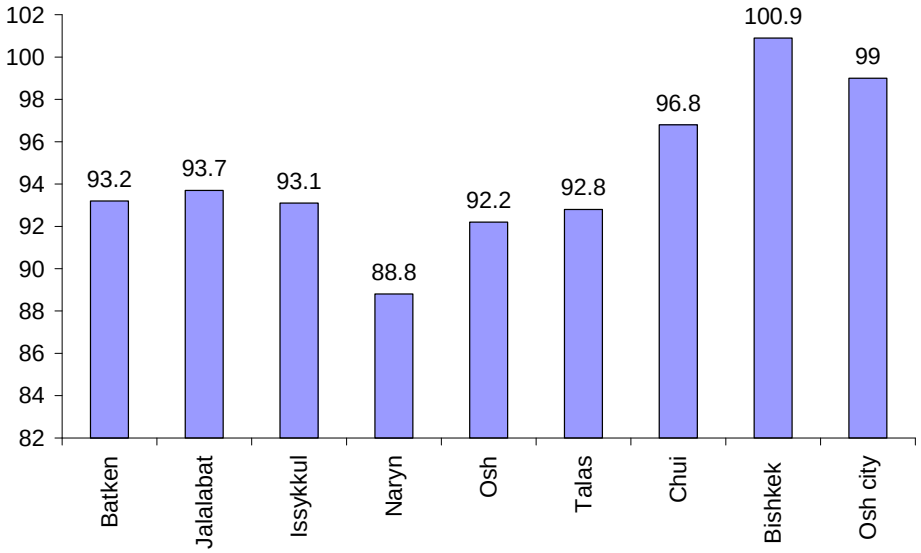
Source: KIHS 2009

1.5. Very often primary completion rates are more informative than net and gross enrollment ratios. As figure 1 shows, there is a variation in primary completion rates across different regions. There is a general pattern of lower completion rates in predominantly rural and remote areas. For example, completion rate in Naryn was less than 90 percent even though enrollment ratios were close to 100 percent. In contrast, urbanized areas, such as the capital, Bishkek, the second largest city, Osh, and relatively industrialized Chui region demonstrate higher completion rates.

1.6. Net secondary school enrollment rates have not changed much over the past five years (data from earlier years is not available) and the gender difference in enrollments is insignificant. In 2009, net secondary school enrollment rate constituted 79 percent for boys and 80 percent for girls. This is below the regional average of 87 percent for boys and girls (with no gender difference) but much higher than the average in low income countries of 34 percent and 28 percent respectively (WDI). Overall, consumption per capita does not seem to be closely associated with gross basic secondary enrollment, at least for boys

(Table 2). Nevertheless, enrollment rate for girls from the poorest consumption quintiles is only 93.5 percent which may reflect barriers in the access to basic secondary education.

Figure 1: Primary School Completion Rates in 2009, %



Source: National Statistics Committee (NSC).2010. "Men and Women of Kyrgyz Republic".
Note: Primary school completion rate for Bishkek is higher 100 percent due to internal migration from other regions. The completion rate from this publication may not be completely comparable to the WDI data discussed above.

1.7. Girls tend to have a somewhat higher academic achievement than boys at the secondary level but overall Kyrgyz students are performing worse than their peers in the region. School performance is assessed through the Program for International Student Assessment (PISA), an international survey of 15-year old students administered every three years, with the latest one conducted in 2009.[4] The subjects that the test covers are reading, math and science. As shown in table 3, girls had a higher achievement than boys in all three areas and the biggest gender gap in performance (16 percent) was observed in reading. Similar differences in results are observed in the National Scholarship Test (Center for Education Assessment and Teaching Methods. 2011). Underperformance of boys can potentially be explained by more erratic attendance. Although data on attendance rates are lacking, some studies suggest that boys are more likely to skip classes due to the need to contribute to family income.[5]

Table 3: Mean Scores on PISA 2009 Assessment in Selected Economies

	Reading			Mathematics			Science		
	Boys	Girls	Total	Boys	Girls	Total	Boys	Girls	Total
Shanghai-China (Top Performer)	536	576	556	599	601	600	574	575	575
OECD average	474	513	493	501	490	496	501	501	501

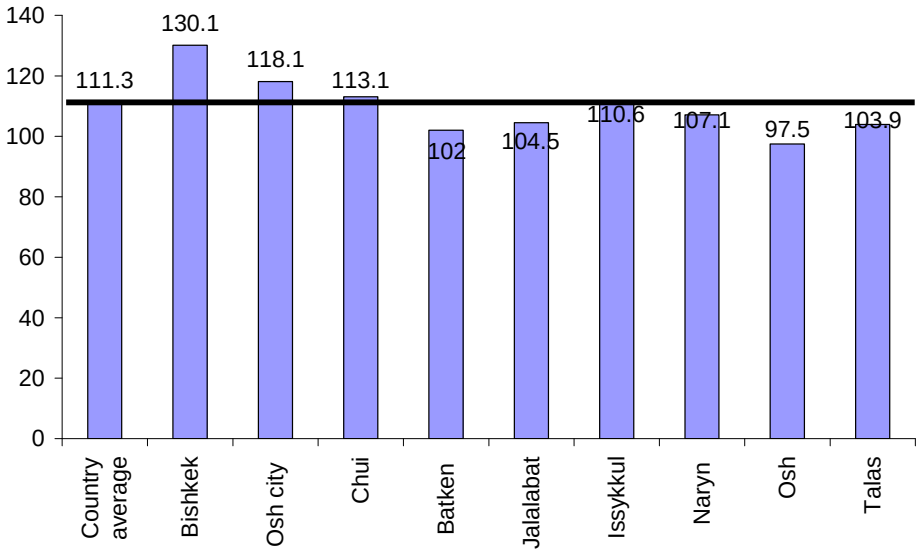
[4] The program was administered in 34 OECD and 31 partner countries. Kyrgyz Republic was the only low-income country participating in the assessment. For more information on PISA methodology and survey findings, see http://www.pisa.oecd.org
[5] ADB. 2005. Country Gender Assessment: Kyrgyz Republic

Russia	437	482	459	469	467	468	477	480	478
Kazakhstan	369	412	390	405	405	405	396	405	400
Azerbaijan	350	374	362	435	427	431	370	377	373
Kyrgyz Republic	**287**	**340**	**314**	**328**	**334**	**331**	**318**	**340**	**330**

Source: OECD (2010). PISA 2009 Results: What Students Know and Can Do-Student Performance in Reading, Mathematics and Science (Volume I).

1.8. Overall, Kyrgyz students had the lowest scores in PISA assessment of all countries surveyed, with over 80 percent of students failing to reach the baseline proficiency level for each of the evaluated disciplines. Poor academic achievement was also registered at the National Scholarship test.[6] These results call for public actions to update school curriculum, ensure proper training of teachers and improve school performance.

Figure 2: Average National Scholarship Test Scores across Regions, 2011



Source: Center for Education Assessment and Teaching Methods. 2011. Bishkek. http://testing.kg/ru/testing/report2011/

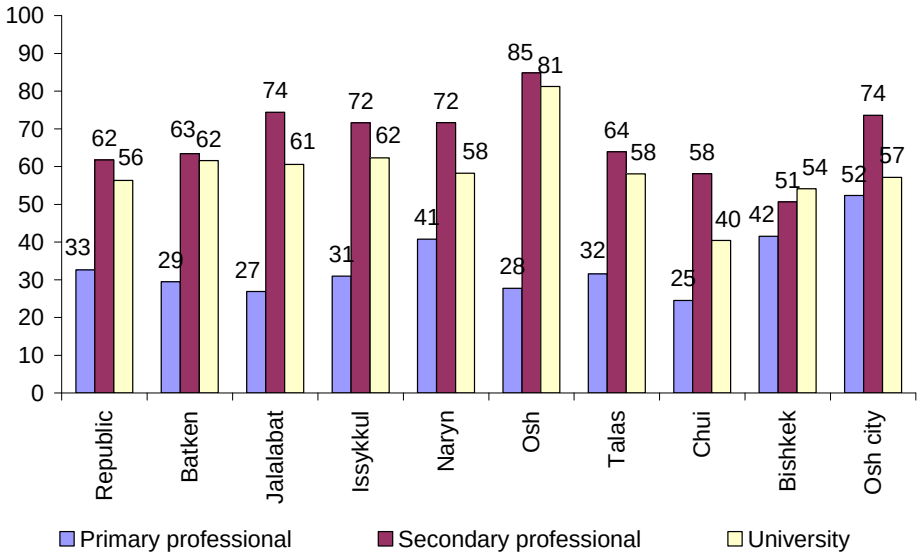
1.9. The quality of secondary education seems to differ across the regions. This can be seen from the results of the National Scholarship Test (see Figure 2). Similar to primary school completion rates, the best performing regions include the capital, Bishkek, Osh city and Chui region. In all other regions the average scores are lower than the country average. This may indicate that the government's efforts to ensure equal quality of secondary education across regions should be strengthened.

[6] Hou, Dingyoung. 2011. Knowledge brief: Education Reform in Kyrgyz Republic – Lessons from PISA, Volume 40, April 2011, World Bank

Vocational and University Education

1.10. Vocational school enrollments skyrocketed over the past decade, having increased by 71 percent.[7] However there are serious concerns about the quality and relevance of education in vocational schools and many of their graduates struggle with finding jobs upon completion of the studies. Kyrgyz vocational education system consists of two levels. The first – primary professional (former PTU) is narrowly specialized and usually prepares students for basic occupations: 61 percent of students at this level major in agriculture, dress-making, cooking and car-repairing (ADB. 2007). Boys comprise 70 percent of students at the primary professional level. The second level of vocational training – secondary professional, usually provides students with broader knowledge and skills and includes training in such fields as education, (preparing teachers for primary schools and kindergartens), nursing and management. Girls make up 57 percent of students at this level. There is noticeable gender segregation by major at vocational schools. Females comprise the majority of students studying technology of consumer goods – 95 percent (a degree leading to sales jobs), health (88 percent), education (86 percent), culture and art (62 percent) and economics and management (61 percent) and a minority of those majoring in mining (2 percent) or machines and equipment (4 percent) (NSC. 2010. "Men and Women").

Figure 3: Female Enrollment among Primary Professional, Secondary Professional and University Students, %



Source: National Statistics Committee (NSC).2008. "Education and Science in the Kyrgyz Republic"
Note: Female enrollment at university level is for 2007 and other indicators are for 2006.

1.11. The number of university students increased by 24 percent over the past decade. Female enrollments rose by 34 percent and male enrollments by 12 percent. Boys are less likely to continue education to the university level and tend to join the labor force at a younger age to contribute to family income. They made up 45 percent of university students in 2009 down from 49 percent in 2000. Men are also underrepresented among PhD students and those continuing their education at postdoctoral level,

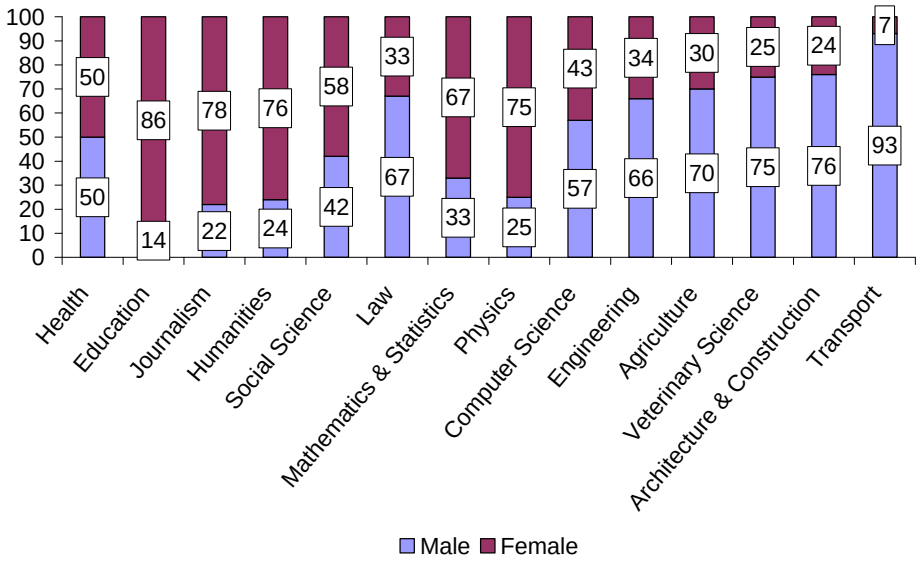
[7] The figure includes students of vocational colleges/lyceums and secondary professional institutions. National Statistics Committee. 2010. "Men and Women of the Kyrgyz Republic (2005-2009)", Bishkek

comprising only 37 percent and 42 percent of such students respectively (NSC. 2010. "Men and Women").

1.12. Detailed information about female enrolment at university, primary, and secondary professional levels across regions is only available for 2007 and 2006 years respectively (see figure 3). The country level patterns that boys are more likely to study at the primary professional level, while girls are more likely to study at the secondary professional level hold at the regional level. However, these gender differences in primary and secondary professional enrolments are less pronounced in the capital and Osh city, two most urbanized areas. Young men are least likely to enter universities in Osh region, where they comprise just 19 percent of students and most likely to do so in Chui region – the only region where the share of male students at the university level (60 percent) is higher than the share of female students.

1.13. Young men and women in the Kyrgyz Republic choose different fields of study, which has an impact on occupational segregation and gender wage gap. University female students often tend to choose majors that lead to low paying public sector jobs, most notably in education, while young men comprise over 70 percent of students majoring in construction, transport and veterinary science (figure 4). The factors behind women's choices of particular fields of study have not been well researched. It is conceivable that women's decisions are influenced by traditional stereotypes about "appropriate jobs" for men and women and the desire to work part-time (e.g. in teaching professions) to be able to take care of family responsibilities. This can explain why women outnumber men in mathematics and physics – majors that often lead to teaching jobs but comprise a minority among students that study computer science, engineering or construction – subjects that require similar skills to succeed and lead to full time and better paid jobs. Similarly, women are overrepresented in social sciences and humanities but are not very likely to study law – a major that is often associated with higher incomes.

Figure 4 : Male and Female University Students by Major, %



Source: National Statistics Committee (NSC).2008. "Education and Science in the Kyrgyz Republic"

B. Health

1.14. Despite some progress in improving certain health indicators (e.g. reduced prevalence of tuberculosis, reduced infant mortality rate and continued high coverage by immunization), widespread poverty, inadequate diets, high out of pocket expenditures and inaccessibility of medical services as well as lack of qualified medical personnel result in some of the worst health outcomes in the region. Maternal mortality rates are among the highest in Eastern Europe and Central Asia, over half of pregnant women and a third of children under 14 are anemic and HIV/AIDS is spreading fast albeit from a low level. Important gender differences exist in access to healthcare, life expectancy at birth, the prevalence of tuberculosis, tobacco, alcohol and drug addiction and the prevalence of sexually transmitted diseases and HIV/AIDS.

Access to Healthcare

1.15. Poor state of medical infrastructure, inadequate access to health facilities in rural areas and affordability of healthcare are among key issues of policy concern. Evidence from household surveys shows that women are more likely than men to say that they need medical services (33 percent vs. 24 percent respectively). The need for medical services is higher in urban than in rural areas both for men and women (31 percent in urban areas versus 19 percent in rural areas for men, 41 percent in urban areas versus 29 percent in rural areas for women). Moreover, women are less likely to utilize health services when needed than men in rural areas, 41 versus 47 percent accordingly. Furthermore, significantly more women than men that need hospitalization do not utilize inpatient facilities; women represent 61 percent of those that did not go to hospitals despite having the medical conditions that require hospitalization (no significant difference between urban and rural areas). Men and women often cited self-treatment and inability to afford the costs of in-patient care among reasons for not going to hospitals (KIHS, 2009). These statistics may suggest that households prioritize the health needs of men in rural areas, possibly because they are seen as breadwinners, which may have long-term implications for women's health and deserves the attention of health practitioners and policy makers.

Table 4: Usage of Health Services by Gender and Residence, %

	Needed health services in 2009								
	Republic			Urban			Rural		
Gender	need	did not need	total	need	did not need	total	need	did not need	total
men	24	76	100	31	69	100	19	81	100
women	33	67	100	41	59	100	29	71	100
	Used health services or not when needed in 2009								
	used	did not use	total	used	did not use	total	used	did not use	total
men	59	41	100	67	33	100	53	47	100
women	61	39	100	64	36	100	59	41	100

Source: KIHS 2009

1.16. Both demand and access to health services seem to be associated with welfare status. Thus, the poor from the lowest consumption per capita quintiles indicated less need in health services and they were less likely to use health services when needed. This pattern holds for men and women. Lack of education among the poor may obscure the recognition of illness, while lack of money may contribute to lower usage of health services.

Table 5: Usage of Health Services by Consumption per Capita Quintiles, %

	Needed health services in 2009				
	Poorest	2	3	4	5
men	21	16	21	26	35
women	30	20	33	36	46
	Did not use health services when needed in 2009				
	Poorest	2	3	4	5
men	52	46	41	33	37
women	48	34	40	33	39

Source: KIHS 2009

Early Marriages and Teenage Pregnancy

1.17. The Family Code of the Kyrgyz Republic allows marriages after reaching the age of eighteen, but stipulates that in case of good reasons executive-administrative bodies of local self-governance units can permit the marriage of females reaching sixteen years old. According to Thomas (2009), the Kyrgyz Republic has ratified the Convention on Consent to Marriage, Minimum Age for Marriage and Registration of Marriages as well as The Convention on the Elimination of All Forms of Discrimination against Women. The Kyrgyz Republic criminal code prohibits forced and early marriages. It criminalizes marriage with anyone younger than sixteen, including by way of kidnapping, and provides a penalty of between three and seven years in prison. Nevertheless, according to the results from the Multiple Indicator Cluster Survey (2006), the practice of early marriages existed and most probably continues nowadays.

Table 6: Early Marriages in 2006, %

	Percentage of women aged 15-49 years in marriage or union before their 15th birthday	Percentage of women aged 20-49 years in marriage or union before their 18th birthday
Republic	0.8	12.2
Region		
Batken	0.2	11.5
Jalal-Abad	1.3	9.5
Issyk-Kul	0.7	14.7
Naryn	0.2	9.7
Osh	1.2	13.4
Talas	0.9	17.7
Chui	0.7	18.2
Bishkek	0.3	7.7
Residence		
Urban	0.6	9.7
Rural	0.9	14.2
Education		
Not secondary	1.9	28.4
Secondary	0.7	13.1
Higher	0.4	6.1
Wealth index quintiles		
Poorest	0.9	16.5
Second	1.0	13.4

Middle	0.6	12.9
Fourth	1.0	11
Richest	0.5	9.1

Source: The Multiple Indicator Cluster Survey (2006)

1.18. As shown in table, about 1 percent of women aged 15-49 years were in marriage or union before their 15th birthday. This figure is higher in the most densely populated Southern regions (Osh and Jalal-Abad) and among females without secondary education. It does not seem to be correlated with the wealth status. The percentage of women aged 20-49 years engaged in marriage or union before their 18th birthday is much higher at 12.2 percent. Regional differences are substantial. The highest percentage is in Chui region, while the lowest is in the capital, Bishkek. Women from rural areas, without secondary education and from the poorest households are more likely to enter marriage or union before their 18th birthday.

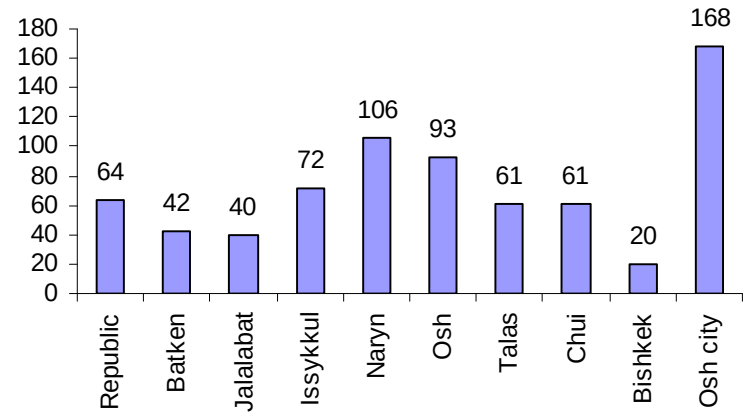
1.19. According to the Multiple Indicator Cluster Survey (2006), there was a slight increase in adolescent fertility rate after 2005. For example, the number of births per 1000 women aged 15-17 increased from 4.5 in 2005 to 5.2 in 2009. The same tendency was observed with the number of births per 1000 women aged 17-19. It has increased from 55.6 to 66.9 respectively.

Maternal Mortality

1.20. Kyrgyz women have the highest risk of death during delivery among ECA countries. Modeled maternal mortality rate (MMR) was estimated to be 81 per 100,000 live births in 2008 with no signs of improvement over the past decade (WDI Database).[8] Under such circumstances, the Kyrgyz Republic is unlikely to meet the MDG target of a 75 percent reduction of MMR by 2015. Rural areas account for almost 75 percent of all cases of maternal mortality (Figure 5). Furthermore, while maternal mortality in urban areas has been steadily declining over the past decade, it has increased substantially in rural areas from 39 per 100,000 live births in 2000 to 75 in 2009. There are also significant regional differences – maternal mortality rates in Osh city are more than 2.5 times higher than the national average (NSC. 2010. “Men and Women”).

[8] National maternal mortality rate is lower at 63.5 in 2009 (NCS. 2010. “Men and Women in the Kyrgyz Republic”). Modeled MMR is considered to be a more reliable indicator for countries with underdeveloped registration systems. It is calculated with a multilevel regression model using available national MMR data and a range of socioeconomic indicators (e.g, fertility rate, number of birth attendants).

Figure 5: Maternal Mortality (per 100,000 live births) by Region and Location



Year	Urban	Rural	Total
2000	60	39	46
2005	48	66	60
2006	43	62	56
2007	36	60	52
2008	43	61	55
2009	43	75	64

Source: NSC, 2010. "Men and Women in the Kyrgyz Republic"

1.21. High incidence of maternal mortality is registered in the context where almost all births occur in the presence of medical professionals.[9] The statistics on the causes of maternal deaths and available studies suggest that a large share of deaths is attributable to preventable factors. Poor maternal health outcomes could be explained by inadequate quality of medical personnel, the dire state of medical infrastructure and lack of equipment and drug supplies, particularly in rural areas. Furthermore, there is no functioning referral system for high risk patients, limited transportation and communication and a lack of support for rural health facilities from the more advanced regional level hospitals[10]. Poor nutrition, high prevalence of anemia (54 percent of pregnant women are anemic) and inadequate health seeking behavior (particularly among rural migrant women who are not aware about their entitlements to healthcare services in the cities) are among other factors that contribute to a high rate of pregnancy complications (60 percent of all pregnancies) and maternal mortality.[11]

1.22. While the official abortion rate has declined from 23 to 16 per 1000 women over the past decade,[12] abortions still account for 7 percent of all maternal deaths.[13] Some studies (e.g. the 2nd MDG Progress Report, UNDP) attribute a decline in the officially registered abortion rates to the increased number of private clinics that perform abortions but do not register them. According to the most recent household survey (KIHS 2009), 57 percent of women aged 15-49 practice contraception. The most popular contraceptives are intrauterine devices (IUDs), chosen by 74 percent of women who reported using contraceptives. The other common contraceptive methods are condoms and contraceptive pills. Each method is used by about 5 percent of women relying on contraceptives; about 7 percent of women rely on tracking high risk days as a contraception method. The highest use of contraceptives is observed

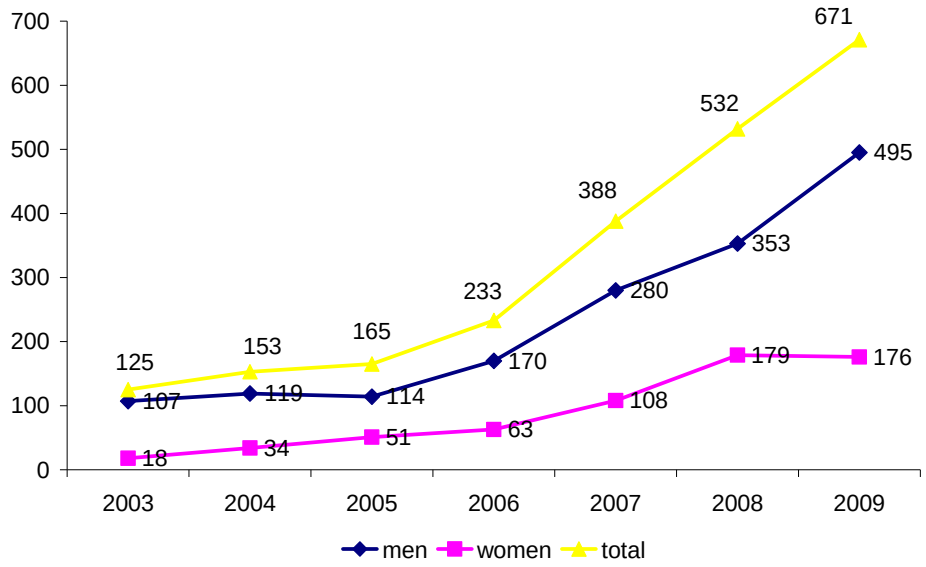
[9] NSC.2010. "Men and Women of the Kyrgyz Republic (2005-2009)", Bishkek.
[10] UNFPA.2009. A Review of Progress in Maternal Health in Eastern Europe and Central Asia, New York
[11] National Statistics Committee. 2010. *Men and Women of the Kyrgyz Republic (2005-2009), Bishkek* and UNFPA. 2009. *A Review of Progress in Maternal Health in Eastern Europe and Central Asia*, New York
[12] UNICEF Regional Office for CEE/CIS. 2010. TransMONEE Database 2011. Country Profile. Kyrgyz Republic http://www.transmonee.org/
[13] UNFPA .2009. *A Review of Progress in Maternal Health in Eastern Europe and Central Asia*, New York

in Talas (72 percent), Issykul (67 percent) and Chui (65 percent) regions; there are no major differences between urban and rural locations.

1.23. Using a contraceptive is higher among women with higher education compared to women with basic secondary and below education, 58.6 percent versus 44.2 percent respectively. This difference is more pronounced in rural areas compared to urban ones. There is slightly lower usage of contraceptives among the poor women of all age groups except women aged 26-35 years.[14]

1.24. Failure to reduce drug addiction and low level of condom use contribute to the spread of sexually transmitted diseases and HIV/AIDS. The current prevalence of HIV is 0.3 percent of population (ages 15-49), which is lower than the regional rate of 0.6 percent.[15] However the number of newly diagnosed HIV cases is growing at a high rate (Figure 6). Men constitute the majority of the newly infected people and those living with HIV/AIDS. Yet over the period of 2003-2009, the rate of new infections was higher among women than among men: the number of newly diagnosed cases increased almost ten times among women and close to five times among men (NSC."Men and Women"; 2005 and 2010).

Figure 6: Number of People First Diagnosed with HIV/AIDS



Source: NSC. "Men and Women of the Kyrgyz Republic" 2005 and 2010

1.25. The leading mode of transmission among men is intravenous, which accounted for 90 percent of infections among men in 2009, while the most common route of infection for women was through unprotected sex.[16] The majority of women living with HIV/AIDS were infected by their husbands who were drug users (UNDP 2009). An increase in women living with HIV/AIDS contributed to the rise in incidence of mother to child transmission, which constituted 2 percent of all cases of infection in 2009 up from 1 percent in 2007.[17] Given that the families of injecting drug users are more likely to break, it is

[14] NSC.2010. "The Living Standards of the Population (2005-2009)".Bishkek.
[15] World Development Indicators. 2010
[16] National Statistics Committee. 2010. "Men and Women of the Kyrgyz Republic (2005-2009)", Bishkek
[17] UNDP.2009. *The Second Periodic Progress Report on the Millennium Development Goals in the Kyrgyz Republic* and National Statistics Committee. 2010. "Men and Women of the Kyrgyz Republic (2005-2009)", Bishkek

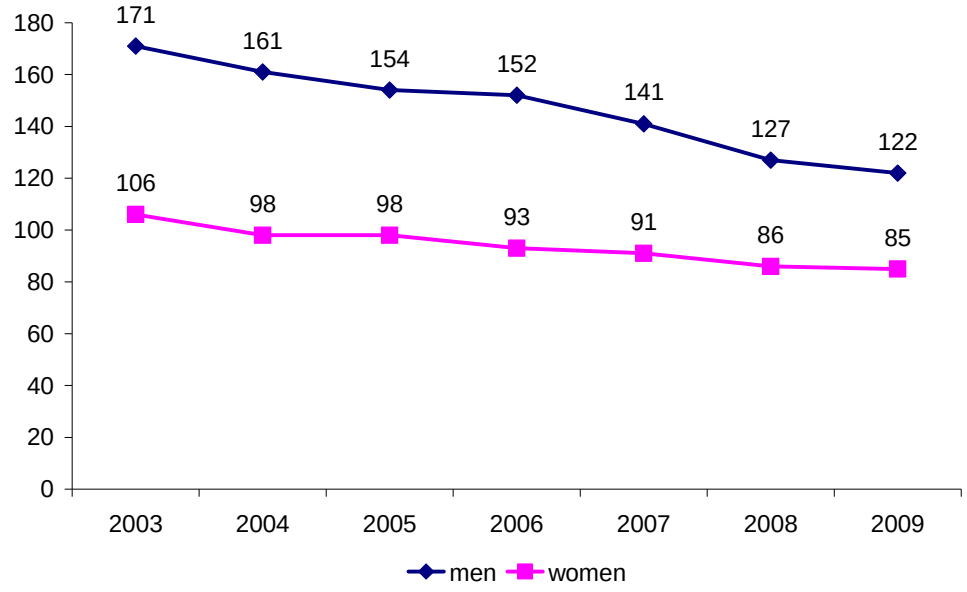
likely that the infected women will pass on the disease to their new partners. This increases the risk of the spread of HIV from marginal groups to the general population and calls for measures to promote safe sex practices and reduce the incidence of drug use.[18]The largest number of people living with HIV/AIDS is observed in Chui region, the city of Osh and Osh region (NSC 2010. "Men and Women").

1.26. In addition to HIV/AIDS, men are also more likely to get infected with syphilis and gonorrhea. In 2009, the prevalence of syphilis per 100,000 people was 25 for men and 19 for women. The prevalence of gonorrhea per 100,000 people was 20 for men and 12 for women. According to official statistics the incidence of both diseases declined since 2005. However, the reduced number of registered cases is mostly due to the fact that the infected do not seek medical help and widespread self-treatment (NSC, 2010. "Men and Women").

The Incidence of Tuberculosis

1.27. The Kyrgyz Republic has achieved some progress in reduction of the prevalence and number of deaths from tuberculosis. The concerted efforts of the government and the donor community aimed at improvement of the identification and treatment of tuberculosis resulted in a decrease in the incidence of disease by 29 percent for men and 20 percent for women (per 100,000 people) between 2002 and 2009 (Figure 7). However, the situation remains difficult as the total incidence of tuberculosis is still above 100 per 100,000 people - a level considered epidemic by WHO. Poor nutrition and inadequate living conditions contribute to the spread of the disease.

Figure 7: Incidence of Tuberculosis per 100,000 People



Source: NSC. "Men and Women" 2005 and 2010

1.28. Men are 1.4 times more likely to get infected with tuberculosis than women (as of 2009). The highest rate of new infections occurs among men and women of 18-24 years old. In this age group, the

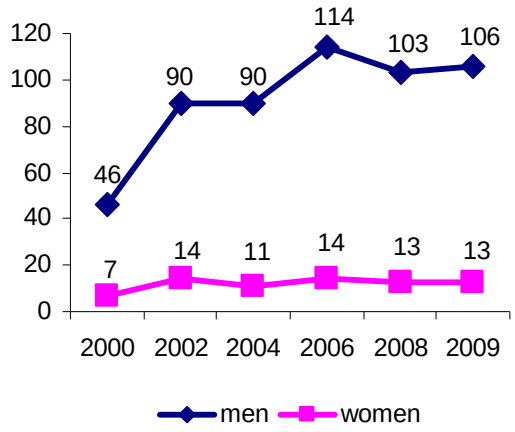
[18] UNDP.2009. The Second Periodic Progress Report on the Millennium Development Goals in the Kyrgyz Republic

prevalence of tuberculosis per 100,000 people is 185 for men and 152 for women (NSC, 2010). The high incidence of morbidity among the youth has high social costs as people are affected in their prime productive years. This necessitates targeted public action to raise awareness about the disease, ensure screening for tuberculosis (e.g. at educational institutions) to improve detection and provide treatment to affected individuals.

Tobacco, Drug and Alcohol Addiction

1.29. Men are much more prone to alcohol, tobacco and drug use and the number of addicts increased significantly over the past decade. The smoking prevalence is 46 percent among adult men and 2 percent among adult women.[19] Alcohol abuse is also widespread. In 2009, the incidence of alcoholism per 100,000 people was 106 for men and 13 for women - a significant increase over the last decade (Figure 8). Most people with alcohol addiction do not seek treatment and are not registered by medical institutions, so the official statistics significantly understates the scope of the problem. Alcohol addiction is more widespread among people age 35 and older; men constitute 89 percent of those with alcohol dependency (NSC 2010. "Men and Women").

Figure 8: Incidence of Alcohol Addiction per 100,000 People



Source: NCS. "Men and Women" 2005 and 2010

1.30. Drug use and addiction has also grown rapidly, particularly among young people. As of 2009, there were 10,417 registered drug users – 93 percent of them were men. The majority of drug users try to avoid registration with government officials due to the social stigma associated with drug use and difficulty in finding employment after registration. Thus the official figures do not reflect the real situation. According to the estimates of UNODC World Drug Report 2010, the Kyrgyz Republic has 25,900 heroine users and 9,600 raw opiate users. The total opiate prevalence rate is estimated at 0.8 percent of population with injecting drug use being the predominant mode of drug consumption.[20]

Life Expectancy at Birth

1.31. Over the last decade, men and women have seen an improvement in their average life expectancy at birth over the past decade by about two years. In 2009, men's life expectancy was 65 years vs. 73 for women (WDI 2011) – levels that are comparable to the ECA average and significantly higher than the average for low income countries. Yet, despite this, the gap in life expectancy between men and women is unusually high in the global context. Men's life expectancy at birth is about 8 years lower than women's (in 2009). This gender gap in life expectancy is comparable to the average in ECA of 9 years although much higher than in low income countries (about 2 years) or even the global average (4 years).

[19] World Development Indicators. The statistics is based on 2006 – the latest year for which data were available
[20] UNODC.2010. *World Drug Report 2010,* Vienna

1.32. There are several possible reasons for the high gap in life expectancy though it appears main driven by the higher mortality rates of prime age men as well as their lower longevity once they reach 65 years. Some of the main factors driving excessive male mortality are health related. Non-communicable diseases, notably, cardiovascular diseases, which accounted for half of all deaths in 2009, injuries (e.g. traffic accidents) and cancer are the three major causes of death.[21] High stress due to unfavorable economic conditions, poor diets, alcohol abuse and tobacco consumption contribute to high mortality rates, particularly among men. Working age men are also over three times more likely to get injured and five times more likely to die while performing work responsibilities. This is due to a higher concentration of men in mining, manufacturing, construction and transport - industries with a higher risk of injuries. Unhealthy life styles, poor health and high mortality rates have high socio-economic costs as they destabilize families and reduce worker productivity.

II. GENDER DISPARITIES IN THE LABOR MARKET

A. Key Labor Market Indicators

2.1. The Soviet regime was characterized by a *de jure* equality in labor relations with high levels of employment and similar remuneration rates for men and women. Similar to other countries of the region, transition to a market economy in the Kyrgyz Republic was marked by sectoral restructuring, privatization of state-owned enterprises, dismantling of the centralized wage setting system and emergence of the informal sector. Significant job loss was observed in manufacturing and heavy industry - sectors that were dominated by men. Although the services sector has expanded and emerged as a key source of employment following the transition, women's activity rates became constrained by the deterioration of public services, particularly child care. Most of the country's kindergartens were closed with less than 20 percent of pre-school children attending childcare institutions in 2009[22]. This has reduced the ability of many women to participate in the labor market.

Activity and Employment Rate

2.2. The total labor force in the Kyrgyz Republic is 2,420,100 people of which 42 percent are women. In 2009, the labor force participation rate was 53 percent for women and 76 percent for men (NSC.2010. "Men and Women").[23] This activity rate is lower than the average in low income countries where it is 66 percent for women and 84 percent for men but higher than the average for ECA – 50 and 69 percent respectively (WDI). Labor force analysis is somewhat difficult because of high migration and poor record keeping of migrant flows in the Kyrgyz Republic. It is estimated that over half a million Kyrgyz are working abroad, primarily in Russia.[24]

[21] NSC.2010. "Men and Women in the Kyrgyz Republic 2005-2009". Bishkek
[22] World Development Indicators.
[23] Throughout the paper, the labor statistics is given for population age 15 and above.
[24] World Bank. Bilateral Migration and Remittances Matrix. 2010.
http://econ.worldbank.org/WBSITE/EXTERNAL/EXTDEC/EXTDECPROSPECTS/0,,contentMDK:22803131~pagePK:64165401~piPK:64165026~theSitePK:476883,00.html

2.3. Examination of labor market indicators over time shows that activity and employment rates fell slightly among women but increased among men (Table 7). The reasons behind these trends have not been well researched and unclear.

Table 7: Labor Market Indicators 2003 and 2009 (population age 15 and above), %

	2003		2009	
	Women	Men	Women	Men
Activity Rate	55	73	53	76
Employment Rate	49	66	48	71
Unemployment Rate	11	9	10	7

Source: NSC. "Men and Women" 2005 and 2010

2.4. In 2009, activity and employment rates of women were over 30 percent lower than men's. Despite better education levels, less than half of Kyrgyz women are employed. The biggest difference in activity and employment rates of men and women was observed in Naryn region where women were half as likely as men to have a job while the smallest gender gap in these indicators was observed in the capital city of Bishkek (Table 8).[25]

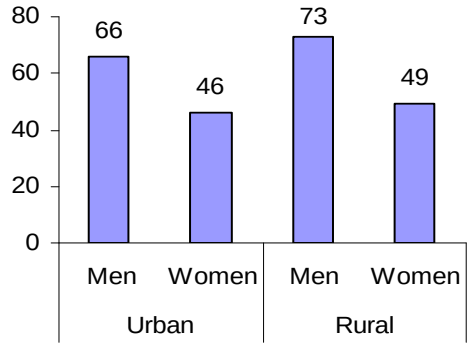
Table 8: Labor Market Indicators by Region in 2009, %

	Activity Rate		Employment Rate		Unemployment Rate	
	Women	Men	Women	Men	Women	Men
Republic	53	76	48	71	10	7
Batken	51	75	43	70	15	7
Jalal-Abad	54	75	50	71	9	6
Issyk-Kul	51	77	45	70	11	8
Naryn	38	74	33	69	15	8
Osh	53	81	48	76	8	6
Talas	62	80	58	77	6	4
Chui	54	73	48	66	11	10
Bishkek	56	74	50	66	10	11

Source: NSC, 2010

2.5. The rural population has higher activity and employment rates than the urban population owing to a greater availability of low skilled jobs in agriculture, which employs almost half of rural men and women. However, rural areas also have a larger gender gap in access to job opportunities (Figure 9). Lack of access to assets (e.g. land, which is usually registered in the name of the husband or a close male relative) and the near absence of childcare institutions in rural locations are among the factors that constrain women's employment opportunities in rural areas.

Figure 9: Employment Rate by Location in 2009, %



Source: NSC, 2010." Employment and Unemployment"

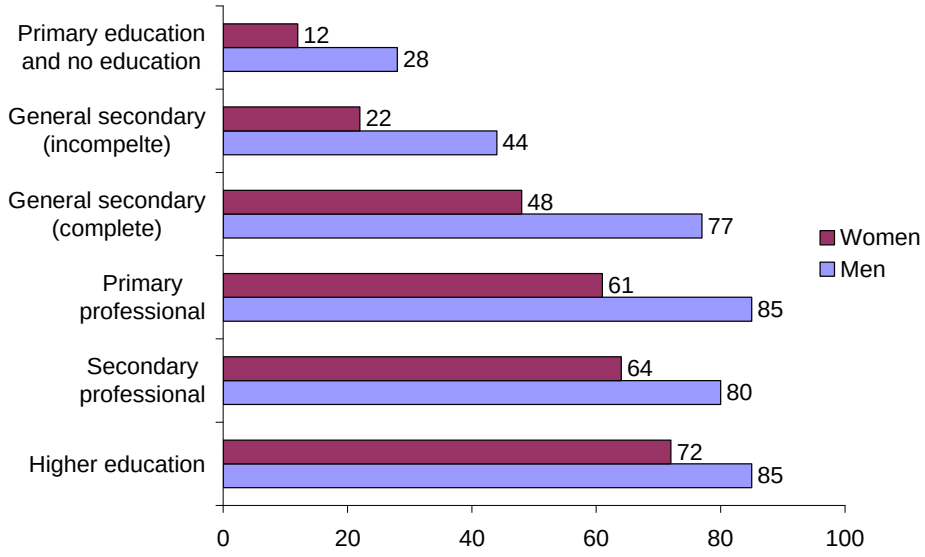
[25] National Statistical Committee. 2010. "Employment and Unemployment: Results of the Integrated Household Survey 2009", Bishkek

2.6. Women's activity and employment rates are lower than men's at all education levels; however they tend to increase progressively with each level of education. For instance, activity rates for women vary from 7 percent for those with primary or no education to 72 percent for those with a university degree. The respective rates for men are 20 percent and 84 percent. Employment rates follow a similar pattern; men and women with higher education have much better chances of finding a job than people with more basic educational qualifications (Figure 10). Yet, women with low educational attainment are about twice less likely to be employed than men with similar education levels.

2.7. A higher demand for skilled workers in the Kyrgyz labor market can explain better employment outcomes for educated people; however it does not explain a dramatic difference in employability of poorly educated men and women. Low activity and employment rates of low skilled women can potentially be attributed to a greater prevalence of traditional social roles where a man is seen as a breadwinner and a woman's role is limited to household's responsibilities. In fact, when asked about reasons for not seeking a job, 16 percent of women with higher education vs. 61 percent of those with complete or incomplete secondary education name household responsibilities as a reason for inactivity. Furthermore, employers offering high skilled jobs tend to have a smaller gender bias. The same pattern is observed in Serbia.[26]

2.8. We are not aware of special surveys devoted to measuring social barriers towards female employment. Nevertheless, several questions from the World Values Survey (WVS) conducted in the Kyrgyz Republic in 2003 can be useful to measure the attitude towards female employment. For example, according to this survey, 49 percent of surveyed population in the Kyrgyz Republic believe that if jobs are scarce men should have more rights to jobs than women. 17 percent believe that working mother can not establish just as warm and secure a relationship with her children as a mother who does not work. 25 percent disagree or strongly disagree that both husband and wife should contribute to household income.

Figure 10: Employment Rates (%) and Educational Attainment of Men and Women, 2009

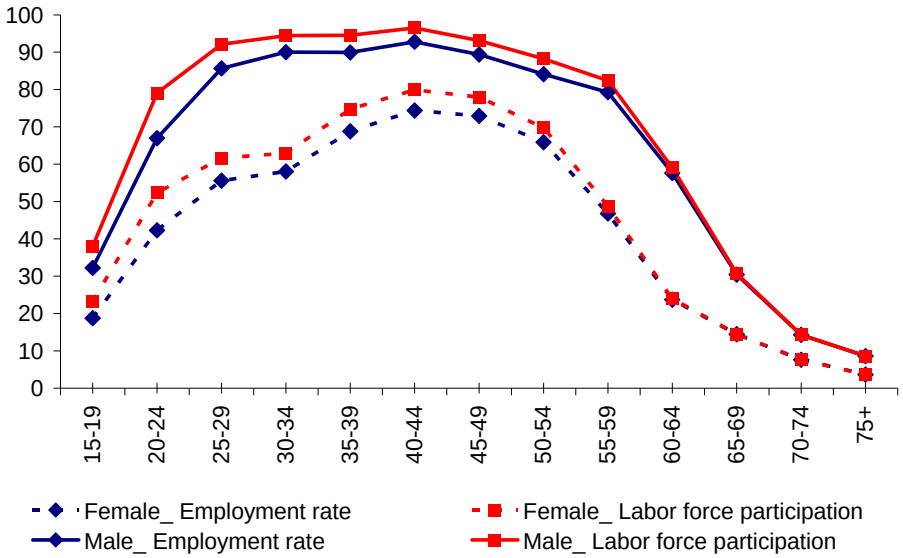


Source: NSC.2010." Employment and Unemployment"

[26] Reva, Anna. 2011. "Inequality in the Labor Market in Serbia". World Bank, Washington DC forthcoming

2.9. Women of all age groups have lower activity and employment rates than men. The biggest gap in employment rates is observed in the 25-34 and 55-64 age groups when women tend to leave their jobs to give birth and bring up their children and in the later age category grandchildren (NSC 2010. Men and Women). This pattern is reflected in figure 11.

Figure 11: Employment and Labor Force Participation Rates Across Age Groups in 2009, %



Source: KIHS 2009

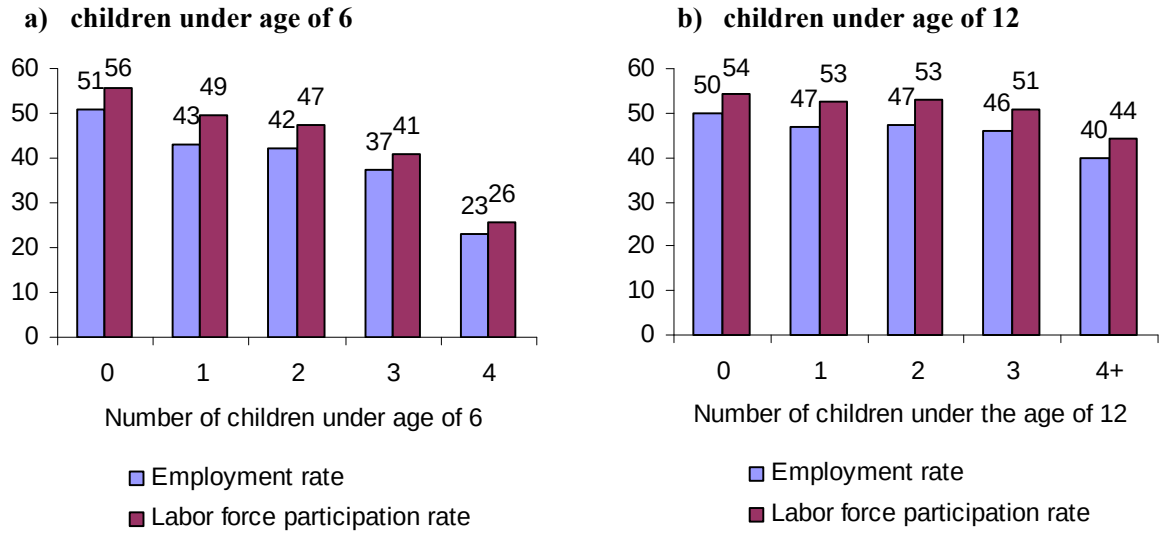
2.10. It is also interesting to see how female employment and labor force participation rates differ across women with different number of children in the household and different marital status. As shown in table 9, the highest employment rate and labor force participation is among divorced or those women who live separately from their husbands. The number of children in household is also associated negatively with the likelihood of females to participate in the labor force and being employed. For example, female employment drops down from 51 percent in households without children under 6 years to 23 percent for those women in households with 4 children under the age of 6. After some time, when children grow up, women enter or re-enter the labor force. Thus, female employment drops only to 40 percent for women from households with 4 and more children under the age of 12.

Table 9: Female Employment and Labor Force Participation Rates across Marriage Status in 2009, %

	Registered marriage or union	Divorced or in marriage but live separately	Widow	Never married
Employment rate	54	77	34	34
Labor force participation rate	59	82	36	41

Source: KIHS 2009

Figure 12: Women's Employment and Participation Rates by Number of Children in the Household, %



Source: KIHS 2009

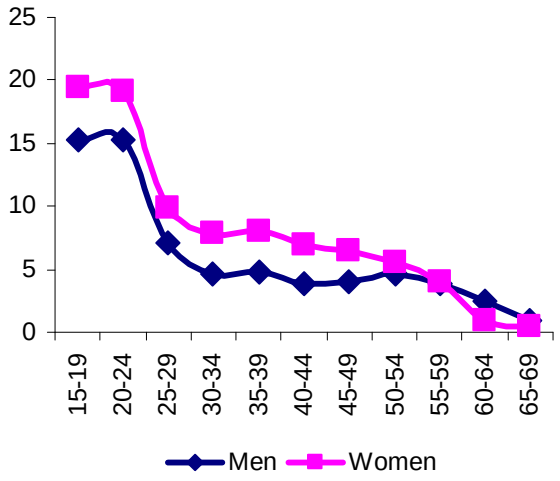
Unemployment Rate

2.11. Unlike other countries in ECA, the unemployment rate in the Kyrgyz Republic is higher among women than among men – 10 and 7 percent respectively. The unemployment rate is lower than the regional average of 12.7 percent and 13.0 percent for women and men.[27] Kyrgyz women tend to look for jobs longer than men. In 2009, 27 percent of unemployed women vs. 19 percent of unemployed men were looking for a job for more than 12 months.[28] This is quite different from the rest of ECA where long term unemployment rates between men and women are similar.

[27] The average is based on the available data for 21 countries, excluding Albania, Armenia, Belarus, Kazakhstan, Montenegro, Tajikistan, Turkmenistan and Uzbekistan; World Bank. 2011. "Europe and Central Asia: Opportunities for Men and Women", Washington DC;
[28] NSC.2010. "Men and Women in the Kyrgyz Republic 2005-2009". Bishkek

2.12. The highest unemployment rate 15 percent for men and 19 percent for women is observed among the youth in the 15-24 age group (Figure 13). In this age group the difference in male and female unemployment rates is also the widest. The highest unemployment rate in the 15-24 age groups is mostly driven by very high youth unemployment in urban areas. In rural areas, youth unemployment is lower, but the difference between male and female unemployment is the widest, especially in the 15-24 age group (Figure 14).

Figure 13: Unemployment Rate as a Percentage of Economically Active Population, 2009

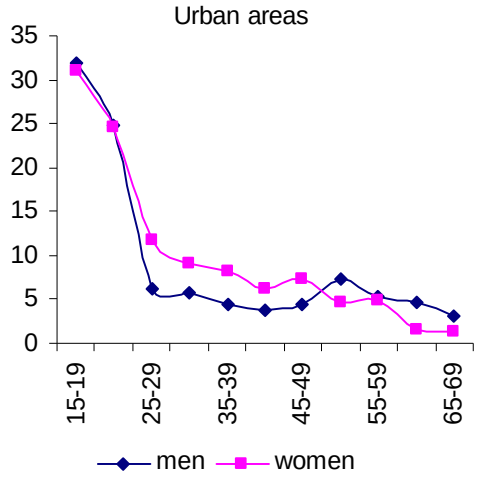


Source: NSC.2010." Employment and Unemployment"

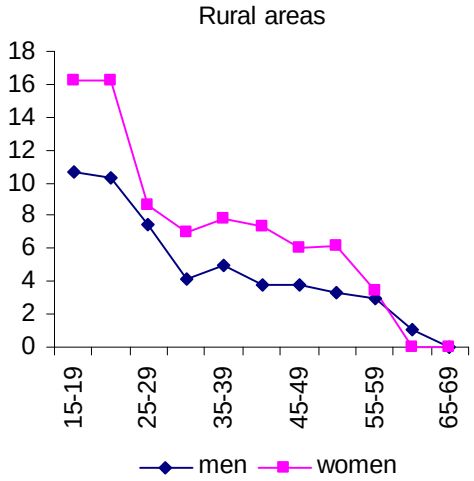
2.13. Lack of jobs for young people has high social costs as it prevents new entrants to the labor market from obtaining relevant skills. In the absence of affordable education and leisure activities lack of employment opportunities for young people may also contribute to the spread of alcohol and drug abuse and other types of delinquent behavior.

Figure 14: Unemployment Rate as Percentage of Economically Active Population By Gender and Residence in 2009, %

a) for urban areas



b) for rural areas



Source: KIHS 2009

2.14. Unemployment rates are lowest among people in the pre-retirement and retirement age group. Furthermore, in this age group the unemployment gap between men and women narrows down and women between the ages of 60 and 69 have a lower unemployment rate than men.

B. Employment Patterns

2.15. The majority of the population works in the private sector, which accounts for 75 percent of GDP and 80 percent of employment.[29] As in many other countries of the region, women are more likely to work in the public sector where jobs are relatively secure and working hours are shorter than in the private sector allowing women to combine employment with family responsibilities.

2.16. Employment in the Kyrgyz Republic is highly concentrated with four sectors accounting for over 70 percent of total employment of men and women (Table 10).[30] Given that 65 percent of population lives in rural areas, it is not surprising that agriculture is a key source of livelihood. It provides jobs to slightly more than 30 percent of males and females: 4 percent of total employment in urban and 47 percent in rural areas. Noticeable gender differences in employment patterns are be observed in other sectors, however. Men are overrepresented in construction, transport and communications as well as utilities (energy, gas and water) making up between 82 percent and 96 percent of those employed in these sectors. Health, education and hotels and restaurants are the sectors that are traditionally dominated by women.[31]

Table 10: Employed Population by Sector and Residence, %

	Republic		Urban		Rural	
Sector	Men	Women	Men	Women	Men	Women
Agriculture, hunting and forestry	33	32	5	4	47	48
Mining and quarrying	1	0	1	0	1	0
Manufacturing	7	9	11	14	5	6
Production and distribution of electricity, gas and water	3	1	4	2	1	0
Construction	18	1	18	1	18	1
Wholesale and retail trade; repair of cars and appliances	12	17	19	23	9	14
Hotels and restaurants	2	6	3	8	1	5
Transport and communication	10	2	16	3	7	1
Finance	1	1	1	2	0	0
Real estate	2	3	5	5	1	1
Public administration	5	5	7	7	4	3
Education	3	14	3	15	3	13
Health and social work	1	7	2	9	1	5
Community, social and personal services	1	3	3	5	1	1
Private households and employers	1	1	1	2	1	1
Total	100	100	100	100	100	100

Source: KIHS 2009

[29] IFC Investment Climate Advisory Services Project in the Kyrgyz Republic http://www.ifc.org/ifcext/kbeep.nsf/Content/Home , accessed on August 20, 2011

[30] In particular, agriculture, trade, education and manufacturing employ 71% of all women while 73% of employed men work in agriculture, construction, trade and transport and communications.

[31] NSC.2010. "Men and Women in the Kyrgyz Republic 2005-2009". Bishkek

2.17. Following independence, the nature of employment changed from long-term formal sector jobs towards less secure work arrangements. Only 51 percent of the employed population (43 percent of men and 61 percent of women) works under open-ended written contracts with women more likely to do so due to a greater tendency to work in the public sector. More than a third of population, 42 percent of men and 28 percent of women work without a written contract, based solely on the verbal agreement, which makes them vulnerable to employer abuse, e.g. work for longer hours without pay or remuneration below the initially agreed amount (KIHS 2009).

2.18. The informal sector has grown significantly since the transition to a market economy. In 2009, 43 percent of the employed had their primary job in the informal sector with no major difference between men and women (KIHS 2009). The definition of the informal sector used in this paper covers those engaged in entrepreneurial activity without forming a legal entity, people that are working for their relatives without compensation, and those working based on a verbal agreement (i.e. without a written contract). Most of the informal sector employees live in rural areas and are employed in agriculture. Workers with primary and incomplete secondary education have the greatest likelihood of being employed informally; over 75 percent of people at these education levels have informal sector jobs (KIHS 2009).

2.19. The high percentage of people employed in the informal sector may be indicative of relatively high costs and/or lengthy procedures associated with business registration and compliance with the regulatory environment and lack of other employment opportunities for job seekers. It also has major implications for social protection policies as a significant share of population does not have access to paid sick leave, unemployment benefits in case of job loss or access to maternity leave. Furthermore, upon retirement informal sector workers will be eligible only for a government cash transfer if they are among the poor.

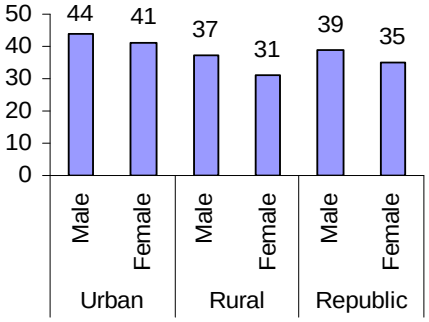
C. Part-time Work and Average Working Hours

2.20. The vast majority of Kyrgyz population – 98 percent works full time with no differences between men and women. Those who work part time do so mainly because they could not find a full time job or on the employer's request. The average rate of part time employment is higher in ECA where 12 percent of employed women and 7 percent of employed men hold part-time jobs.[32] The share of part-time employees in industrialized economies is even higher and reaches 35 percent for women in EU-15.[33] The unattractiveness of part-time jobs in the Kyrgyz Republic could be explained by low level of wages in the country; i.e. people working part time will not be able to cover transportation, meals and other costs due to low earnings.

[32] World Bank. 2011. "Europe and Central Asia: Opportunities for Men and Women", Washington DC
[33] Giovannola, Daniele. Nicola Massarelli. 2009. *Population and social conditions*. Eurostat Data in Focus 35/2009 http://epp.eurostat.ec.europa.eu/cache/ITY_OFFPUB/KS-QA-09-035/EN/KS-QA-09-035-EN.PDF

2.21. While most of the employed consider themselves working full time there is a significant difference between the number of hours worked in a week in rural and urban areas (Figure 15). This is mainly due to the scarcity of work in rural locations. Rural women work ten hours less than urban women while rural men work seven hours less than urban men. Although women spend less time than men at their jobs, they fulfill most of the household responsibilities. Employed men spend only 1.3 hours a day for household work and upbringing the children while employed women spend slightly more than four hours for these activities (NSC.2010. "Men and Women").

Figure 15: Number of Hours Worked Weekly



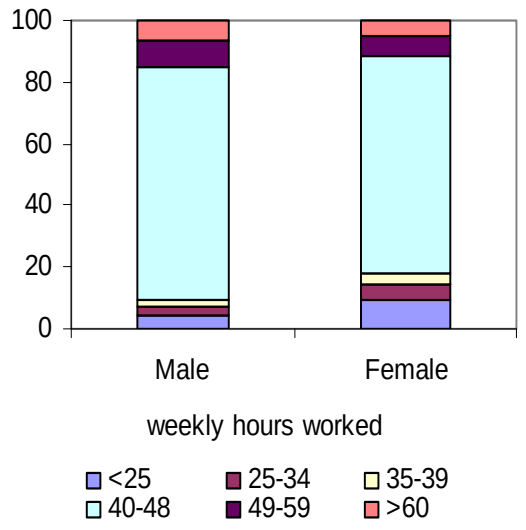
Source: KIHS 2009

2.22. About a quarter of men and a fifth of women would like to work more if this could provide them with additional earnings and 23 percent of population is looking for an additional job. However, only 7 percent succeeded in finding additional employment in 2009 (KIHS, 2009). Most of the people who reported having an additional job live in rural areas and are employed in agriculture.

2.23. The distribution of rural and urban primary employment by weekly hours worked shows that underemployment is a problem mainly in rural areas. Thus, 46 percent of women work less than 25 hours per week in rural areas in comparison to 9 percent in urban areas. 31 percent of men work less than 25 hours per week in rural areas (see Figure 16). Underemployment in rural areas has a seasonal character. For example, the share of women working less than 25 hours per week falls down from 53 percent in the fourth quarter to 37 percent in the second quarter.

Figure 16: Share of Employment by Weekly Hours Worked, Primary Occupation in 2009, %

a) for urban areas



b) for rural areas

Source: KIHS 2009

III. WAGE DIFFERENTIALS BETWEEN MEN AND WOMEN

3.1. An examination of gender wage differentials can be helpful in understanding of the treatment of male and female workers in the labor market. In 2009, men in the Kyrgyz Republic were earning on average 30 percent more than women on a monthly basis (KIHS 2009). This wage gap, i.e. difference between average men's and women's monthly earnings as a percentage of men's average monthly earnings is much higher than in the rest of ECA, where it is 18 percent.[34] The wage gap in the Kyrgyz Republic is particularly striking given the higher education levels of women.

3.2. This part of the paper focuses on the analysis of men's and women's earnings and attempts to identify the factors that influence wage differentials. All wage data comes from the sample of wage workers from the KIHS 2009 survey for the 4th quarter. The reported wages may be lower than those stated in other official statistics, e.g. the Survey of Institutions and Enterprises, because of underreporting. The rest of this section provides a description of the earnings differentials between men and women based on location, sector of employment and occupation and attempts to explain the wage gap in the Kyrgyz Republic using regression analysis.

[34] World Bank. 2011. "Europe and Central Asia: Opportunities for Men and Women", Washington DC

A. Wage Differentials between Men and Women[35]

Location and Education

3.3. Regionally, women's average monthly wages are highest in Bishkek at KGS 5,180; men's monthly wages in this city are KGS 5,800, making the capital a place with the lowest gender wage gap (of about 11 percent) nationwide. This is likely because being the biggest city in the Kyrgyz Republic, it offers a variety of private sector jobs where wages for women are higher than in the public sector and possibly because employers in Bishkek are less influenced by traditional stereotypes. Furthermore, Bishkek has a higher concentration of university educated women that tend to be better paid. The highest wages for men are observed in Jalal-Abad – at KGS 7,869. High earnings of men in Jalal-Abad region are largely due to a big hydroelectric station construction project that was in an active phase at the time of the survey.

3.4. Men and women with university degrees have higher wages than people with lower education levels. Furthermore, the gender wage gap among those with university degrees (23 percent) is lower than that observed at most other education levels. However, in general, education does not seem to be a major predictor of wages, particularly for women. This could be explained to some extent by the different choices in majors by men and women in vocational schools and universities, where women are overrepresented in education, social sciences and humanities – fields that lead mostly to low paying public sector jobs while men are significantly more likely to major in construction, technology and mining-related subjects that often lead to relatively well paid jobs.

Sector and Occupation

3.5. Men's and women's wages vary significantly based on the sector of employment (Table 11). Women's wages are highest when they work for other households as employees (e.g. nannies, housekeepers). This is also the third best paying sector for men. However, this sector provides employment to only about 1 percent of Kyrgyz population. Finance and construction are the other two high paying sectors employing 19 percent of men (mostly in construction) and 2 percent of women. The lowest wages for women are in health and social work as well as education (that account for 20 percent of women's employment) and for men in agriculture.

3.6. Women's wages are lower than men's in all sectors except for agriculture.[36] The largest gender wage gap is observed in the three male dominated sectors transport and communications, mining and construction. By contrast, with few exceptions, sectors with large representation of women (e.g. personal, community and social services, education, hotels and restaurants as well as trade) tend to have a less pronounced gender wage gap. The lowest wage gap between men and women is observed in work for households.

[35] Throughout this section the analysis is based on mean wages without adjustment for hours worked.

36 Higher mean wage among women in the agricultural sector can be explained by the fact that 95 percent of them occupy skilled positions, while among men this figure is only 70%.

Table 11: Mean Monthly Wages (KGS) by Sector of Employment

Sector	Male	Female	Wage Gap	Share of male employment as a % of sector employees	Share of female employment as a % of sector employees
Agriculture	3297	3575	-8	59.5	40.5
Mining	6804	4796	**30**	86.8	13.2
Manufacturing	5763	4709	18	53.1	46.9
Electricity/Gas/AC	4910	4125	16	81.9	18.1
Construction	7263	5240	**28**	95.6	4.4
Wholesale and retail trade	5335	4802	10	49.4	50.6
Hotel and food service	5222	4677	10	31.3	68.7
Transport and communication	6581	4213	**36**	88.3	11.7
Financial and insurance	7931	5801	27	48.9	51.1
Real estate	5767	5009	13	56.8	43.2
Public admin and social security	5060	4232	16	59.5	40.5
Education	3622	3126	14	23.4	76.6
Health and social work	3737	2964	21	20.4	79.6
Personal, community and social services	5088	4764	6	41.8	58.2
Private Households as employers	6919	6718	3	53.6	46.4

Source: data for wages are based on the 4th quarter, 2009 (KIHS); data on share of employment by gender are based on annual averages in 2009 (NSC.2010. "Men and Women")

3.7. Examination of wages by occupation shows that men and women in management positions have the highest salaries (Table 12). However, counter to expectations, there are no major differences in remuneration (that is, the mean monthly wages) between highly qualified and relatively low skilled workers in other occupations, particularly for men. For instance, the difference in salaries between professionals and clerks is only 3 percent for men and 11 percent for women. Furthermore, the monthly remuneration of professionals is comparable to that of people in elementary occupations that require no qualifications at all. This could be due to the fact that "professionals" is a female-dominated occupation and because a large number of people in this occupation (doctors, teachers, scholars, meteorologists, statisticians, etc) are in public institutions where salaries are significantly lower than in the private sector. As with the sector of employment, the only occupation where women's salaries are higher than men's is in the Skilled Agriculture and Fisheries, however this occupation has the lowest wages.

Table 12: Mean Monthly Wages (KGS) by Occupation

Occupation	Male	Female	Wage Gap	Share of male employment as a % of total employment	Share of female employment as a % of total employment	Structure of male employment %	Structure of female employment %
Managers and senior officials	6981	5768	17	69.3	30.7	2.1	1.3
Professionals	5359	4409	18	35.9	64.1	5.6	14.0
Associate professionals and technicians	4965	3178	**36**	32.8	67.2	3.6	10.5
Clerks	5209	3937	**24**	35.6	64.4	1.3	3.3
Service, utilities and sales workers	4895	4244	13	40	60.0	11.1	23.1
Skilled agricultural and fishery workers	3214	3625	-13	59.4	40.6	31.0	29.6

Craft and related trade workers	6613	4321	**35**	82.3	17.7	25.5	7.7
Plant and machine operators and assemblers	6179	5498	11	96.9	3.1	12.1	0.5
Elementary occupations	5374	4367	19	51.8	48.2	7.7	10

Source: data for wages are based on the 4th quarter, 2009 (KIHS); data on share and structure of employment by gender are based on annual averages in 2009 (NSC.2010. "Employment and Unemployment")

Marital Status

3.8. The analysis of wages by marital status shows that average monthly earnings of married men are 4 percent higher than those of single men while the earnings of married women are 18 percent lower than the earnings of single women. The lower average earnings of married women could be due to fewer hours spent at work; on average, married women work four hours less per week than singles with no such differences for men. Furthermore, married women are three times more likely than single women to engage in unpaid family labor; while the opposite is true for men. Lastly, employers may have some bias towards married women who are seen as secondary wage earners.

Explaining the Wage Gap

3.9. This section of the paper uses the Oaxaca-Blinder decomposition to explain the gender wage gap (Annex 1 provides a description of the methodology). Separate wage regressions are estimated for men and women and reported in Table 10. The results show that while earnings of men and women are influenced to some extent by region, marital status, part-time or full time employment, education, sector of employment and occupation not all predictors impact men's and women's wages in the same way. For instance, married men tend to receive higher wages relative to single men while the opposite is true for women. Table 13 also shows that having university education increases the wages of both men and women (relative to just the primary education), yet other levels of education are not statistically significant for women. Furthermore, the sector of employment is a greater determinant of wages for men than for women.

Table 13: Regression of Monthly Earnings

VARIABLES	Men		Women	
Region: omitted Naryn				
Issykul	0.033	(0.076)	0.279***	(0.064)
Jalal-Abad	0.412***	(0.076)	0.122*	(0.063)
Batken	0.223***	(0.076)	0.218***	(0.065)
Osh	0.103	(0.074)	-0.075	(0.068)
Talas	-0.0479	(0.078)	0.197***	(0.060)
Chui	0.220***	(0.071)	0.004	(0.063)
Bishkek	0.277***	(0.070)	0.194***	(0.060)
Location: omitted rural				
Urban	-0.025	(0.035)	0.039	(0.035)
Status: omitted formal				
Informal	-0.045	(0.051)	0.088	(0.059)
Age	0.037***	(0.009)	0.011	(0.010)
Age2	-0.001***	(0.0001)	-0.0002*	(0.0001)

Marital status: omitted non-married				
married	0.098**	(0.047)	-0.078**	(0.033)
Education: omitted primary				
Higher	0.455***	(0.136)	0.235*	(0.138)
Incomplete Higher	0.246*	(0.149)	-0.128	(0.176)
Secondary Professional	0.264*	(0.135)	0.039	(0.133)
Primary Prof. Technical (with General Secondary)	0.218*	(0.131)	-0.113	(0.135)
Primary Prof. Technical (without General Secondary)	0.243	(0.237)	-0.001	(0.156)
General Secondary (complete)	0.210*	(0.125)	-0.034	(0.126)
General Secondary (incomplete)	0.118	(0.137)	-0.137	(0.164)
Job type: omitted full time				
part-time	-0.299*	(0.177)	0.733***	(0.114)
Sector: omitted community, social and personal services				
Agriculture	0.004	(0.189)	-0.484*	(0.281)
Mining	0.351***	(0.130)	0.157	(0.164)
Manufacturing	0.237**	(0.107)	0.208	(0.131)
Electricity, gas and water	0.029	(0.110)	-0.062	(0.138)
Construction	0.417***	(0.108)	0.291*	(0.173)
Wholesale and retail trade; repair of cars and appliances	0.294**	(0.115)	0.098	(0.120)
Hotels and restaurants	0.294**	(0.136)	0.131	(0.124)
Transport and communications	0.361***	(0.112)	-0.110	(0.139)
Finance	0.406***	(0.130)	0.121	(0.131)
Real estate	0.039	(0.119)	-0.016	(0.130)
Public administration	-0.053	(0.111)	-0.102	(0.112)
Education	-0.331***	(0.106)	0.401***	(0.114)
Health and social work	-0.247**	(0.116)	-0.288**	(0.113)
Private households as employers	0.410***	(0.145)	0.248	(0.223)
Extraterritorial organizations	0.422***	(0.136)	1.090***	(0.124)
Occupation: omitted elementary				
Managers and senior officials	0.351***	(0.097)	0.388***	(0.104)
Professionals	0.117	(0.087)	0.203**	(0.099)
Associate professionals and technicians	0.152*	(0.083)	0.084	(0.085)
Clerks	-0.05	(0.118)	0.084	(0.092)
Service, shop and market sales workers	-0.047	(0.088)	-0.063	(0.075)
Skilled agricultural and fishery workers	-0.194	(0.246)	0.523*	(0.289)
Craft and related trade workers	0.089	(0.070)	-0.167	(0.108)
Plant and machine operators and assemblers	0.122	(0.084)	0.309*	(0.164)
Constant	7.066***	(0.235)	8.019***	(0.266)
Observations	2,158		1,910	
R-squared	0.226		0.347	

Robust standard errors in parentheses; *** p<0.01, ** p<0.05, * p<0.1

Source: KIHS, 4th Quarter, 2009

3.10. Analysis of wage regressions by gender in urban and rural areas (Annex 2) shows that determinants of wages differ significantly by location, particularly for women. In rural areas, education

and dummies for most sectors of employment and occupations are not statistically significant in determining women's wages. However, these variables are significant in determining women's wages in urban areas. For men, the situation is somewhat different. In rural areas, higher and incomplete higher education are statistically significant and increase men's wages relative to the situation of having only primary education; yet the level of education is not a statistically significant predictor of men's wages in urban areas. Furthermore, occupation and most sectors of employment do not have a statistically significant impact on men's wages in rural areas but are important in urban locations. These findings show that men's and women's wages are influenced by different factors based on location and that women tend to receive higher returns on education in urban areas. The results also indicate scarcity of jobs for qualified workers in rural locations and suggest that migration to urban centers can open new economic opportunities, particularly for women.

3.11. The estimates from the regressions on men's and women's mean monthly wages (reported in Table 10) are used to calculate a threefold and a twofold Oaxaca-Blinder decomposition. The estimated wage gap in earnings between men and women is 33 percent (Table 14). The three-fold decomposition is based on the assumption that gender wage differentials occur due to a) the difference in characteristics of male and female workers (i.e. endowments); b) difference in returns to the same characteristics (coefficients) and c) the interaction effect, which allows accounting for the fact that differences in endowments and coefficients between men and women exist simultaneously. The results of the threefold decomposition show that difference in endowments (e.g. education, occupation, sector of employment) is in favor of men. However it accounts for only about 22 percent of the wage gap. The difference in returns to the same characteristics represents the largest share of the wage gap – 45 percent while interaction of these two factors accounts for the remainder of the wage gap. The results of a two-fold decomposition offer similar conclusions. Less than half of the wage gap can be explained by observed differences between male and female worker characteristics. The remainder of the gap is "unexplained" and can be indicative of discrimination against women in the Kyrgyz labor market.[37]

Table 14: Oaxaca-Blinder Threefold and Two-fold Decomposition of Monthly Wages of Male and Female Employees

Wage differential	0.330***(0.026)
Threefold decomposition	
Endowments	0.072* (0.042)
Coefficients	0.147*** (0.029)
Interaction	0.111** (0.047)
Twofold decomposition	
Explained	0.161*** (0.021)
Unexplained	0.170*** (0.027)

Source: BEEPS, 2009

IV. ENTREPRENEURSHIP AND CAREER ADVANCEMENT

A. Firm Ownership and entrepreneurship

4.1. At first sight, the picture of women's entrepreneurship in the Kyrgyz Republic is quite different from that in other ECA countries. According to WDI, the rate of female participation in firm ownership in the Kyrgyz Republic increased more than twice over the past five years and constituted 60 percent in

[37] The unexplained part also captures all potential effects of differences in unobserved variables

2009 – the highest rate of all ECA countries.[38] Is this a reflection of the more advanced status of Kyrgyz women in the business sector however? Unlikely so. Women's participation in firm ownership varies greatly by type of enterprise. Only 4 percent of firms with some female ownership in the Kyrgyz Republic are sole proprietorships (Table 15). Thus, women's ownership of enterprises where they can have the most significant control over the decision making process is negligible. By contrast, about a third of sole proprietorships in ECA are headed by women.[39]

Table 15: Firms' Legal Status by Gender of the Owner, %

Firm's Legal Status	Firms owned solely by men	Firms with some female ownership
Shareholding company/shares traded in the stock market	13.4	35.4
Shareholding company/shares traded privately if at all	79.1	60.4
Sole proprietorship	7.5	3.9
Limited partnership	0	0.3
	100	100

Source: BEEPS, 2009

4.2. Kyrgyz women have the greatest chances of participation in ownership in shareholding companies (most likely as wives, daughters or other close relatives of the majority shareholder) and it is questionable that they have much voice in the power structure of these firms. While there is no data on majority owners in shareholding companies of the Kyrgyz Republic, it is estimated that on average 82 percent of a domestic firm in ECA is owned by a majority shareholder. Under such circumstances, unless the majority owner is a woman, it is unlikely that having some ownership in the company will translate into full participation in the decision making process or benefits from the generated income stream.[40]

4.3. The analysis of the Business Environment and Enterprise Performance Survey (BEEPS) did not reveal any significant differences in the exposure of Kyrgyz firms with some female ownership and those owned solely by men to regulatory requirements. This is contrary to the trend observed in other countries of the region. According to the findings of the recent World Bank report "Opportunities for Men and Women in ECA", women-owned businesses are more likely to identify inspections, permits, business registration procedures and tax administration as an obstacle to firm operation. They are also more likely to pay bribes when dealing with the government officials. The fact that no such trends were identified in the Kyrgyz Republic is likely due to the situation when firms with some female ownership are in reality run predominantly by men and thus do not face a different regulatory environment. Furthermore, BEEPs survey covers only registered firms, and mainly those that have over five employees. However, the private sector in the country is dominated by individual entrepreneurs and micro-enterprises many of which are unregistered and excluded from the official statistics.

[38] EBRD.World Bank. 2009. Business Environment and Enterprise Performance Survey (BEEPS). 2009. Kyrgyz Republic
[39] World Bank. 2011. "Europe and Central Asia: Opportunities for Men and Women", Washington DC
[40] World Bank. 2011. "Europe and Central Asia: Opportunities for Men and Women", Washington DC

4.4. Table 16 shows that the number of people working as individual entrepreneurs (or for them) is somewhat higher than that employed in the small, medium and large enterprises,[41] this difference would have been much larger if informal sector workers were covered by the data. The table also shows that the lowest concentration of women is observed in small firms, i.e. the ones that employ less than 50 workers. In 2009, the share of women working in such companies constituted 12 percent of the total number of employees down from 34 percent in 2005.

Table 16: Private Sector in the Kyrgyz Republic, 2009

Number of registered individual entrepreneurs*			
with employees			27,175
without employees			177,071
Total		**20**	**4,246**
Number of people working in registered small, medium and large enterprises, 2009			
	Male	Female	Total
small enterprises	45,400	6,400	51,800
medium enterprises	28,700	12,400	41,100
large enterprises	68,200	35,900	104,100
Total			**197,000**
* the gender-disaggregated data on individual entrepreneurship was not available			
Source: NSC.2010. SMEs in Kyrgyz Republic 2005-2009 and NSC.2010. Men and Women			

4.5. The integrated household survey (KIHS) provides additional information on individual entrepreneurs – i.e. the self-employed. It shows that men are almost three times more likely to engage in entrepreneurial activities than women (Table 17). Men represent nearly 78 percent of those that identify themselves as self employed. Limited engagement of women in business activities could be explained by several factors. Lack of access to assets that could be used as a collateral for a bank loan to start a business is among the most significant constraints. For example, despite progressive legislation on land ownership, land rights in rural areas are guided primarily by customary law. After privatization, women received approximately 51 percent of the land shares.[42] According to legislation, family shares cannot be physically divided but family members can claim the monetary value of their share of the land. However, women rarely ask for the financial compensation of their land share when getting married and leaving the parents' household or in case of a divorce as such requests would be considered shameful. Under customary law, the house and the land are owned by men while the property within the house (usually of much smaller value) belongs to women. These informal asset ownership arrangements limit women's chances of obtaining bank credit. Other potential factors that restrict women's entrepreneurship include negative stereotypes about business women and the near absence of kindergartens in rural areas, which limits all forms of women's employment.

Table 17: Structure of Employment Status by Gender, 2009

	Men	Women
Self-employed and owners of businesses	36.0	12.4
Employees	52.5	64.0
Members of cooperatives	0.3	0.2
Unpaid family workers	11.2	23.5

Source: KIHS, 2009

[41] The National Statistics Committee uses the following definition for company size: small companies are those that employ less than 50 workers, medium companies are those that employ 51 to 200 workers and large companies are those that employ over 200 employees (Source: NSC. 2010. "Men and Women").
[42] USAID. "USAID Country profile: Property Rights and Resource Governance" http://usaidlandtenure.net/usaidltprproducts/country-profiles/Kyrgyz Republic

4.6. While fewer women than men engage in entrepreneurial activities, female entrepreneurs are as likely to hire workers as their male counterparts; about 9 percent of the self-employed men and women hire permanent or seasonal workers. The overwhelming majority of people that identified themselves as self-employed (97 percent) live in rural areas and work mainly in agriculture (60 percent), wholesale and retail trade (14 percent) and transport (6 percent).[43]

B. Career Advancement in Business and Politics

4.7. Although women in the Kyrgyz Republic on average have higher education levels than men, they face more obstacles in developing their careers and rarely rise to managerial positions. Men comprise 70 percent of managers and senior officials in public and private organizations, while women are overrepresented among professionals, technicians and clerks, comprising over 60 percent of people in these occupations (KIHS 2009).

4.8. The data from BEEPS 2009 survey shows that 23 percent of firms in the Kyrgyz Republic have women as the top managers. This rate is slightly higher than the average in the region – 19 percent.[44] As in other ECA countries, firms with some female ownership are more likely to have a woman as the top manager compared to firms owned solely by men: 34 percent of firms with some female ownership vs. 8 percent of firms owned only by men have female top managers. Furthermore, firms with some female ownership also have more women as a share of employees. These findings suggest that women may be facing an unfavorable environment for professional development and possibly discrimination in hiring and promotion practices in male-owned firms. Given the prevalence of traditional social norms in Kyrgyz society, these findings may also be indicative of the importance of role models whose example can provide hope and strengthen the aspiration of other female workers to move up the career ladder.

4.9. Women tend to have a lower access to formal and informal networks and support institutions such as banks, business development services or simply platforms where like minded professionals (particularly in the private sector) can gather and share experiences in starting and developing their businesses or building successful careers. The problem is deep rooted as even in Soviet times most positions of power were occupied by men. This left women with few high level contacts and disadvantaged them in privatization process. While Kyrgyz women were able to fill in some business niches that did not exist in Soviet times, e.g. shuttle trade,[45] lack of connections continues to limit their engagement in large businesses with high profit margins.

4.10. Similarly, women are underrepresented in politics at both local and national level although introduction of quotas for women in parliament in 2007 has significantly improved the situation. Today, women comprise 21 percent of Members of Parliament (or 25 out of 120 MPs) – the largest share in Central Asia. Furthermore, former President Rosa Otunbayeva (the first female president in Central Asia) and the current vice Prime-Minister Asymbekova Gulnara have increased visibility of women in positions of power. Nevertheless, women remain underrepresented among civil servants. All ministries with the

[43] National Statistical Committee. 2009. Kyrgyz Integrated Household Survey (KIHS) 2009
[44] World Bank. 2011. "Europe and Central Asia: Opportunities for Men and Women", Washington DC
[45] The activity in which individual entrepreneurs buy goods abroad and import them for resale in street markets or small shops… according to OECD glossary. http://stats.oecd.org/glossary/detail.asp?ID=2459

exception of the Ministry on Health are headed by men.[46] Low number of women among policy makers limits their ability to protect women's rights in legislation and to ensure proper implementation of gender sensitive practices.

V. CONCLUSIONS AND POLICY IMPLICATIONS

5.1. The findings of the paper show that there are noticeable gender differences in human capital and access to economic opportunities between men and women in the Kyrgyz Republic. The erosion of human capital gains over the past two decades has in many respects affected men more than women. Men are more likely to suffer from alcohol, tobacco and drug addiction; they are disproportionately affected by tuberculosis, sexually transmitted diseases and HIV/AIDS and have a much lower life expectancy than women. Furthermore, boys have somewhat lower academic achievements than girls in secondary schools and are less likely to continue their studies in vocational institutions and universities. Nevertheless there are important women's issues as well. In particular, maternal mortality increased by 40 percent over the past decade and households tend to prioritize men's health needs over women's.

5.2. Women in the Kyrgyz Republic face disadvantages in access to economic opportunities. Women's activity and employment rates are over 30 percent lower than men's. Women are also underrepresented in business, comprising less than one-third of entrepreneurs and in managerial positions in private companies and the government. Underutilization of women's skills and talent has a negative impact on economic development. Indeed if less than half of adult Kyrgyz women are employed and a large majority does not have opportunities to advance in their careers this represents a lost economic potential. However, today Kyrgyz economy is dominated by services – a sector that can offer significant opportunities for women's employment if institutional, economic and cultural constraints that limit women's participation in the labor force are effectively addressed.

5.3. Promotion of gender equality in access to human capital and economic opportunities is a complex task yet government policies can do much in improving health and education outcomes for men and women and alleviating the constraints that limit women's employment and career advancement. In particular, decision makers should focus on the following areas:

1) Improving access and quality of education

5.4. The analysis of household's survey (KIHS 2009) shows that people with better education levels have higher chances of finding a job. An educated labor force is also an important condition for sustainable economic development. Thus it will be important to improve the quality and relevance of primary and secondary education (including through the upgrade of curricula, distribution of textbooks and professional development programs for teachers) paying particular attention to the needs of rural areas. To address gender differences in access to vocational and university education the government should introduce scholarships for students from poor families, which will improve enrollment rates among low-income boys. Given high unemployment among the youth, it will also be important to develop internships and apprenticeship opportunities that can provide useful experience for first entrants

[46] Government of Kyrgyz Republic http://www.gov.kg/ accessed on March 14, 2012

to the labor market and smooth transition from the educational institutions into the professional environment.

2) Promoting healthy life-styles and reducing the incidence of tuberculosis and maternal mortality

5.5. The government can build on the experience of pilot "healthy schools" (see UNDP 2009 MDG report for more information) or other similar initiatives and introduce courses on healthy lifestyles covering reproductive health, family planning, major infectious diseases, HIV/AIDS, nutrition and physical activity in educational institutions throughout the country. Evidence from secondary and vocational schools that included such courses in the curriculum showed that there is much interest and high student attendance in these classes as the topics covered are rarely discussed in the family.[47] Reduction of the prevalence of tobacco, alcohol and drug abuse will also require targeted work with at risk youth, improvement of access to education and extra-curricular activities (sports, arts, etc) and increasing job opportunities for young people. Mass media can also play a role in raising awareness about ways of HIV transmission and prevention. It is important to sustain the achievements in reducing the incidence of tuberculosis and perform active surveillance of at-risk groups, particularly prisoners (the prevalence of tuberculosis in penitentiary institutions was 16 times higher than the national average according to UNDP 2009 MDG Report).

5.6. Reducing maternal mortality is another important priority. Policy makers should focus their efforts on rehabilitation of health facilities and raising the skills of medical professionals in rural areas that account for almost 75 percent of all cases of maternal mortality. Furthermore, a functioning referral system for high risk patients in remote and rural locations should be developed to enable them make use of the better equipped regional level hospitals. It will also be important to raise public awareness about service standards and women's entitlements to care and introduce a system of feedback provision by patients to hold providers more accountable for the quality of services rendered.

3) Reducing gender disparities in access to jobs and entrepreneurship opportunities

5.7. Improving women's access to employment opportunities will require a package of interventions. Development of affordable childcare to relieve constraints on women's time should be among immediate priorities. It will also be important to create more jobs for both men and women. Potential measures include attraction of FDI, improvement of infrastructure and strengthening of access to credit. Experience from many countries shows that when opportunities for women's gainful employment arise, households reallocate domestic responsibilities to allow women to work. Examples of call centers in India, garments in Bangladesh and a cut-flower industry in Ecuador demonstrate that demand for female labor can reduce the role of stereotypes about men as primary breadwinners and bring women in the labor market even in traditional societies.

5.8. Governments in many countries have also experimented with creation of active labor market policies (skill building, assistance in job search/ job placement and wage subsidies) some of which specifically targeted women. For example, The Jovenes in Action Program in Colombia, ProJoven in Peru and PROBECAT in Mexico provided short-term vocational training sometimes combined with subsidies

[47] UNFPA 2009. "A Review of Progress in Maternal Health in Eastern Europe and Central Asia", New York and UNDP 2009. "The Second Periodic Progress Report on the Millennium Development Goals in the Kyrgyz Republic"

(transportation, uniforms) for mothers. Argentina's Proempleo program provided wage subsidy vouchers. All of the programs succeeded in improving employment rates of male and female participants and some resulted in significant improvement of women's earnings (WB 2012 "Gender Equality and Development"). Kyrgyz Republic can consider development of such programs on a pilot basis and scaling them up if they tend to be successful.

5.9. Development of entrepreneurship among men and women as well as formalization of existing businesses can be facilitated through better enforcement of existing regulations, reduced corruption, improved infrastructure and access to credit. While data on access to credit for Kyrgyz women was not available, evidence from other countries in the region and the developing world at large shows that women tend to be disadvantaged in credit markets and it is unlikely that the Kyrgyz Republic is an exception. The Government and the banking sector can tap into the experience and resources of a number of donor programs (e.g. USAID's Development Credit Authority, IFC's Women in Business Program, etc) to provide training to financial institutions in Kyrgyz Republic and develop new loan products (e.g. loans based on cash flows rather than assets as a collateral), which will help increase the number of females among bank clients. Similarly, the Government can build on the experience of existing donor initiatives in Kyrgyz Republic to raise awareness about women's land rights and ways to enforce them and increase women's ownership of assets – an important condition for business start up. Providing support to women's business associations, for instance, by channeling some technical assistance through them can help address specific constraints faced by female entrepreneurs. It will also provide a useful networking platform for women. Lastly, highlighting women's success stories in the media, for example through annual Business Women Awards can improve visibility of women's achievements and provide inspiration to other female entrepreneurs.

4) Facilitating career growth and reducing the wage gap between men and women

5.10. Supporting women's career advancement can bring more deserving people to leadership positions and improve the performance of public and private institutions. The analysis carried out for the World Bank's World Development Report 2012 shows that lack of voters' and business professionals' knowledge of the performance of potential female managers explains much of the preference for male leaders. Policies and business practices that aim to address these information asymmetries often succeed in increasing women's representation in positions of power. For instance, quotas for women in local governments in India built an experience of voters with female leaders and increased the number of elected women in local councils even after the quotas were removed. While Kyrgyz Republic succeeded in increasing the number of female members of Parliament, women are almost absent from the leadership at the local level and in the Government. Introducing an affirmative action program can increase women's representation among decision makers in these institutions.

Women's career advancement and remuneration in public institutions and private companies also depends on the existence of merit-based promotion schemes. While there are no studies on factors that determine managers' decisions to promote or increase the wages of employees in Kyrgyz Republic, anecdotal evidence suggests that such decisions are often guided solely by managerial discretion rather than by any objective criteria. The public sector can take a lead in developing merit-based promotion schemes. In the private sector, industry associations can be mobilized to promote gender sensitive corporate practices and equal treatment of men and women at the workplace.

5.11. The findings of the first part of this paper showed that female students tend to concentrate in majors that mostly lead to low paying jobs and that this segregation is not based on academic achievement in secondary schools. Choice of an academic major taken in adolescence can affect women's lifelong earnings. While more research on the factors that underpin girls decisions is needed, some measures that can change the situation include raising awareness of high school students and their parents on returns to different degrees, establishment of scholarships for girls that want to study engineering (or other male-dominated disciplines) and scholarships for boys that want to major in female-dominated fields like education. The education authorities could also provide more visibility to women's achievements in non-traditional majors through annual competitions for the best engineering solution, architectural projects etc among female students as well as support development of professional associations such as *Women Students in Law* that could provide a platform for networking and exchange of information on potential job opportunities.

Annex 1. Oaxaca-Blinder Wage Decomposition: Methodology[48]

Oaxaca-Blinder wage decomposition is a frequently used methodology to study wage differentials based on race or gender. The approach is built on the assumption that wages are determined by employee characteristics (such as education, years of experience, sector of employment, etc). In the absence of discrimination, the observed gender wage differentials would result from the differences in productivity between men and women. Gender wage discrimination takes place when workers with similar characteristics are paid different wage rates.

To measure wage differentials, separate wage equations are estimated for men and women:

Males' wage: $W_{male} = \beta_{male} X + \varepsilon_{male}$ (1)

Females' wage: $W_{female} = \beta_{female} X + \varepsilon_{female}$ (2),

where Wmale and Wfemale are the logarithms of monthly wages of the male and female workers respectively, *X* is a vector of workers' characteristics (education, experience, occupation, etc) that explain the level of wages; β_{male} and β_{female} are the returns to the workers' characteristics; and ε_{male} and ε_{female} are error terms for both equations. Following the methodology of Oaxaca (1973) and Blinder (1973), the difference in mean wages for men and women, denoted R, can be decomposed into three parts (Jann, 2008):

$R = \overline{W}_{male} - \overline{W}_{female} = (\overline{X}_{male} - \overline{X}_{female})\,\hat{\beta}_{female} + \overline{X}_{female}\,(\hat{\beta}_{male} - \hat{\beta}_{female}) + (\overline{X}_{male} - \overline{X}_{female})\,(\hat{\beta}_{male} - \hat{\beta}_{female})$[49] (3)

This is a three-fold decomposition, where the first term represents the Endowments Effect (*E)* and explains the differences that are due to employee characteristics (such as education, sector of employment, occupation etc)*:*

$E = (\overline{X}_{male} - \overline{X}_{female})_{female}$,

the second term reflects the Coefficients effect *I*, which shows the differences in the estimated returns to men's and women's characteristics:

$C = \overline{X}_{female}\,(\hat{\beta}_{male} - \hat{\beta}_{female})$,

and the third term, Interaction effect *(I)*, allows to account for the fact that differences in endowments and coefficients between men and women exist simultaneously:

$I = (\overline{X}_{male} - \overline{X}_{female})\,(\hat{\beta}_{male} - \hat{\beta}_{female})$

[48] The description of the methodology was adapted from Jahn, Ben "The Stata implementation of the Blinder-Oaxaca decomposition" and Reva, Anna "Gender Inequality in the Labor Market in Serbia"

[49] Bars on the top of variables denote mean values; $\hat{?}$ shows estimated coefficients value.

If men and women get equal returns for their characteristics, the second and the third part will equal zero and wage differentials between male and female employees will be explained by the difference in endowments alone.

The above decomposition is formulated based on the prevailing wages of women, i.e. the differences in endowments and coefficients between men and women are weighted by the wage coefficients of women. However, this equation could also be presented based on the prevailing wage structure of men.

An alternative approach to wage decomposition, prominent in the literature on wage discrimination, is based on the assumption that wage differentials are explained by a non-discriminatory coefficients vector, denoted β^*, which is estimated in a regression that pools together samples of both men and women. Then, the wage gap can be written as:

$$W_{ma-e} - W_{female} = (X_{male} - X_{female})\beta^* + X_{male}(\beta_{male} - \beta^*) + X_{female}(\beta^* - \beta_{female}) + \varepsilon_{male} - \varepsilon_{female} \quad (4)$$

The above equation represents a two-fold decomposition:

$$R = Q + U$$

Where $Q = (\bar{X}_{male} - \bar{X}_{female})\beta^*$ is the part of the wage differential that is "explained" by sample differences assessed with common "returns" and the second term $U = \bar{X}_{male}(\hat{\beta}_{male} - \hat{\beta}^*) + \bar{X}_{female}(\hat{\beta}^* - \hat{\beta}_{female})$ is the "unexplained" part not attributed to observed differences in men's and women's characteristics. The latter part is often treated as discrimination. It is important to note however that "the unexplained part" also captures all potential effects of differences in unobserved variables (Jann, 2008).

Annex 2 Regressions of Monthly Earnings by Location

VARIABLES	Rural men		Urban men		Rural Women		Urban Women	
Region: omitted Naryn								
Issykul	0.191	(0.118)	-0.231***	(0.065)	-0.312***	(0.095)	-0.309***	(0.08)
Jalal-Abad	0.533***	(0.107)	0.136**	(0.063)	0.112	(0.089)	-0.001	(0.07)
Batken	0.325***	(0.105)	0.062	(0.089)	-0.244**	(0.096)	-0.227***	(0.07)
Osh	0.199*	(0.107)	-0.107	(0.069)	-0.094	(0.095)	-0.156**	(0.07)
Talas	0.088	(0.109)	-0.240***	(0.062)	-0.187**	(0.084)	-0.396***	(0.06)
Chui	0.317***	(0.098)	0.058	(0.073)	-0.064	(0.086)	-0.042	(0.08)
Bishkek	0	(0)	0.075	(0.054)	0	(0)	0.109*	(0.06)
Status: omitted formal								
informal	-0.068	(0.080)	-0.025	(0.054)	0.203*	(0.113)	0.036	(0.056)
Age	0.053***	(0.018)	0.031***	(0.009)	-0.023	(0.017)	0.0363***	(0.011)
age2	-0.001***	(0.0002)	-0.0004***	(0.0001)	0.0002	(0.0002)	-0.001***	(0.0001)
Marital s tatus: omitted non-married								
married	-0.016	(0.079)	0.171***	(0.050)	-0.007	(0.061)	-0.105***	(0.037)
Education: omitted primary								
Higher	0.657***	(0.199)	0.213	(0.155)	0.167	(0.167)	0.620***	(0.228)
Incomplete Higher	0.340*	(0.195)	0.106	(0.177)	-0.148	(0.241)	0.408	(0.261)
Secondary Professional	0.154	(0.191)	0.200	(0.154)	0.148	(0.158)	0.393*	(0.224)
Primary Prof. Technical (with General Secondary)	0.218	(0.172)	0.103	(0.157)	-0.0479	(0.163)	0.289	(0.229)
Primary Prof. Technical (without General Secondary)	0.291	(0.379)	0.031	(0.248)	-0.113	(0.288)	0.499**	(0.240)
General Secondary (complete)	0.247	(0.161)	0.041	(0.148)	-0.0510	(0.136)	0.401*	(0.222)
General Secondary (incomplete)	0.100	(0.185)	0.064	(0.160)	-0.133	(0.213)	0.334	(0.249)
Job type: omitted full time								
part-time	-0.108	(0.223)	-0.669***	(0.161)	-0.773***	(0.149)	-0.739***	(0.165)
Sector: omitted community, s ocial and personal services								
Agriculture	0.039	(0.302)	-0.178	(0.182)	-0.253	(0.316)	-0.569*	(0.344)
Mining	0.377	(0.238)	0.270*	(0.156)	0	(0)	0.319**	(0.162)
Manufacturing	0.271	(0.210)	0.154	(0.135)	0.102	(0.281)	0.298**	(0.135)
Electricity, gas and water	-0.183	(0.222)	0.137	(0.127)	-0.452	(0.402)	0.138	(0.134)
Construction	0.451**	(0.205)	0.258*	(0.141)	0.029	(0.391)	0.436***	(0.162)
Wholesale and retail trade; repair of cars and appliances	0.364*	(0.204)	0.120	(0.153)	-0.165	(0.264)	0.192*	(0.111)
Hotels and restaurants	0.341	(0.245)	0.110	(0.178)	-0.157	(0.259)	0.202	(0.124)
Transport and communication	0.310	(0.237)	0.306**	(0.133)	-0.538*	(0.286)	0.163	(0.135)
Finance	0.455	(0.276)	0.366**	(0.163)	-0.293	(0.294)	0.326***	(0.119)
Real estate	0.016	(0.254)	0.005	(0.140)	-0.275	(0.289)	0.092	(0.129)
Public administration	-0.127	(0.210)	-0.003	(0.136)	-0.313	(0.247)	-0.01	(0.111)
Education	-0.417**	(0.201)	-0.230*	(0.137)	-0.627**	(0.256)	-0.243**	(0.105)
Health and social work	-0.297	(0.213)	-0.249	(0.155)	-0.558**	(0.255)	-0.151	(0.106)
Private households as employers	0.577**	(0.226)	0.165	(0.186)	0.132	(0.361)	0.193	(0.230)
Extraterritorial organizations	0	(0)	0.0419	(0.164)	0	(0)	1.142***	(0.113)
Occupation: omi tted elementary								
Managers and senior officials	0.236	(0.179)	0.549***	(0.111)	-0.041	(0.161)	0.641***	(0.119)
Professionals	-0.099	(0.161)	0.343***	(0.092)	0.063	(0.171)	0.454***	(0.107)
Associate professionals and technicians	0.190	(0.155)	0.302***	(0.085)	-0.173	(0.140)	0.367***	(0.087)
Clerks	-0.188	(0.183)	0.225*	(0.131)	-0.176	(0.140)	0.387***	(0.108)
Service, shop and market	-0.131	(0.126)	0.245**	(0.104)	-0.280**	(0.111)	0.227***	(0.080)

VARIABLES	Rural men		Urban men		Rural Women		Urban Women	
sales workers								
Skilled agricultural and fishery workers	-0.270	(0.318)	0.158	(0.192)	-0.077	(0.238)	0.669*	(0.385)
Craft and related trade workers	0.055	(0.107)	0.251***	(0.080)	-0.508**	(0.206)	0.109	(0.110)
Plant and machine operators and assemblers	0.073	(0.136)	0.303***	(0.089)	0.071	(0.248)	0.419***	(0.152)
Constant	6.759***	(0.398)	7.326***	(0.258)	8.986***	(0.427)	6.897***	(0.297)
Observations	786		1,372		575		1,335	
R-squared	0.280		0.226		0.359		0.351	

Robust standard errors in parentheses; *** p<0.01, ** p<0.05, * p<0.1; Source: KIHS, 4th Quarter 2009

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