Gender Regime and Women's Employment in Kazakhstan: Toward a State-Supported Dual-Earner Dual Carer Model?

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Introduction:

Over the past decade, researchers have begun to address what Esping-Andersen (1997) referred to as "the blindness of virtually all comparative political economy to the world of families." Feminist economists, in particular, have detailed the importance of care work within households in producing workers and citizens through intergenerational cooperation and transfer, at the same time emphasizing that there is "nothing automatic about this" reproduction (Razavi, 2009). Researchers have also emphasized the ways that care work affects the ability of women to participate in the paid labor force (Gornick and Hegewisch, 2010, Jaumottte, 2003). The quality of reproduction and the distribution of its costs are heavily influenced by the national and local structures of markets, state policies, and culture. The combined policies and institutions impacting the gender distribution of care and paid work have been described as a "gender regime". These regimes and associated care and employment practices are increasingly recognized as having a central impact on a wide range of national outcomes, including human capital development, gender equality, economic growth, fiscal health, as well as individual economic security, and dignity (Commission for the European Communities 2008; Mason and King 2001; OECD 2007). As a result, they have been the focus of increasing attention, as governments seek to improve fiscal health as well as promote gender equity.

A number of typologies have been developed to describe and analyze the complex of policies and practices used to provide care services (Frericks, et. al., 2014) and support equal labor market participation of men and women in Europe (Bettio and Plantenga, 2004), in order to better understand the impact of varying regimes on key outcomes. Most of this work has focused on Europe, with some including the formerly socialist countries of the wider Europe (Saraceno and Keck, 2004; Gillian and Pascal, 2004). The European post-socialist cases differ

from the other European cases in important ways, however, including higher historical levels of female labor force participation and government support for child care, and the impact of the severe post-socialist economic downturn, which put strong pressure on government support for women's employment (Pascall and Lewis, 2004;Meurs, Temesgun, and Giddings, 2007).

Post-socialist governments have begun to develop new gender regimes, particularly since the early 2000s, in part responding to demographic decline and the need to mobilize female workers. None of the research to date on gender regimes has included any of the formerly socialist countries of Central Asia, which are distinguished by their relatively high fertility rates (2.5-3.5 total births per women, compared to around 1.6 in the European cases, where aging populations are the norm) (data.worldbank.org, accessed on July 1, 2020). Among Central Asian cases, Kazakhstan has become a leader in advancing policy to facilitate combining family responsibilities with employment, announcing several rounds of new policy over the past 15 years.

In this paper, we address the question of how Kazakhstan's emerging care and employment policies compare analytically with the more-studied European models and whether the emerging regime is having the expected impact on female labor force participation. We describe the policies in relation to existing typologies, expanding the typologies to include a focus on the extent to which government policy encourages the sharing of care within couples. We examine the relationship between increased government support for care and women's labor force participation and, to explain the apparently limited impact, we use the EBRD LITS data from 2006 and 2016 to examine the employment behavior of individual women, using a probit model of employment for women 18-59.

We find that Kazakhstan's emerging care regime retains a strong resemblance to the Dual-Earner, Female-Caregiver model common under socialism, and that this model is likely to limit progress on the stated government goal of equal employment opportunities for men and women. While the state has increased support for childcare among children 3-6 years of age, there is less availability of care for children 0-2. Further, limited support for the sharing of parental leave (low levels of wage replacement and absence of leave explicitly for fathers) places the burden of care for young children on women. This element of the gender regime, which has received less attention in previous research, appears central. Regression analysis suggests that the burden of care for very young children is strongly associated with their non-employment. The impact of the significant government expansion of childcare availability is mixed. Regional measures of childcare availability are not associate with women's rates of labor force participation, but the share of such centers which are state-run is positively associated with labor force participation, suggesting that the cost of childcare may affect its impact. In concluding, we draw on European examples to suggest two alternative paths toward more equal labor market integration in Kazakhstan.

Models of Care, Drawn from European Cases:

Typologies developed in comparative political economy and feminist economics provide an analytical framework for understanding varied national approaches to the provision of care and their relationship to variations in female labor force participation. Situating Kazakhstan's emerging gender regime within these typologies highlights key aspects of its functioning and sheds light on likely outcomes of the policy.

Previous work describing gender regimes has focused on two aspects of the national models of care provision —how the responsibility for care is shared between the family and the

state (Bettio and Plantenga, 2004; Saraceno and Keck, 2008; Frericks, et. al., 2014; Gornick and Hegewisch, 2008) and how individuals in the household share responsibilities for the care provided by the household (Gilliam and Pascal, 2004; Gornick and Meyers, 2008). A foundational element of this work was describing the Male Breadwinner (-Female Caregiver) model on which social policy in many countries was based during the middle part of the 20th century. In this model, men were expected to specialize in paid work. Women were expected to specialize in unpaid work in the home, although the omission of this from the description of the model highlights the invisible and assumed nature of women's work. A fuller description would be Male Breadwinner, Female Caregiver. The state provides little support for care under this model since, with a full-time care giver, households are expected to be able to provide that themselves.

The alternative to a Male Breadwinner, Female Caregiver model might be a Dual Earner-Dual Caregiver model (Gornick and Meyers, 2010) in which both parents participate equally in paid work and care. Few countries have made a full transition to such a model, however. Focusing on the European case, researchers note that women's labor force participation increased in the 1990s, but women's incorporation into the paid labor force has been incomplete. There are important variations within Europe, with only 57% of women participating in the paid labor force in Belgium in 2012 (the year of data on which Saraceno and Keck's typology, which we will be drawing on below, is based), while 78% did so in Sweden (https://stats.oecd.org/Index.aspx?DataSetCode=LFS_SEXAGE_I_R#, accessed on July 13, 2020). Still, in 2008, Gornick and Meyers found that "mothers' employment rates lag behind the 90 percent or higher rates reported among fathers" in all OECD countries, and that women are more likely than men to work part time (Gornick and Meyers, 2008).

With men still more specialized in the labor force, women are still more specialized in care. Analysis of time-use data in the early 2000's suggested that "employed fathers in most OECD countries devote fewer than one-quarter of the hours that their female partners commit to routine housework, and less than half as much time to caring for their children" (Gornick and Hegewisch, 2010: 318). As with paid employment, the extent of sharing in care work varies. In Sweden, fathers spent more time caring for children--a little more than half as much time as their female partners.

Clearly, "women's greater responsibility for unpaid family care work for children and the elderly creates barriers to their equal participation in employment" (Gornick and Hegewisch, 2010). To address this work-family conflict, European countries have increased support of policies which improve people's ability to combine employment and parenting. These include paid and unpaid parental leaves, flexible work schedules, tax concessions and other monetary benefits and child allowances which can offset income losses when a parent provides care, state-provided childcare, state-subsidized childcare and state support for market-provided care (e.g. through licensing).

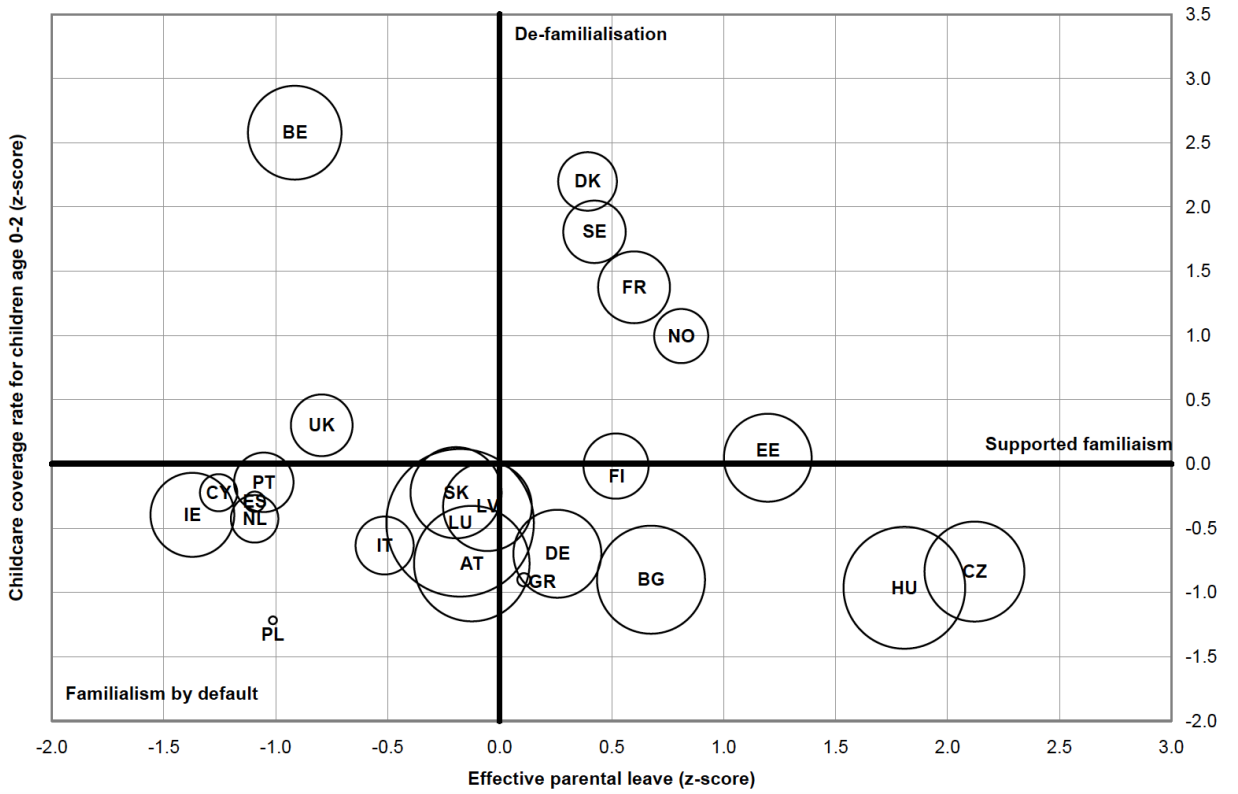
Policy combinations (gender regimes) may focus on supporting families in providing the needed care (familialization), through generous leaves and family allowances, or the policies may focus on state-provided (or subsidized) childcare (de-familialization) (Saraceno and Keck, 2008). Analyzing policies related to care for children in 27 European countries, Saraceno and Keck (2008) find that the main differences among countries lie in how care is provided for children under 3 years of age. An extensive literature finds that the costs of such care have a significant positive impact on female labor force participation, while a more limited literature

examining the impact of that spatial proximity also finds a significant impact (Herbst and Barnow, 2007; Bick, 2016).

Figure 1, from Saraceno and Keck (2008) summarizes these differences in how care for young children is supported. In cases where family leave to care for small children is limited (left hand side of the figure), countries differ between the case of Belgium, where childcare for children 0-2 years is relatively highly available and there is modest state financial support for families with small children (the third dimension in the figure, represented by the size of the circle), and countries like the Netherlands, the UK and Italy, where there is little childcare available for children under 3 and little financial support. In the later cases, families provide the majority of care themselves, with limited support. But there are also countries, including the Nordic countries and France, which offer both more state-supported parental leave and more childcare for children under 3 (upper right quadrant). In these cases, families share care responsibilities with paid caregivers.

The former socialist countries are mostly found in the lower right quadrant of the figure, offering less childcare for children 0-2, longer leaves, and more financial support. Generally, they provide state-supported familial care for children in this age group. This is roughly consistent with the previous socialist model, although levels of support are lower now (some former socialist countries offer much less support, with Poland being the extreme example) (Saraceno and Keck, 2008).

Figure 1. State and Family Responsibility for Children



Saraceno and Keck, 2008: 23.

At a given level of state support, policies may also differ in whether they encourage more equal sharing of paid and care work between parents or more specialization, with women usually specializing in care. Research suggests that maternity leave, particularly paid leave, will increase women's labor force participation prior to giving birth and also the share of women who return to the labor market afterward (De Henau, Meulders and O'Dorchai, 2007). However, longer leaves can depress future wages and reduce incentives to return to the labor market. Jaumotte (2003) concluded that the impact on labor force participation of additional weeks of leave becomes negative beyond 20 weeks in duration. Likewise, policies which offer financial support for in-home childcare encourage longer times out of the labor force and reduce labor force participation by women (Gornick and Hegewisch, 2010). Greater specialization results.

Father participation in leave not only supports female labor force participation by reducing the amount of time women spend out of the labor force. Men who take longer leaves also participate more in childcare over the longer term than fathers who take shorter periods of leave (Tanaka & Waldfogel, 2007: Huerta, et. al., 2014). If parental leave can be shared freely between parents, however, more leave is taken by women. Paid leave and higher wage replacement rates reduce the disincentives for men (who typically have higher earnings) to take the leave. Deven and Moss (2005) recommend replacement rates of 80 to 100 percent in support of father take-up. Leaves that must be specifically taken by the father also increase father uptake, and countries in Europe continue to vary significantly in the extent of such leave, with most countries continuing to offer only 2 weeks. Slovenia offers 13 weeks, however, and Finland 9 weeks (van Belle, 2020); other countries require some portion of the total leave to be taken by fathers, as in Sweden. This reduces the double burden on working women and thus the opportunity cost of taking up paid work, reducing specialization.

Combining these differences in support for sharing of care between partners with those described by Saraceno and Keck in state support for care suggests 4 types of state support for care as shown in Figure 2. While all four approaches might generally be said to support a "male-dominated dual earner, female-dominated dual care giver" gender regime, the four quadrants show how European countries are arrayed across a fairly wide continuum within this framework. The countries are chosen as illustrations of these approaches and possible outcomes.

High levels of state provision of care and high levels of support for sharing of family duties, as in Sweden, provide the strongest support for sharing of household duties and for women's labor force participation and an outcome closer to the dual earner-dual care giver model. High levels of state provision of care may offer some support women's labor force

participation, but low levels of support for leave-sharing reduce the likelihood of sharing household work, raise the opportunity costs of women's paid work while reducing their expected earnings, and limit women's ability and incentives to participate full labor force participation. This supports a partial dual earner model with mainly female caregiving, as in France, where none of the weeks of leave are reserved only for fathers. Low levels of state support for care combined with low levels of support for sharing of unpaid work, as is the case in Greece, where about half of unpaid leave is reserved for fathers (European Commision, 2018), create double disincentives for both sharing household work and female employment, at least among certain age groups. Low levels of state support combined with equal access for either partner to that support, as in the US allows for more equal sharing of the heavy burdens on households, but leaves it up to the household whether they prefer to share that burden. With a significant wage gap, women are likely to do more care and less paid work.

Figure 2. State Support for Care

State Support for Care		State Support for Family Sharing of Care work: **High**	State Support for Family Sharing of Care work: **Low**
	High	Sweden Ratio Paid work (w/m): 0.82 Ratio Unpaid Work (w/m): 1.3	France Ratio Paid Work: 0.68 Ratio Unpaid Work: 1.69
	Low	US Ratio Paid work: 0.64 Ratio Unpaid Work: 1.6	Greece Ratio Paid Work: 0.52 Ratio Unpaid Work: 2.92

Source: World Bank Gender Statistics, www.worldbank.org; Time Use Statistics, UN, www.unstats.un.org. Unpaid care work

Most of the European post-socialist countries offer a middle level of state support, mandating long maternity leaves but doing little to ensure access to childcare for children under 3. These countries are consistent in reserving none of the parental leave for men, placing them somewhere between France and Greece in Figure 2.

It might be argued that the relationship between support for care and women's employment seen in Figure 2 is not causal, but simply reflects cultural differences across countries, with families in some countries simply preferring that women do less paid work and more care. However, Alexander Bick (2016) confirms the potential role of state policy in influencing women's labor force participation, finding a causal relationship between state expansion of subsidized care for children 0-2 and an increase in women's labor force participation in Germany.

Care and Employment: Kazakhstan's Socialist Legacy

Socialist countries developed a dual-earner model very early. To support the goal of rapid industrialization, women were expected to integrate fully into paid labor starting in the 1950s in the East and Central European cases. In the late 1980s, 62% of women participated in the labor force in Hungary and 77% did so in Czechoslovakia (Boeri and Sziraczki 1993: 244). To support this, workplaces and the state provided significant levels of childcare for children over 3 years old (Ghodsee 2005; Meurs 2003). Enrollment rates among pre-school children ranged from 49 percent in Poland to 90 percent in the Czech Republic in 1989 (UNICEF, 1999: 133). Women were explicitly recognized as the main caregivers, however, and provided with relatively long (2-3 year) paid maternity leaves and, in some cases, shortened hours to permit them to attend to domestic tasks (Ehrenreich). Institutional childcare for children under 3 years of age

was much more limited. The model might thus be described as dual-earner single-caregiver, with significant state financial support for care but limited support for shared caring.

This model was never as fully implemented in the socialist republics of Central Asia as it was in Central and Eastern Europe. Social norms and lower levels of industrial investment contributed to women integrating less completely into the paid labor force in Central Asian republics of the former Soviet Union. In 1990, labor force participation rates for women were 36% in Tajikistan and 38% in Kyrgyzstan. Rates of childcare enrollment were also lower, enrolling only 31 percent of children of pre-school age (3-6 years) in Kyrgyzstan by 1989 and 17% in Tajikistan (UNICEF, 1999:133). In Kazakhstan, however, 65% of women participated in the labor force in 1990 (World Bank 2020, accessed July 3, 2020) and 52 percent of pre-school aged children attended childcare, making Kazakhstan more like East and Central European countries than their Central Asian neighbors.

Independence in 1991, and the post-socialist transformation away from central planning and towards markets led to a significant reorganization of economic life in Kazakhstan, with important implications for the model of care provision. Output fell rapidly, falling to 61% of 1989 levels in Kazakhstan by 1994, and reaching 1989 levels again only in 2009 (EBRD 2009: 21). As in other post-socialist cases, many state enterprises ceased to function, state revenues declined, and government expenditure in Kazakhstan dropped from 31% of GDP in 1990 to only 19% of the much-reduced GDP in 1995-1996. State-supported preschools were one of the many state services to face very severe cuts. Preschool enrollment rates dropped from 31% in 1989 to under 12% in 1997. Some maternity leave and child payments continued, but these were greatly reduced and subject to frequent changes, making it difficult for individuals to understand and access their benefits ((https://www.ilo.org/wcmsp5/groups/public/---europe/---ro-geneva/---sro-

moscow/documents/publication/wcms_344717.pdf;http://adilet.zan.kz/kaz/docs/P990001851_/compare).

At the same time, wages fell rapidly, falling to 33% of 1989 levels (in real terms) by 1994, driving more household members (both men and women) into the labor force and pushing labor force participation rates up slightly (UNICEF, 1999: 133-141). Families continued to need two earners, but the main state support for female caregivers, widespread availability of preschool, had disappeared, putting extreme pressure on the dual-earner single-caregiver model, and particularly on women, who provided 6.65 hours of unpaid work per day in the year 2000 compared to just 3.32 hours for men (https://unstats.un.org/unsd/gender/timeuse/index.html, accessed on July 27, 2020).

Toward a New Model?

Since the early 2000s, the government of Kazakhstan has begun to develop policies to facilitate combining family responsibilities with employment. As in most European post-socialist cases, however, policies in Kazakhstan support relatively more equal participation in earnings but relatively less equal participation in care work. The policies support dual earning by offering fairly long maternity leaves and expanding the availability of paid childcare, to date mainly for children over 3 years of age. The policies would thus place Kazakhstan with the European post-socialist cases in the lower right-hand quadrant of the typology proposed by Saraceno and Keck (2008). Limited support for increasing men's role in caregiving reflects a shift away from the previous female caregiver model and in the direction of a male-dominated dual-earner female-dominated caregiver model, but the limited nature of the shift would leave Kazakhstan with other, European post-socialist cases on the right-hand side of Figure 2.

A number of recent policies emphasize improving women's labor force participation as a national goal. The 2003 Concept of Gender Policy for the Republic of Kazakhstan defined the main directions for gender policy to include the provision of equal opportunities for women's economic independence, entrepreneurship and career development (http://www.oecd.org/gov/Russian_Gender_Kaz.pdf). Initiative 6.15 of the Strategic development Plan of the Republic of Kazakhstan to 2025, developed in 2006, aims to "... create conditions to ensure equal employment for men and women" (https://www.ndi.org/sites/default/files/Kazakhstan-Gender-Strategy-2006-2016.pdf). The Strategy for Gender Equality in the Republic of Kazakhstan for 2006-2016, too, lists gender equality in the economic sphere as one of seven priority areas, alongside strengthening of the family (https://www.ndi.org/sites/default/files/Kazakhstan-Gender-Strategy-2006-2016.pdf).

Labor legislation supports both goals by protecting the rights of parents to flexible forms of employment and parental leave, and government policy promises support through social benefits and services. Mothers in Kazakhstan are eligible for 126 days of paid maternity leave (56 days of which are given after the birth). In addition, one family member is entitled to one year of paid childcare leave after the birth, plus another two years of unpaid leave (OECD, 2017). While normally the childcare leave is taken by the mother, the leave may be taken by the father, grandparents, another relative or guardian (ILO, 2011). Payment is insurance-based and determined by the average monthly income for the last 24 months before the leave with the benefit set at 40% of that average monthly income, capped at 4 times the minimum wage per child. If the caregiver had not been employed in those 24 months before the birth, a state payment is given. In both cases, however, a 2011 ILO report noted that these payments averaged below minimum wage. As of 2014, in order to ensure that working mothers do not suffer a

pension disadvantage for taking the maternity leave, the government has been paying the pension contributions for mothers on maternity leave (http://adilet.zan.kz/eng/docs/U1600000384). Since 2002, low income families may qualify for some additional income support for children (under the age of 18) through the Targeted Social Assistance program (https://online.zakon.kz/Document/?doc_id=37190763#pos=14;-44).

The majority of the support for early care is directed at mothers, however. Fathers cannot share in the 56 days of post-natal maternity leave. Although fathers may share in the one year of paid leave and two years of unpaid leave to care for a child up to the age of 3, there are no special incentives for them to do so, employer participation in this benefit is voluntary, and the low level of wage replacement during the paid leave and significant gender wage gap (36% in 2008) (wageindicator.org) discourage fathers' participation. Few fathers are reported to use this leave although no official statistics on this are available (ILO, 2012).

Childcare availability has increased significantly since 2009. Since 2014, expansion of childcare services has been supported by the "Balapan program" 2014/2020, which sought to cover 77.7% of all children 1-6 years old by 2015 and to ensure 100% coverage by 2020 (Figure 3). Between 2000 and 2018, the number of childcare institutions increased almost tenfold. Since 2011, the increases have been driven by increases in private centers, many of which operate under contract to the state (https://stat.gov.kz/ ; Ministry of Education and Science, 2018) (Figure 4). Costs to families using private care have been relatively high (Nugmanova, et. al., 2019).

For children under 3, childcare enrollments increased very significantly, from only 5.2% of children under 3 in 2009 to 31.7% in 2018. Enrollment varies significantly by region (oblast), however, with 68% of children under 3 in care in the Turkestan region and but only 14.3% in

Mangistau region. The limited enrollment of children 0-2 years of age may result from lack of availability of institutional care, or lack of demand for such care given the relatively long (unpaid) leaves. In either case, the long (partially unpaid) leaves and limited incentives for fathers to take leaves are likely to result in longer-than-optimal periods specializing in care at home for mothers, and long-term impacts on their human capital formation and careers.

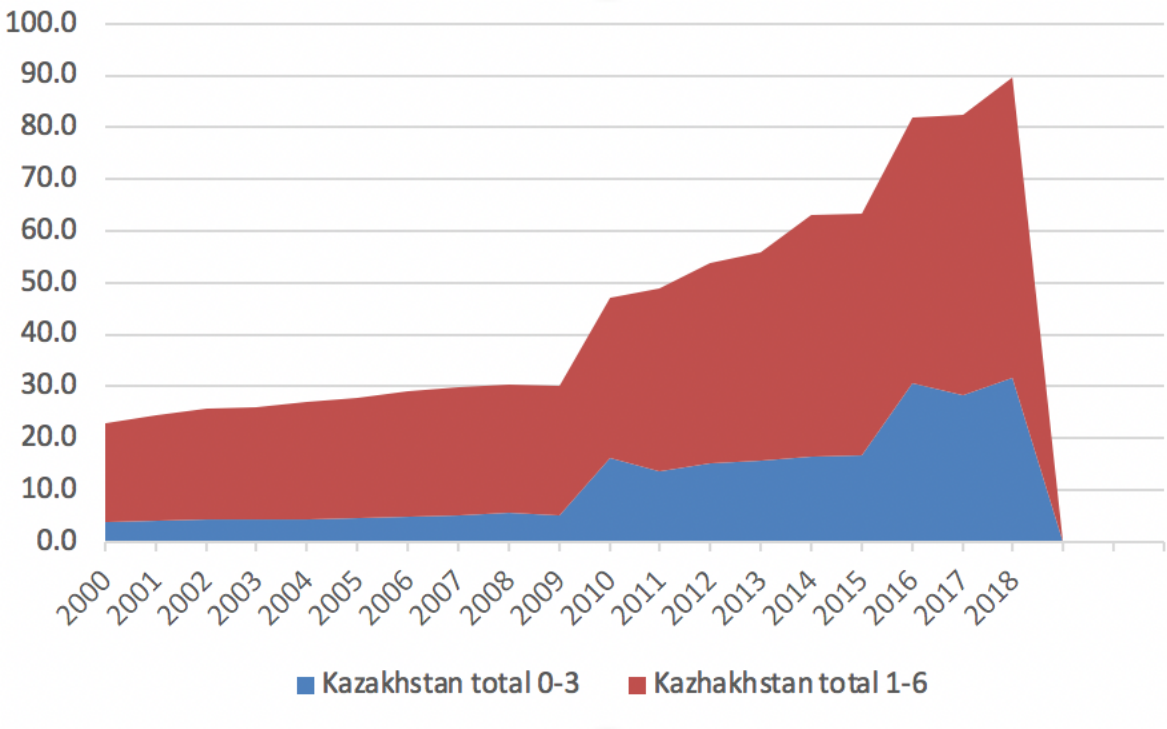
Once the child reaches the age of 3, mothers are expected to return to work, and state-supported childcare has increased significantly. Government statistics report almost universal participation (ninety-five percent of children 3-6 years old) in 2018 (Ministry of Education and Science, 2018), up from 72% in 2012 and 20% in 2000, at the end of the economic collapse (Ministry of Education and Science, 2018a, 2018b, 2017, 2013).

Overall, in 2018 the state-reported share of all children aged 1-7 years enrolled in preschool institutions reached 57.8%, well short of the Balapan goal of 77.7 percent by 2015 (Figure 4). Over 95% of children aged 3-6 were reported to be enrolled, however, while 32% of children under 3 were enrolled (National Statistical Office, 2020). Overall, shortages of places and crowding persist. In 2018 there were almost 106 children enrolled per 100 places in childcare centers (https://stat.gov.kz/). Although the problem is widespread, with 80% of Kazakhstan's regions reporting a shortage of places, the vast majority of all children on the waiting list live in urban areas. Accessibility of childcare is another issue. In Amaty, the largest city, there were 1581 childcare institutions per '000 km^2 in 2016, while in the Mangistau region, there were 1.45. Of the regions that are not cities, only 1 has more than 6 centers per '000 km^2.

Other problems may limit the appeal of sending children to childcare. Pressure to start-up preschool organizations had a negative impact on the quality of services provided. In 2018, 19.6% of PE organization in the country had no hot water, 23.2% had no sewage services, and

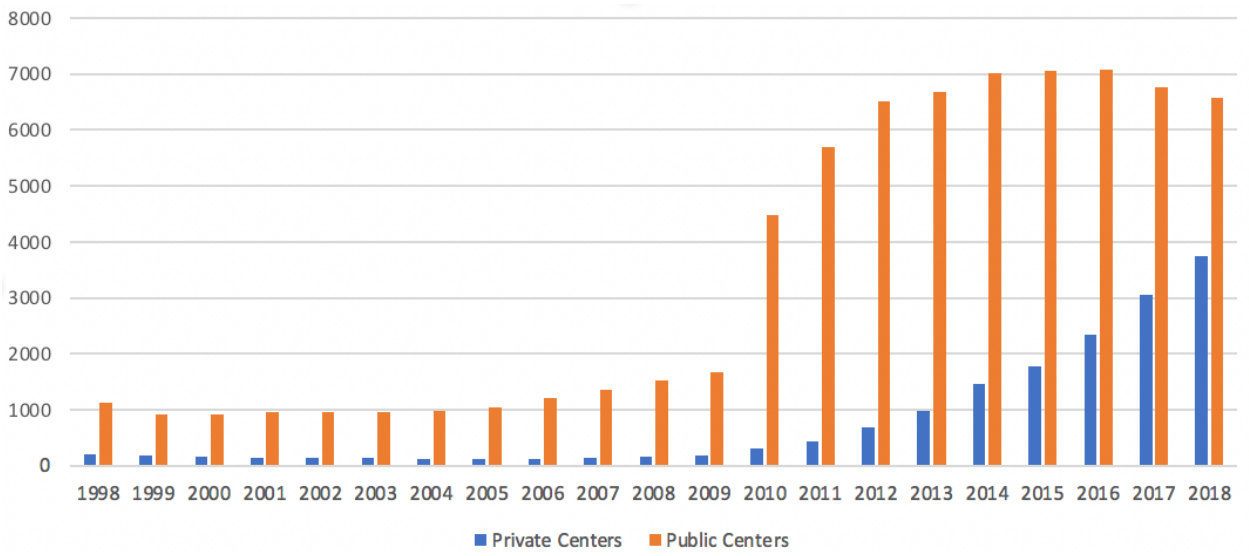
15.3% had no water supply at all. Salaries of employees are among the lowest in Kazakhstan, teachers and nurses may lack qualifications, and centers may lack equipment and materials) (Ministry of Education and Science, 2018; https://stat.gov.kz/) . Low average wages of women combined with high cost of private organizations may also limit the use of paid childcare.

Figure 3: Childcare Enrollments, 0-3 and 1-6 Years



Source: National Statistical Office, 2020.

Figure 4: Public and Private Childcare Centers, Kazakhstan 1998-2018

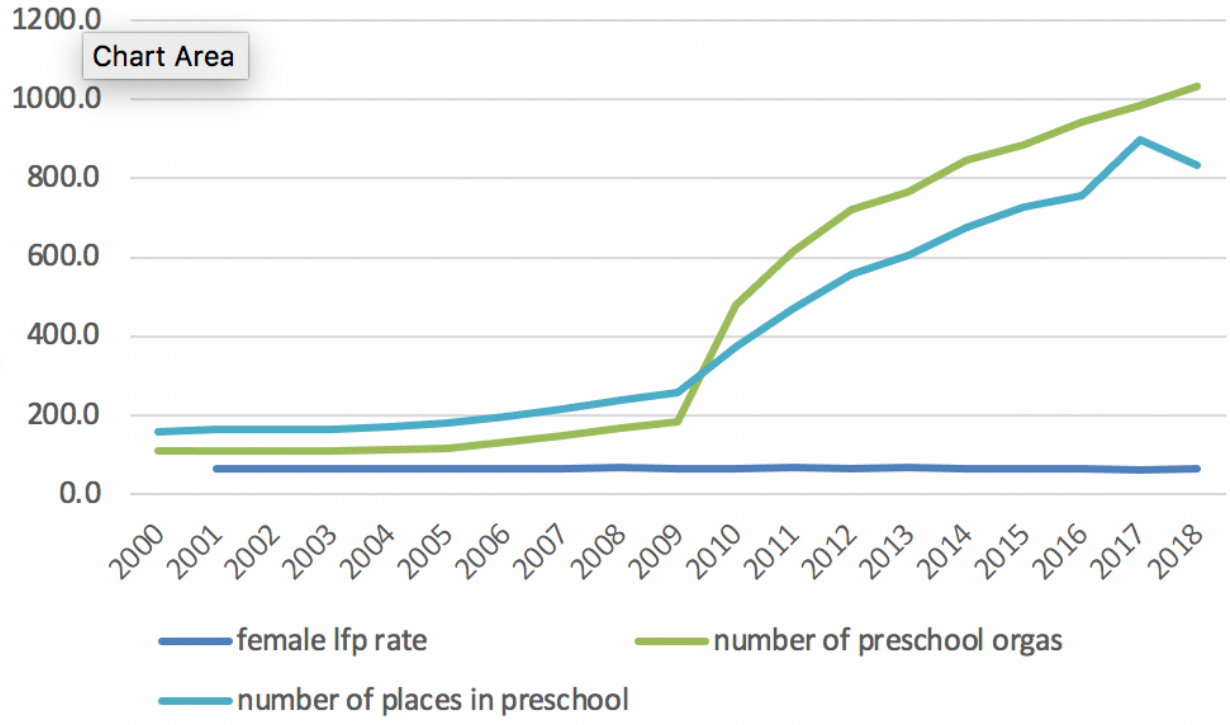


Source: National Statistical Office, 2020

Increased state support for childcare, combined with rights to maternity leave, are expected to support increases in women's labor force participation, as suggested by the cross-country comparisons in Figure 2. However, in Kazakhstan women's labor force participation has not tracked childcare availability, as can be seen in Figure 5. The post-socialist collapse of state-run childcare in the 1990s coincided with only a 1 percentage point decline in women's labor force participation rates (from 1999-2004). Pressed by financial need and accustomed to working, women in Kazakhstan cobbled together alternative care. The labor force participation rate then more than recovered from 2004-2008 to 65.7%, while institutional childcare availability increased only slightly. More recently, as state support for, and availability of, childcare availability has expanded significantly, particularly for children 3-6 years old, female labor force participation rates remained fairly steady until 2014 and then fell significantly through 2019 to 62.6% (almost three percentage points, considerably more than during the collapse of state-run childcare in the early 1990s). While the labor force participation rate of 62.6% is higher than that of other Central

Asian countries (45% in the Kyrgyz Republic and 31% in Tajikistan), it remains below the rate in many European countries, well below the male labor force participation rate in Kazakhstan of 76%, and below levels in the 1980s (World Bank, 2020, accessed July 15, 2020).

Figure 5: Women's Labor Force Participation and Child Care Availability in Kazakhstan



Source: Kazakhstan National Statistical Office, 2020.

Increased availability of childcare, the renewed payments of maternity and childcare leaves, and the ability of fathers to share in childcare leave (if used) should all support higher levels of female labor force participation, by reducing opportunity costs of paid work and also increasing expected returns to that work. Possible explanations for the limited impact of expanding childcare might be that mothers are not the ones out of the labor force, that the care is not accessible, that the quality is so low that it is not wanted, or that behavioral norms regarding care for young children or women's employment reduce the impact of the policy initiates. In the next section of the paper, we examine the labor force participation decisions of individual

women in Kazakhstan, drawing on data from the Life in Transition Survey of the EBRD from 2016, in order to examine the apparent limited behavioral response to the changing policies.

Women's Labor Force Participation and Childcare Availability in Kazakhstan

Other than the 1995 Kazakhstan LSMS of the World Bank, the Life In Transition Survey is, to our knowledge, the only publicly available data on women's employment and household structure for Kazakhstan. The LITS collected data from 1500 households in each of 34 countries in 2016 and 1000 households in 2010 on labor force participation, care provision and social and political opinions. We use the LITS Kazakhstan data from 2010 and 2016 in two ways to examine the relationship between labor force participation and childcare availability and combine this with administrative data on the availability of childcare organizations and total places within those organizations, normalized by km^2 or population of children, as appropriate.

First, we examine regional patterns of change in childcare availability and women's labor force participation between 2006 and 2016. Shortages of places were reduced significantly in all regions between 2006 and 2016, and variation across regions was also significantly reduced. In 2006, children 0-6 years old per childcare place ranged from 4.40 in Pavlodar to 35.78 in South Kazakhstan, averaging. 7.7. By 2016, children per place ranged from 2.3 in Akmolinska 4.7 (which includes the capital of Astana/Nur Sultan) in West Kazakhstan, averaging 3.4. Perhaps surprisingly, urban areas do not always seem to be better supplied and are increasingly less so. In 2006, comparing the total population of children 0-6 per childcare center in urban areas to that in rural areas by region, we find that in regions of Aktubinska and Kuzludorska, the ratio of the population of children to centers was higher in urban areas (about 1200 children per center in urban areas of Kuzludorska, compared to 775 per center in rural areas). By 2016, the ratio of children to centers had decreased everywhere (to 280 children per center in urban Kuzulordska,

for example), but this issue of higher ratios in urban areas was much more widespread. In every region except Mangitsau, urban areas had much higher populations of children 0-6 per center than rural areas—up to 14 times as high. As with the measure of places per child, variation across regions is greatly reduced 2006-2016.

Looking at spatial distribution of the centers by region, we also find increased availability as measured per km^2, which ranged from .22 in Mangistau to 1.3 in Akmolinska in 2006 and from 1.19 in Karaganda to 13.27 in South Kazakhstan in 2016. Center availability by km^2 became more varied, however, unlike places per child, which became more equal across regions over time. As expected, availability per km^2 was higher in urban areas in 2006, ranging from .17 to .84 but, according to the administrative data, becomes much denser in rural areas in 2016, ranging from .64 to 8.55, compared to .55 to 3.28 in urban areas. Unfortunately, the administrative data do not distinguish centers which serve children under 3 years, which as noted above are reported to be in short supply.

Finally, looking at women's labor force participation, we find it varies regionally in 2006 from 62% in West Kakakhstan to almost 70% in the Almaty region (excluding Almaty city, where the rate is only 64%). In 2016, Karaganda reports the low of only 57% participation, while Aktubinska reports almost 74%. Looking at simple correlations between childcare availability and female labor force participation, the correlation is negative, as expected, in both years, but very weak in 2006. Correlation between centers per km^2 and labor force participation is positive and strong (.82) in 2016, but weak and negative (-0.08) in 2006.

Drawing on the LITS data, we next describe patterns of women's reported household structure, childcare use, and employment in Kazakhstan, noting differences between government data and patterns reported on the survey. We compare characteristics of working and non-

working women, and patterns of childcare use by location, education, and age of children. We then use a basic probit regression to analyze the relationship between women's employment, individual and household characteristics, and regional childcare availability. Examining regional differences, we consider whether historical patterns of labor force participation (norms) might explain the limited response to changing policy.

Of the 1650 working age women in the sample, we identified 442 as mothers of children 0-6 years old. One hundred and sixty-seven had one or more children aged 3-6, but no children under 3 years of age. One hundred and ninety-two had only a child under 3, while 30 had children in both age groups. Sixty-six percent of the mothers were married, with a higher share of the mothers of children 0-2 (92%). Most (64%) lived in nuclear households (spouse and child). Eleven percent were single mothers living alone with their children. Sixteen percent lived in the same household with their in-laws, and 9% lived in other types of multigenerational households.

For women 18-59 (current retirement age for women is 58), we find that in 2016 62% report working in the past 12 months. This is slightly lower than the 64% reported by the National Statistical Office for women 15 years and older in 2016, and significantly lower than the labor force participation rate of 74% for women 15 years and older in the 2016 ILO estimates cited above. Comparing women who reported working and those who do not, we find that they report very similar age distribution, are equally likely to live in urban versus rural locations, and report having similar numbers of people at home requiring care (both children and elders). Women who do not report employment report lower educational attainment (less likely to have any post-secondary education) than women who report employment, however, and therefore possibly lower expected wages.

In 2006, a smaller share of women (55%) women reported working in the past 12 months and, as in 2016, these women were better educated than those who did not report working. However, the share working was significantly higher in urban than rural areas (66% compared to 40%) and working individuals were older than those not working.

Comparing mothers of children under 7 (school age) to women who do not have such children, we find that 61.9% of non-mothers report working in the last 12 months, while only 49.8% of mothers of children under 7 worked. Breaking this down further, looking at mothers of children under 3, only 37.2% worked in the past 12 mo., while 59.2% of mothers of children 3-6 did so. The share of mothers of children in both age groups who reported working increased over the period 2006-2016, with mothers of children 0-2 increasing their participation from 31.8% to 40.6% and mothers of children 3-6 increasing their participation from 50.8% to 66.2%.

Looking at what types of child care households report using in 2016 (the only year in which the question was asked) in Table 1, for both children 0-2 and children 3-6 care by a household member is the most commonly used form of care. Sixty-eight percent of children 0-2 and 40% of children 3-6 in the LITS survey are cared for by a household member. Although the LITS data does not include information on which household member provides care, a small survey of 300 households in Almaty and the Almaty region suggested that the majority of children were cared for by their mother. A small share (3%) were cared for by their father, and 12% by their grandmother or grandfather (Nugmanova, et. al., 2019). Of children ages 3-6 in survey households, only 43% attended public or private kindergarten, with the majority attending public kindergarten. A much lower share of children 0-2 attended public or private childcare institutions (16%), and young children were about evenly split between public and private care, probably because much less public care is available for very young children. These rates of use

of institutional childcare are much lower than those reported in official government statistics are discussed above. About 5% of both groups are cared for by a nanny, and a similar share is cared for by another non-household member. Very young children receive similar forms of care in urban and rural areas, but in rural areas older children, 3-6 years, are more likely than urban children to be in care of a household member and less likely to be in a public institution.

Despite the prevalence of family care, not all women living in multigenerational households are more likely to work. Fifty percent of mothers living in nuclear households reported working in the past 12 months, but only 34% of mothers living with their in-laws. Women living in other types of multigenerational households were most likely to work (61%).

Table 2: Reported Sources of Childcare in Kazakhstan, 2016

	0-2 years N = 210	3-6 years N = 364
HH Member	0.68	0.40
Private Center	0.09	0.12
Public Center	0.07	0.31
Nanny	0.05	0.04
Other non-HH	0.06	0.04
"No Care"	0.05	0.09

To analyze factors associated with women's employment we follow others, including Connelly (1991), in using a probit regression in which a woman's labor force participation is a function of the return on time in household production, expected return on time in paid labor, and

costs of accessing childcare, as in equation 1, below. Standard models of women's labor force participation estimate expected wages. Unfortunately, the LITS 2016 data on wages includes many missing and apparently erroneous observations, and we were unable to use it to estimate expected wages for women not currently employed, and the other years do not include wage data. We use education (a dummy variable distinguishing less than high school education, high school education, post-secondary (non-tertiary) education, and tertiary education), as well as age, marital status, a dummy variable for whether the respondent reports being in "bad" or "very bad" health, and whether she lives in an urban area, in addition to a regional control discussed below, to proxy for expected wages (W^e_i). As measures of return on women's time in household production, we include dummy variables for whether the individual has agricultural land and whether the household has access to tap water, and the number of other adult women in the household, as well as the number of children under the age of 7 (H_i).

LITS data also does not include any explicit measures of childcare costs. As seen above, the majority of institutional childcare in Kazakhstan is state-run and subsidized; prices in state-run care are not expected to vary significantly. Since 2009, private childcare centers have become more common, however, and these are reported to be significantly more expensive. We therefore use share of centers which are state, by region, as one measure of cost of care. To measure spatial availability, we include the number of available childcare places per child under the age of 7, by region, as well as the number of centers per km^2 (CCC_i)[1]. A set of 14 region dummies (R_i) is included to capture other, unobserved, differences in employment context across regions (labor market and cultural differences, for example), as well as a dummy for survey year.

[1] A second measure of availability, number of places per child under the age of 7 in the region, is also used, but does not change the result.

Descriptive statistics are reported in Table 3, by year. Generally, the sample of women in 2016 is slightly older, in better health, better educated, and much less likely to cultivate agricultural land.

$$e_i = \delta_0 + \beta_1 W^e_i + \beta_2 H_i + \beta_3 CCC_i + \beta_4 R_i + \beta_5 Year + \mu_i \quad (1)$$

Regression results are presented in Table 4 (to be found at the end of the document). To examine the relationship between potential childcare need and employment, in columns 2 and 3, we include the number of small children in the household along with other usual variables thought to impact labor force participation. Because childcare availability in Kazakhstan varies importantly between that for children 0-2 years and that for children 3-6 years, we include these separately.

Individual and household characteristics have the expected relationship to employment. Likelihood of labor force participation increases with age at a decreasing rate, as well as increasingly with tertiary education, while married women and women in bad health are much less to be employed. As measured, other demands on women's time (agricultural land, number of adult women in the household and the need to collect water) do not have a significant impact on women's employment.

Children under 3 years of age have a significant negative relationship to employment, of a larger magnitude than being in bad health. Having children 3-6 is not associated with employment. This may be partly explained by the year of paid leave available to new mothers (something to be further examined more carefully in a future iteration of this paper), as well as the greater relative availability of childcare places for children 3-6.

Table 3: Descriptive Statistics

	2006	n=458		2016	n=1192
Respondent Characteristics	mean	stdDev		mean	stdDev
Respondent's Age	37.12	11.66		39.43	10.90
Bad Health	0.13	0.33		0.05	0.22
Less Than Secondary Education	0.05	0.21		0.06	0.24
Secondary Education	0.37	0.48		0.23	0.44
Post Secondary Education	0.36	0.48		0.32	0.47
Tertiary Education	0.22	0.42		0.37	0.48
Mother 0-2 years	0.10	0.31		0.13	0.34
Mother 3-6 years	0.24	0.51		0.25	0.53
Household Characteristics					
Agricultural Land	0.38	0.49		0.07	0.25
Running Water	0.54	0.50		0.78	0.40
Urban	0.57	0.50		0.58	0.50
Number Adult Females	1.48	0.70		1.32	0.60
In-Law Household	0.06	0.23		0.04	0.19
Nuclear Household	0.15	0.36		0.18	0.38
Single Mother	0.02	0.15		0.03	0.18
Regional Childcare					
Centers/km2	0.70	0.37		5.08	3.70
Child population/place	11.40	9.72		3.38	11.66

To further examine the relationship between the availability of institutional childcare and the labor force participation of mothers of young children, in columns 4-9 we include measures of the density of childcare centers per km^2 in the respondent's region and the ratio of the population of children under 7 in region to the number of childcare places. We first include all women in the analysis as, as seen above, access to childcare can have long term impacts on women's expected earnings and careers. In columns 8-9, we include only mothers of children under 7 in the regression. The number of cases drops significantly, of course, when we include only mothers, but the pseudo r^2 remains about the same, and both marital status and bad health

continue to be significantly negatively associated with being employed, while living in an urban area is positively associated with employment. For mothers, however, educational level is not associated with being employed.

We see that for both all women, controlling for whether the woman is a mother (columns 4-5), and for mothers of children under 7 (columns 8-9), regional density of childcare centers, a rough measure of access, is not significantly associated with employment. Since new mothers may choose to use a year of (poorly) paid maternity leave, in columns 10-11 we include in the analysis only mothers of children 3-6 and again examine potential impact of spatial childcare accessibility. We find none. Perhaps regional density is not a good measure of access. In columns 6-7, however, we see that the share of centers which are state-run, which are reported to be less expensive, does have a positive relationship with employment for all women. This suggests that childcare costs may be a significant factor in the employment decision.

Conclusions:

Kazakhstan's emerging gender regime retains a strong resemblance to the (male dominated) dual earner, female caregiver model common under socialism. Emerging (still very limited) support for increasing men's role in caregiving, by allowing any family member may take the one year of paid childcare leave, reflects a shift in the direction of a male-dominated dual-earner female-dominated dual-caregiver model now common in Europe. Leave payments are low, however, and the model remains similar to the "familial" models described by Saraceno and Keck (2008). Families are expected to provide most care. As in other (European) post-socialist cases, the state has focused support on expanding provision of institutional childcare for children 3-6 years of age and focused policy mainly on mothers. In Kazakhstan, these investments have significantly expanded availability of institutional care for children 3-6 in both urban and rural

areas and in all regions of the country. While more limited, availability of care for children 0-2 years has also expanded.

Kazakhstan's heavy investment in childcare and numerous policy initiatives to promote women's employment have, perhaps surprisingly, failed to elicit the expected household response to support a new gender regime. Women's labor force participation rates have not increased since the 2000s and, most recently have even declined. Looking at employment decisions of individual women drawing on the 2006 and 2016 LITS data, it is evident women with children under 3 years in the home are significantly less likely to be employed. The relationship is large, almost as large as being in bad health. Of households with children under 3, in 2016 68 percent reported that the young children are cared for by a household member, and results of a small survey suggest that the mother is almost always the caregiver. New state support for increasing men's role in caregiving allows any family member may take this leave, but to date few men appear to use this leave, perhaps due to low wage replacement rates.

Regional levels of childcare availability, measured either per km^2, are not associated with employment for women or for mothers of young children. It is possible that this measure of access is not adequate, as it does not accurately measure access for very young children or is measured at too broad a level (region, as opposed to municipality). We do find, however, that the share of centers run by the state, which are highly subsidized and less expensive than private centers, is significantly associated with employment for all women.

The number of adult women in the household has an unexpected negative (although not significant) relationship to employment, suggesting that perhaps women in more traditional extended households are less likely to be employed. (This will be checked in a future iteration of the paper.) However, in results not presented here, we found that women are not more likely to be

out of the labor force where the enrollment rate for small children is low (suggesting local norms of caring for children at home), and women are not more likely to be employed in regions with a history of higher female labor force participation rates (a different measure of social norms).

As extended leaves negatively impact women's employment outcomes over their lifetime, the current gender regime will impact women's labor market outcomes and incentives and the state goal of promoting employment equality between men and women. This problem is not unique to Kazakhstan. As seen in Figure 2, countries in Europe have implemented very different levels of support of partner sharing of care for very young children, even where EU and ILO policy provide support for greater sharing. One possible area for policy enhancement is to expand support for the sharing of parental leave (by raising levels of wage replacement and designating leave explicitly for fathers).

An alternative option would be to accept, for now, the gender division of labor in care for very young children, but provide more state support for this care. The expansion of high-quality childcare centers for children 0-2, perhaps accompanied by some shortening of the period of unpaid leave, could encourage women to return to work sooner, reducing the losses in human capital and associated wage impacts.

References

Bettio, Francesca and Janneke Plantenga. 2004. Comparing Care Regimes in Europe. *Feminist Economics*, 10:1, 85-113, DOI: 10.1080/1354570042000198245

Bick, Alexander. 2016. The Quantitative Role of Childcare for Female Labor Force Participation and Fertility. *Journal of the European Economic Association* 14(3) 639-668.

Boeri and Sziraczki 1993: 244. Pending.

Commission of the European Communities (CEC). 2008. *A better work-life balance: stronger support for reconciling professional, private and family life*. Communication from the Brussels: Commission to the European Parliament, the Council and the European Economic and Social Committee and the Committee of the Regions: COM (2008).

Connelly, Rachel. 1991. The Effect of Childcare Costs on Married Women's Labor Force Participation. *Review of Economics and Statistics*. 74(1): 83-90.

De Henau, Jérôme, Danièle Meulders, and Síle O'Dorchai. 2007. "Parents' Care and Career. Comparing Parental Leave Policies across EU-15." In Daniela Del Boca and Cécile Wetzels (eds), *Social Policies, Labour Markets and Motherhood: a Comparative Analysis of European Countries*, pp. 63-106. Cambridge, UK: Cambridge University Press.

Deven, Fred and Peter Moss (eds). 2005. *Leave Policies and Research: Reviews and Country Notes*(CBGS-Werkdocument 2005/3). Brussels: Centrum voor Bevolkingsen Gezinsstudie. Available at: www.cbgs.be.

EBRD (European Bank for Reconstruction and Development). 2009. *Transition Report*.

Esping-Andersen, Gosta. 1997. Hybrid or Unique?: The Japanese Welfare State Between Europe And America. *European Journal of Social Policy*. 7(3).

Frericks, Patricia, Per H. Jensen, Birgit Pfau-Effinger. 2014. Social rights and employment rights related to family care: Family care regimes in Europe. *Journal of Aging Studies*. 29: 66-77.

Ghodsee, Kirsten. *The Red Riviera: Gender, Tourism, and Postsocialism on the Black Sea*. Duke University Press. 2005.

Gornick, Janet and Arianne Hegewisch. 2010. The Impact of "Family-Friendly Policies" on Women's Employment Outcomes and on the Costs and Benefits of Doing Business." Commissioned Report for the World Bank.

Gornick, Janet and Marcia Meyers. 2008. Creating Gender Egalitarian Societies: An Agenda for Reform. *Politics and Society.* 36:313-349.

Herbst, Chris and Burt Barnow. 2008. *Journal of Family Economic Issues*. 29:128-151.

Huerta MC, Adema W, Baxter J, Han WJ, Lausten M, Lee R, Waldfogel J. 2014. Fathers' Leave and Fathers' Involvement: Evidence from Four OECD Countries. *European Journal of Social Security. 16(4):308-346.*

ILO (International Labor Organization). 2012. *Work and Family Responsibilities: The Republic of Kazakhstan*.
https://www.ilo.org/wcmsp5/groups/public/---europe/---ro-geneva/---sro-moscow/documents/publication/wcms_312669.pdf

Jaumottte, Florence. 2003. Female Labour Force Participation: Past Trends and Main Determinants in OECD Countries. OECD Economics Department Working Papers No.376.

Mason, Andrew D. and Elizabeth E. King. 2001. *Engendering Development Through Gender Eqyuality, in Rights, Resources and Voice.* New York, NY: Oxford Univeristy Press and The World Bank.

Meurs, Mieke and Rasika Ranasinghe. 2003. "De-development in Post-Socialism: Conceptual and Measurement Issues," *Politics and Society*. 31 (1).

Meurs, Mieke and Lisa Giddings. 2020. Elder Care and Paid Work: Gender Differences in the Relationship Between Unpaid Elder Care Work and Employment in Bulgaria. *European Journal of Social Policy*, forthcoming.

Meurs, Mieke, Lisa Giddings and Tilahun Temesgen. 2007. "Changing Preschool Enrollments in Post-Socialist Central Asia: Causes and Implications," *Comparative Economic Studies*, 49 (1): 81-100.

Ministry of Education and Science of the Republic of Kazakhstan, National report on development of the education system of the Republic of Kazakhstan. 2019. JSC "Information and Analytical Center".http://iac.kz/sites/default/files/0_nacionalnyy_doklad_za_2018_god_final_s_oblozhkami_na_sayt_compressed_0.pdf

Ministry of Education and Science of the Republic of Kazakhstan. 2018a. Report "Children of Kazakhstan, 2014-2018."

Ministry of Education and Science of the Republic of Kazakhstan. 2018b. National report on development of the education system of the Republic of Kazakhstan.

Ministry of Education and Science of the Republic of Kazakhstan. 2017. National report on development of the education system of the Republic of Kazakhstan, 2017,

Ministry of Education and Science of the Republic of Kazakhstan. 2012. National report on development of the education system of the Republic of Kazakhstan.

Nugmanova, et. al. 2020. Unpublished report to the UN Women Kazakhstan project "Study on Women's Unpaid Domestic Care Work in Kazakhstan", Gender Economic Research Center, Narxoz University.

Organization for Economic Co-operation and Development (OECD). 2007. *Babies and bosses: Reconciling work and family life: A synthesis of findings for OECD countries*. Paris: OECD.OECD, 2017. Early childhood education and care: POLICY REVIEW. http://www.oecd.org/education/school/Early-Childhood-Education-and-Care-Policy-Review-Kazakhstan.pdf

Pascal, Gillian and Jane Lewis. 2004. Emerging Gender Regimes and Policies for Gender Equality in a Wider Europe. *Journal of Social Policy*. 33(3): 373–394.

Razavi, Shahra. 2009. Engendering the political economy of agrarian change. *Journal of Peasant Studies* 36(1):197–226.

Saraceno , Chiara and Wolfgang Keck. 2010. Can We Identify Intergenerational Policy Regimes in Europe? *European Societies*. 12:5, 675-696, DOI: 10.1080/14616696.2010.483006

Tanaka S, Waldfogel J. 2007. Effects of parental leave and working hours on fathers' involvement with their babies: Evidence from the UK Millennium Cohort Study. Community, Work, and Family. 10:409–426. doi: 10.1080/13668800701575069.

UNICEF. 1999. *Women in Transition*. Florence, Italy: UNICEF.

Table 4: Probit Regressions, Women's Employment and Childcare in Kazakhstan, pooled 2006 and 2016

Dependent Variable	**Worked in the Past 12 months (All women)**		**Worked in the Past 12 months (All)**		**Worked in the Past 12 months (All)**		**Worked in the Past 12 months (child 0-6)**		**Worked in the Past 12 months (child 3-6)**	
Pseudo R^2	**n=1650 0.13**		**n=1650 0.14**		**n=1650 0.14**		**n=442 0.10**		**n=330 0.16**	
Independent Variables	**coeff**	**Z**	**coeff**	**Z**	**coeff**	**Z**	**coeff**	**Z**	**coeff**	**Z**
age	**0.1529**	**6.74*** **	**0. 1533**	**6.76*** **	**0.1548**	**6.82*** **	**0.1160**	**1.29**	**0.0708**	**0.63**
age^2	**-0.0019**	**-6.49*** **	**-0.0019**	**-6.51*** **	**-0.0019**	**-6.55*** **	**-0.0014**	**-1.06**	**-0.0009**	**0.56**
tertiary education	**0.7232**	**4.57*** **	**0. 7279**	**4.59*** **	**0.7311**	**4.60*** **	**0.2590**	**0.84**	**0.2051**	**0.55**
post-secondary education	**0.3471**	**2.23** **	**0. 3513**	**2. 52** **	**0.3672**	**2.35** **	**-0.1317**	**-0.42**	**-0.1577**	**0.42**
secondary education	**0.0733**	**0.47**	**0.0776**	**0.49**	**0.0812**	**0.52**	**-0.3670**	**-1.16**	**-0.3971**	**-1.04**
bad health	**-0.4423**	**-3.41**	**-0.4444**	**-3.42*** **	**-0.4587**	**-3.53*** **	**-0.6899**	**-2.05** **	**-0.8257**	**-2.40** **
marital status	**-0.4336**	**-5.67*** **	**-0. 4333**	**-5.67*** **	**-0.4220**	**-5.51*** **	**-0.5247**	**-2.76** **	**-0.6176**	**-2.84** **
agricultural land	**-0.0164**	**-0.16**	**-0. 0135**	**1.86***	**0.0312**	**0.30**	**0.2830**	**1.30**	**0.3131**	**1.24**
running water	**-0.0705**	**-0.76**	**-0.0709**	**-0.77**	**-0.0641**	**-0.69**	**0.0348**	**0.20**	**0.2221**	**1.08**
urban	**0.1275**	**1.61***	**0.1271**	**-0.09**	**0.1332**	**1.68***	**0.2469**	**1.70***	**0.3834**	**2.27** **
number adult women in hh	**-0.0859**	**-1.53**	**-0.0862**	**-1.54**	**-0.0891**	**-1.59**	**-0.0788**	**-0.64**	**-0.1933**	**-1.27**
children 0-2	**-0.5844**	**-5.43**	**-0.5849**	**-5.44*** **	**-0.5814**	**5.39*** **				
children 3-6	**-0.0387**	**-0.55**	**-0.0370**	**-0.53**	**-0.0322**	**-0.46**				
centers per km2			**0.0073**	**0.34**	**0.0153**	**0.70**	**0.0132**	**0.35**	-0.0040	-0.09
share centers state-run					**0.9094**	**1.95** **				
									-0.9064	**-0.45**
constant	**-2.5797**	**-5.34*** **	**-2.2964**	**-3.06*** **	**-3.3163**	**-5.54*** **	**-3.3753**	**-5.43*** **	**-2.2551**	**-4.42*** **

Regression also includes a set of 14 region dummies.

*=Variable has significant relationship to outcome at p <.10

**=Variable has significant relationship to outcome at p <.05

***= Variable has significant relationship to outcome at p <.01