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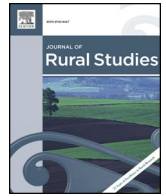
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The feminization of agriculture in post-Soviet Tajikistan

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ABSTRACT

In this paper we aim to analyse economic and social transition factors affecting the agricultural labor force and to understand the feminization phenomenon in rural Tajikistan. Agrarian reforms, seasonal male labor outmigration, and the subsequent increase in women's labor participation have facilitated changes in gender occupational segregation. We assume that in post-Soviet transition countries such as Tajikistan, the process of feminization grew from the need to take on jobs and to slip in the role of the breadwinner due to the absence of men. The process enabled women to gain knowledge and experience in new employment positions.

We contribute to the knowledge on feminization by conducting qualitative, case based analysis through in-depth interviews and focus group discussions and present unique data on previously unobserved employment categories and their characteristics from the Sughd province of Tajikistan.

Results suggest that existing local systems of power and male-dominated relationships are being challenged due to male labor force outmigration, leading to a feminization of the remaining labor force and recipient clients. The jobs women perform remain subject to low protection, security, and earnings. However, increased participation in the labor force provides a gateway to a wider spectrum of labor opportunities and advances women's roles in primary agricultural production as well as in the service supply sector, and provides them a certain amount of control over their own lives.

1. Introduction

After gaining independence in the early 1990s, the majority of the former Soviet countries experienced periods of political and economic turbulence. Among them is the Republic of Tajikistan, which, after gaining independence in 1991, was ravaged by civil war from 1992 to 1997. The war brought with it a drastic decline in living standards, and a sharp fall in production and employment (World Bank, 1999). Although there have been many reforms aimed at improving economic development over the past 25 years, the implementation of these reforms has been slow, investments and job opportunities, especially in rural areas, are lacking, and the population is becoming increasingly vulnerable. One major constraint for the overall population is poor employment conditions that negatively affect both men and women; however, female workers typically struggle more as a result of additional burdens stemming from their involvement in reproductive family care and productive agricultural and non-agricultural activities (Chant, 2006; Gartaula et al., 2010a). In the formerly Soviet Central Asian countries, the encumbrances of transition and of structural adjustments have had a disproportionate effect on women compared to men in the

formerly Soviet Central Asian countries. In particular, female employment has been influenced by post-independence socioeconomic, institutional and cultural changes including a weakening of social protection systems, effectively reducing the possibility of women working outside the home; limited access to paid jobs and employment opportunities; and the redistribution of state ownership, which placed many income-generating resources in the hands of men.

The present study looks at the increase in women's labor participation and, in particular, the growing diversification of the agricultural positions they take on as well as their increased labor mobility stemming from male outmigration. It attempts to answer whether this has helped to lift gender inequalities or whether, on the contrary, it has served to reinforce patriarchal values. We contribute to, and advance, the existing knowledge on feminization by characterizing and categorizing the agricultural labor force specific to Central Asian countries and show how women have gone from being non-participants to being included participants beyond the conventional female positions.

Tajik land reform was initiated in the early years of independence, encompassing the transformation of former Soviet collective (*kolkhoz*) and state farms (*sovkhoz*) into joint-stock companies called collective

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farms (CFs) and individual *dehkan*¹ farms (DFs). However, the distribution of land for private use was unequal and included many administrative and informal obstacles (Mirzoeva, 2009). For the rural population, low-paid agricultural work became less rewarding and provided insufficient wages for meeting basic household needs. Due to the limited employment opportunities at home in both the agricultural and non-agricultural sectors, around 40 percent of the working-age population, the majority under 30, set out to search for labor opportunities abroad. According to the World Bank Living standard Measurement Survey on Tajikistan, around 95 percent of the migrants go to Russia and they are predominantly men (93.5 percent) from rural areas (WB, 2013). The absence of male labor in agriculture led to a substantial increase in the responsibilities of female household members. In addition to caring for the family, women were now required to take over what were previously considered to be traditionally male agricultural activities. Since then, the proportion of women in the agricultural labor force of Tajikistan has been increasing, from 54 percent in 1999 to more than 75 percent of the total current population (TAJSTAT, 2015). Increased involvement and the diversification of the roles of women in agricultural activities have led to the phenomenon of feminization of the agricultural labor force.

Feminization refers to the increased participation or greater roles of women in decision-making processes within the community or household. The phenomenon itself has a rich history and can be found in both developed and developing countries (Sachs and Alston, 2010; Lastarria-Cornhiel, 2008; Mandel, 2013). The trend towards the feminization of agricultural labor is often linked with a variety of factors such as male labor outmigration, the growing number of female-headed households, and the development of labor-intensive agriculture (Kelkar, 2009; Lastarria-Cornhiel, 2008). In many cases, the feminization of labor is accompanied by changing political and economic processes such as access to and control over resources, degradation of productive resources, low returns on labor and other investments, and lack of finances for health and social services. Rural women respond to these changes by participating more in subsistence farming and taking over a wider number of agricultural occupations, including those that were formerly considered to be male activities (Tamang et al., 2014; Mandel, 2013).

This paper contributes to the knowledge on the feminization of agriculture in rural societies and presents a systematic review of the reforms and social changes that have taken place since the collapse of the Soviet Union and the beginning of the transition period in Tajikistan's Sughd province. As such, this study questions whether the observed economic transition, agrarian reforms, male outmigration, and the subsequent increase in women's labor participation has facilitated changes in gender occupational segregation. We assume that in transition countries such as Tajikistan, although the jobs women perform remain subject to low protection, security, and earnings, increased participation in the labor force provides a gateway to a wider spectrum of labor opportunities and a certain amount of control over their own lives. Therefore, a gender perspective provides an important analytical lens for assessing how changes associated with transitions affect gender relations and women's status in societies characterized by varied levels of openness to, and tolerance of, women's participation in the labor force (Bieri, 2014).

The paper continues with a background section providing an introduction to the research area as well as agricultural production during the Soviet Union and within the transition period following independence in 1991. This is succeeded by a framework focusing on the causes and consequences of the feminization of labor in general and in agriculture. The case study section focuses on two support services influenced by the feminization of rural communities and agricultural production: water management (village and farmer *mirobs*—water

masters) and the organization of seasonal workers (*mardikors*). The conclusions emphasize the importance of considering the contextualization of feminization for possible interventions and the need for comparative research in other provinces of Tajikistan to reveal similar or distinct cases of women gaining importance in agricultural support services where the supply of male workers has decreased.

2. A gender perspective on agricultural labor

Gender roles are based on the different expectations that individuals, groups and societies have of others based on sex, societal values and beliefs. Interactions between individuals and their social, historical, political and economic environments shape the norms which influence the formation of gender roles in society (West and Zimmerman, 1987). Applied to various contexts and locations, these norms can represent certain formal or hidden structural elements that influence gender regimes. Thus, not only are activities and experience gender-specifically structured, but gender norms influence the formation of skills, interests, power relations, and decision-making processes at individual, family, and institutional levels. Economic activities differ according to gender norms and, in the workplace, men and women are often expected to perform different tasks and occupy different roles based on their sex. Gender-occupational segregation refers to the different distribution of men and women across occupations and jobs. Occupational segregation is determined by “social norms, values and beliefs that commonly undervalue women's productive work and legitimise their relegation to lower status, casual, manual work while men predominate in managerial and more skilled jobs” (Abdelali-Martini and Dey de Pryck, 2014).

In the United States, improvements in women's occupational standing began to gain momentum from the 1970s, during which sex segregation declined by more than 14 points (Cotter et al., 2004). This movement subsequently spread throughout the Western world and brought with it a change in traditional views on women's rights, including the increased influx of women into paid labor, the expansion of the educational system, technological and institutional developments, and, most importantly, a shift in the public opinion towards gender equality (Mandel, 2013; England and Boyer, 2009). Empirical evidence from Western countries also shows that the occupational mobility of women and the resulting feminization of certain labor positions furthermore progressed with the increasing demand for workers due to a shift or absence of male workers in those occupations (Mandel, 2013; Shortall, 2014). Women became successful in entering highly rewarded occupations and/or previously male-dominated professions such as medicine, law and managerial positions. However, to a certain extent, this process negatively influenced the pay levels in male-typed and high-paid occupations (Mandel, 2013) and empirical evidence confirms the devaluation theory, which refers to a process of decreasing fees for jobs that occurs as a result of women's entry into prestigious occupations (England and Boyer, 2009). Yet, contrary to highly paid occupations, low-paid male-dominated occupations that “require little or no education and skills should be less affected by women's entry because their initial social ‘value’ or reputation is already low” (Mandel, 2013, p. 1188). Thus, regardless of the progress achieved in the name of occupational gender equality, the positions and benefits attained by women remain, for the most part, worse than those of men who have the same professional qualifications.

Although empirical data shows some convergence of male and female patterns of employment in Western countries, analyses by Standing (1999) suggest that in industrialized countries the growth and flexibility of labor markets and diverse forms of insecurity have triggered a relative and absolute growth in non-regular and non-wage forms of employment. Employment in the formal sector is largely based on wage and salaried labor where workers are secured and protected under legislation and guaranteed better career prospects, whereas the informal sector consists of self-employed, family labor and wage

¹ *Dehkan-persian* is a word for a peasant, farmer.

workers with low pay and skills, less stability, and few career prospects (ILO, 2002). Women's participation in the dual labor markets consisting of formal and informal jobs mainly happens due to multiple demands on their time and energy in the absence of any family, community, or state-run support services (Wharton, 2013). In developing and transition economies, over 50 percent of women are informally employed or combine both formal and informal jobs. Informal jobs do not provide an official working status or social protection; they do, however, provide some flexibility and additional income earning opportunities which are, at times, the main source of income (ILO, 2010). Furthermore, a flexible and informal labor supply seems to suit the needs of many production businesses with a demand for low-paid workers (Standing, 1999).

The proximate cause of increased female participation in agricultural production is defined as the increased participation of men in off-farm wage work, including the seasonal labor out-migration of men (Abdelali-Martini and Dey de Pryck, 2015; Lastarria-Cornhiel, 2008). While few in number, certain studies also hint at the “erosion of traditional roles” (Taylor et al., 2006; FAO, 2011) and the adverse influence of greater female activity on the male participation rate in agriculture, which could further cause the male agricultural force to shift to other sectors or lead to increased labor migration. The effects of migration and poverty are often mitigated by women through reproductive activities as well as their increasing involvement in agricultural activities (Mutersbaugh, 2002; Razavi, 2003; Mukhamedova and Wegerich, 2014a; Tamang et al., 2014). Due to low levels of literacy, skills, training, and bargaining capacities in most developing countries, women are more compelled to resort to jobs that are low paid, seasonal, and labor-intensive, such as in agriculture. This is coupled with difficulties accessing various resources and entering into markets. In some developing countries, the employment of women is even considered a sign of poverty, and disturbs gender roles as it represents the man's unfulfilled role as breadwinner (Lastarria-Cornhiel, 2008). The increased importance of women's contributions to the household economy has eroded male authority and enabled women to challenge the stereotype of the male breadwinner (Kabeer, 2013; de Haan and Lakwo, 2010). Women taking up jobs at lower wages and the tasks formerly performed by men, such as land preparation, cultivation of crops, spraying pesticides, harvesting, post-harvesting, and marketing of produce (Kelkar, 2009), often carries positive interpretations of feminization such as the improved bargaining position of women within the family, leading to improved welfare for children (FAO, 2011). Despite the substantial amount of time allocated to domestic work, rural women experience a kind of empowerment in the absence of men: they manage small budgets and household decisions. To some extent, women's mobility is increased as they go to the local market to sell their products. However, in the case of larger items, they tend to rely on older male relatives. In an analysis of feminization of agriculture in China, Zhang et al. (2006) notes that rural women, particularly from the younger generation, increasingly control household income and make decisions about the sale of agricultural products, investments, and purchases of large items such as houses and consumer durables.

While these arguments could imply that male labor migration leads to increased opportunities for autonomy and better employment for women, there are cases with opposite consequences. These vulnerabilities reshape gender relations in ways that continue to disadvantage women including low-remuneration, the informal status of wage-workers, or non-remuneration of family workers (Akramov and Shreedhar, 2012; Deere, 2005). A study by Desai and Banerji (2008) in India suggests that women working in agriculture do not gain more freedom and autonomy if they live in an extended family. Male migration has tended to strengthen rather than weaken traditional gender ideologies. Several case studies from Nepal also show that the effects of male labor outmigration on women's participation in agricultural work and decision-making are contingent upon the intra-household arrangements of roles and power (Gartaula et al., 2010b). Similarly, Reeves (2011) notes that in a Central Asian context, collective

regulation of female honor or control of women's movements by not only the family, but also the village, can mean that wives left behind often enjoy fewer opportunities for mobility, rather than more.

3. Agricultural reforms and changes in the labor sector in Tajikistan

3.1. Transformation of the agricultural sector

Located in Central Asia, the Republic of Tajikistan occupies a mountainous area with only about 10 percent of its land suitable for agricultural use. According to government data (Decree No. 349 of Republic of Tajikistan, dated 31 August 2004), the total arable land is 720 thousand hectares, of which 502 thousand hectares are irrigated. During the Soviet Union, the Tajik Soviet Socialist Republic (SSR) was classified as an agrarian economy, with 43 percent of its labor force employed in the agricultural sector (1991). The first land reforms (Appendix 1) after independence were initiated in 1992, but the civil war (1992–1997) delayed their implementation. The 1992 Law “On *Dekhkan* Farms” established the right of every citizen to create a *dekhkan* farm (based on private, individual, and inheritable land shares), and the Law “On Land Reform” stipulated, in total, three different organizational forms of the restructured farms: *dekhkan* farms, lease share enterprises, and agricultural enterprises, however, most of the ex-collective farms experienced delays in restructuring. Most of the newly formed farms also preserved the old Soviet type structure. Workers from former Soviet farms became members of agricultural enterprises and turned into land shareholders (*sahimdors*) who were to receive land certificates entitling them to a share of land within the former collective farm.

It took several years, however, before land certificates were issued to members of some of the collective farms. The certificates of land also did not provide the full rights to actually possess the documented land plot, thus leaving the management and use of the land to the farm leader. Finally, only after the 2002 Law on “*Dekhkan* Farms” did some private farms begin to appear. According to Tajikistan's State Agency for Surveying, Cartography, and Land Use, in 2011 some 35 percent of agricultural land still remained under collective farms and associations and 20 percent with *dekhkan* farms (Lerman and Sedik, 2008; FAO, 2011).

Following the latest land redistribution stage (Toshmatov 23 January 2014), by the beginning of 2015 (1 January 2015) there were 108,035 *dekhkan* farms with an average size varying between one and five hectares. However, not all share owners of the formerly collective farms received their entitled plots of land. Although, according to the law, former farm workers were entitled to withdraw their land share, in reality this was not practiced by the majority of agricultural enterprises (Table 2, p.19). Maintaining the same collective farm structures, established value chains and state order system for cotton allowed a continuation of administrative control and interventions (KasWag AgriConsulting Worldwide 2008). Few women entered into the privatization process of their land rights as heads of farms, although, at an earlier stage of restructuring, they were reported to hold around 53 percent of shares within farms (ADB, 2006). In 2015, about 13 percent of the 110 thousand registered *dekhkan* farms were formally managed by women.

Agricultural production takes place not only on farms, but also in kitchen gardens and on presidential lands to which people often have access. Presidential lands, with an average size of 0.115 hectares, were intended to supplement the household plot as a source of food for household consumption. In cases where the household members worked on the collective farm, a defined (alienated or not) parcel of land (*sahim*—land share) was promised. Kitchen gardens are mostly involved in growing fruit trees and horticulture and fodder crops (Fig. 1). Gardens close to the house or homestead plots are by far the most productive segment of agriculture, accounting for over 50 percent

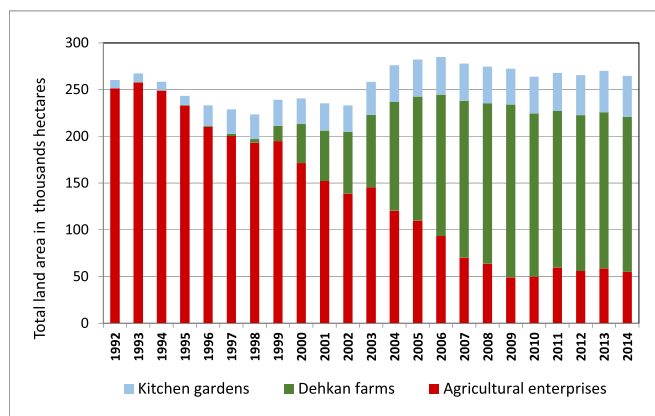


Fig. 1. Agricultural areas (hectares) by different forms of producers of agricultural goods in Tajikistan.

Source: Agency of Statistics of Republic of Tajikistan 2015.

of the value of agricultural production on about 12 percent of arable land (Yakubov, 2013).

The total population of Tajikistan, which currently sits at over 8.7 million people, has been increasing, with almost 73 percent residing in rural areas. The collapse of the collective farm system left rural men and women with few employment opportunities beyond poorly paid jobs in agriculture. There have been small rises and falls in the total population employed in agriculture over the years. Lerman and Sedik (2009) explain that the decline in employment was possibly caused by the incipient decrease in industrial production already occurring before independence, as well as the outmigration of Russian minorities (who were mainly employed in the industrial sector) and devastations during the civil war.

3.2. Roots of feminization—gender roles during the Soviet period and after

In the last decade of Soviet rule, the Tajik Soviet Socialist Republic (SSR) was classified as an agrarian republic with 43 percent of the labor force employed in the agricultural sector (Curtis, 1996). During the Soviet period, agricultural production was organized in crop-specialized, state-owned, large-scale collective farms (*kolkhoz* and *sovkhoz*²) where the Soviet system tried to regulate gender relations by involving women in production on a similar basis to men. The representation of men and women in collective farms became more or less equal, and women were also encouraged to become involved in political and economic decision-making processes within the collective farm (Mickiewicz, 1977). Islamic customs, which are interwoven within Tajik traditions, assign all authority and power to men, but the constitution provides men and women with equal rights. According to traditional family merits, women are seen as caretakers within the home, while men are the breadwinners and the protectors of their wives, mothers, and daughters. Although in family life there was scarcely any redefinition of gender roles (Akiner, 1997), in the agricultural sector the collectivization of private farms broke the tradition of women acting as only housewives and dependents by assigning women into wage jobs (Constantine, 2007). While Soviet policies on gender relations claimed to prioritize women's liberalization, it ignored their status and existing contributions to production and the economy. The paradox of Soviet modernization was characterized by the state

² The major difference between the two farm types was that the wages of the former were dependent on the profit that was made by the farm in accordance with the working days of the worker. In contrast, the workers of the latter received a fixed salary independent of the profits of the state farm, and each member of a household also received an equal amount of potatoes, carrots, or other local products. Different programs were initiated to reduce the inequalities between the two state farms and in the second half of the 1970s the loss-making *kolkhozy* were merged into *sovkhozy*.

integration of women into the workforce as well as the provision of equal citizenship, while at the same time supporting motherhood as a social duty and exploiting patriarchal family structures (Kandiyoti, 2007).

Originally the *kolkhoz* and *sovkhoz* type farms were supposed to have little gender role distinctions (within non-managerial positions), but over time some specializations began to occur along gender lines. Planting, weeding, trimming, and harvesting became the responsibility of women, while men took over the role of irrigation, transportation, mechanization, and heavy land preparation work. Hence, a gender-biased categorization of rural labor had already begun to come into play during the Soviet times. Women occupied few managerial positions at the lower levels of significance and decision-making power (female specialization in administrative/technical education was introduced only during the Soviet Union). By 1987, the policy of “the rent of cotton plots” was initiated. Under this policy, *kolkhoz* plots (0.5–2 hectares) were assigned to collective farm members and their families for growing and harvesting cotton according to state plans on an annual basis. *Kolkhoz* members assigned to agricultural lands were called *hektarchi*. *Hektarchi*, in the times of the Soviet Union, was not a gender-specific term and made reference to *kolkhoz* members and their families working on assigned land. *Hektarchi* at that time were represented by almost equal numbers of men and women; however, the most tedious tasks of trimming and gathering cotton were allocated to women.

After independence and the start of the economic transition, the collapse of the collective farm system left the rural population with few employment opportunities beyond poorly paid jobs in agriculture and an overall unemployment rate of almost 40 percent (World Bank, 1999). Both the causes and outcomes of poverty are heavily gendered and women and girls have borne a greater share of the cost of economic transition. This has resulted in the intensification of women's workloads with increasing participation in formal and, more importantly, informal labor markets alongside an unequal household division of labor (Falkingham and Klychnikova, 2006, p. xviii).

4. Feminization of jobs in Tajik agriculture

During recent years, the total labor force has increased by almost 60 percent, although the number of those employed in the agricultural sector has decreased (Fig. 2) and the latter contributed only 23 percent of the total Gross Domestic Product (GDP) (USAID, 2012).

According to World Bank data (2013), Tajikistan's unemployment rate averaged 11.53 percent from 1991 to 2013. Rising unemployment and reduced wages triggered male outmigration, and increased the labor activity of women. According to the Migration Service under the Government of the Republic of Tajikistan, in 2012 the total number of seasonal labor migrants was 877,335 (about 10 percent of the total population), of which only 14.1 percent were women. Half of the male labor migrants were between 21 and 30 years old. In 2014, remittances from labor migrants constituted approximately 50 percent of Tajikistan's gross domestic product. Data from the Statistics Agency of Tajikistan (Fig. 3) show the declining number of men employed in agriculture, which can be attributed to low wages and the consequent outmigration abroad in pursuit of better paid employment. The overall female participation in the labor force rose, with the total number of men and women in agriculture experiencing opposite trends. More women and fewer men worked in this sector until 2013, and the numbers of female agricultural workers began to decrease in 2014. This decline could be explained by various reasons including the fact that the statistical data does not include the informal agricultural labor in which female workers prevail.

Nevertheless, female wages are much lower than male wages (over 65 percent lower), which cannot be explained by age, educational attainment, or urban or rural locations (Sattar, 2013). Due to the seasonal migration of men (between 20 and 40 years of age), the majority of households can be classified as female-headed households (Kurbanova

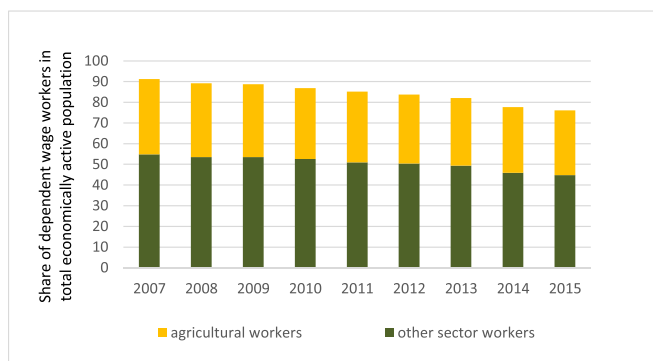


Fig. 2. Employment trends of agricultural labor in Tajikistan, 2007–2013.

Source: author's compilation from data of the Ministry of Labor and Social Security and Statements of the Agency of Statistics of the Republic of Tajikistan.

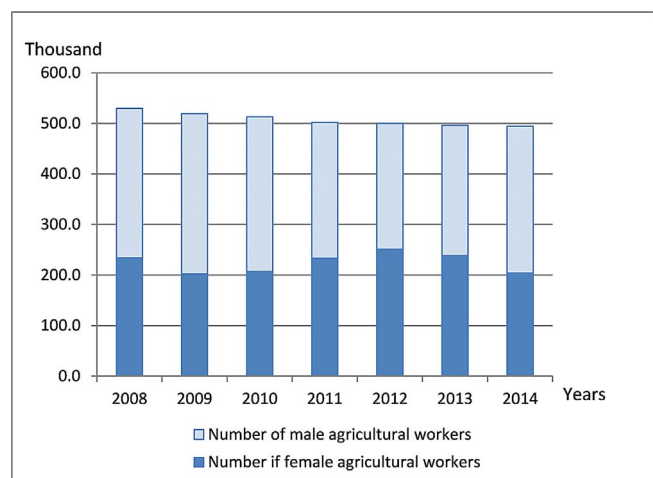


Fig. 3. Change in total employment of agricultural workers by gender, thousand persons. Source: author's compilation from the Ministry of Labor and Social Security and Statements of the Agency of Statistics of the Republic of Tajikistan.

and Olimova, 2016; ILO, 2010). Average remittances received by Tajik households account for only 10 to 12 percent of total household income (Falkingham and Klytchnikova, 2006). In addition, the welfare system does not offer benefits comparable to those offered during the socialist system.³ Hence, there is pressure on women to take low paid agricultural jobs. The average wage work income in the agricultural sector is currently around 40 dollars per month (TAJSTAT, 2015). Therefore, in general, a combination of several sources of income is required to ensure self-sustainability for rural households (Shahriari et al., 2009; Somach and Rubin, 2010).

Households also rely on kitchen gardens, which have been evaluated as an important household income source (Abdullaev et al., 2009). For on-farm and kitchen farming activities, households also rely on the contributions of different generations (usually three generations live in one household) (Tandon, 2011). Kitchen gardens have gained considerable importance and contribute to the overall food security and livelihoods of people in Tajikistan, especially in the Sughd province (Fig. 4) where the contribution of household (kitchen garden) production to the total volume of agricultural production is considerable and

³ In addition to free health care and education as well as cheap housing and transportation, the socialist system provided many types of family benefits. In-kind benefits included the provision (usually free) of crèche facilities, kindergartens, day care centers, and school meals. Cash benefits included family allowances, a birth grant, maternity leave at full pay, parental or childcare benefits (a monthly payment to the mother after maternity leave, and usually until the child was three years of age), paid leave for the care of a sick child, various tax allowances and credits, and a death grant (Sipos, 1994).

has been steadily increasing (Yakubov, 2013).

Male labor out-migration has led to women filling the absent male position gap in the sector and forced female labor out of its conventional, cultural settings, effectively reducing the occupational segregation in agriculture. The feminization of rural employment in Tajikistan was further distinguished by Mukhamedova and Wegerich (2014a), who showed that each new policy on farm restructuring created not only new types of farms, but also triggered different kinds of contractual relationships between large collectives, private farms, and other agricultural actors including members entitled to own a land plot within former collective farms (*sahindors*), wage workers occupied on cotton fields (*hektarchi*), and private farms and seasonal workers (*mardikors*) (Table 2). Substantially, these contractual relationships are labor agreements that are established between the farm heads, mostly men, and the workers, mostly women. This gender imbalance is due to the fact that men are not willing to accept low paid jobs in agriculture. Most of the contracts, except the position of *sahindor*, are informal positions, which are not reflected in the official statistics, with unreliable incomes, working conditions and availability. Therefore, often, these newly acquired employment positions push women further into the informal labor market, where they are not registered as official workers and, therefore, are not eligible for social support or pension provisions. Farmers in the new market conditions have not been eager to offer official contracts due to tax burdens, market instabilities and possibly due to existing gender norms which push women into low payment groups. Migration reduces the domestic labor supply, and thus triggers the increase of the wage level expectation in the local job market. In this situation, some prefer to remain unemployed as they do not want to accept low-wage jobs rather preferring three times higher paid employment. However this induces informal labor relations (Abdulloev et al. 2011). Nevertheless, such informality of positions is found to be essential for rural women as it offers flexibility of time management and the opportunity to earn while also fulfilling other family obligations.

5. Introduction to case study and field research methodology

5.1. Background to farm restructuring in the Sughd province

The Sughd (former Leninabad) province is located in northern Tajikistan and covers about 26.1 thousand km² (Fig. 4). The Sughd province was chosen as a representative location for our case study for two main socio-demographic reasons. First, the population in the district is large (2.5 million in 2015), which accounts for around one-third of the total population of Tajikistan, and the percentage of rural population is high at over 75 percent of the total population of the Sughd province (TAJSTAT, 2015). Second, the province is considered to be one of two provinces in Tajikistan with the highest migration rates (TAJSTAT, 2015). After independence and the economic transition, labor migration, particularly of the male population, reached approximately 62 percent within the Sughd province (IOM, 2012).

In 1972, the Leninabad (Sughd) province had 81 *kolkhoz* and 32 *sovkhoz* farms which made up a total of 231 thousand hectares of arable land, 58 percent of which was irrigated (Big Soviet Encyclopedia, 1978). Land reforms triggered the gradual restructuring of collective agricultural enterprises into new forms of farms (*dekhkan* farms) provided in a general category of farm enterprises in official statistics. Variations in the numbers of farms reflected in Fig. 5 show the percentage changes in numbers for three types of farming entities that were accompanied by periods of land reform implementation.

Although statistics show that most of the collective farms were dissolved and the number of private farms increased significantly, there are considerable differences in ownership, management, and organizational settings within the large group of *dekhkan* farms (Mandler, 2016) that function still as *kolkhozes* or *sovkhozes*.

Institutional reforms also took place within the country's water

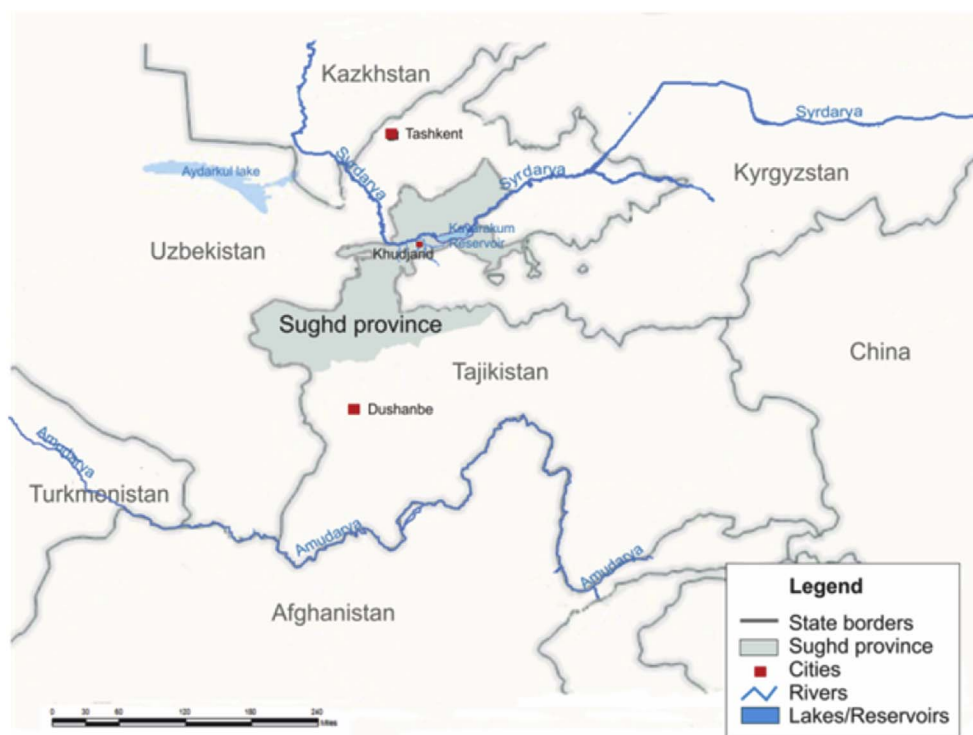


Fig. 4. Map of the Sughd province within Fergana Valley.

Source: Produced by Nozilakhon Mukhamedova.

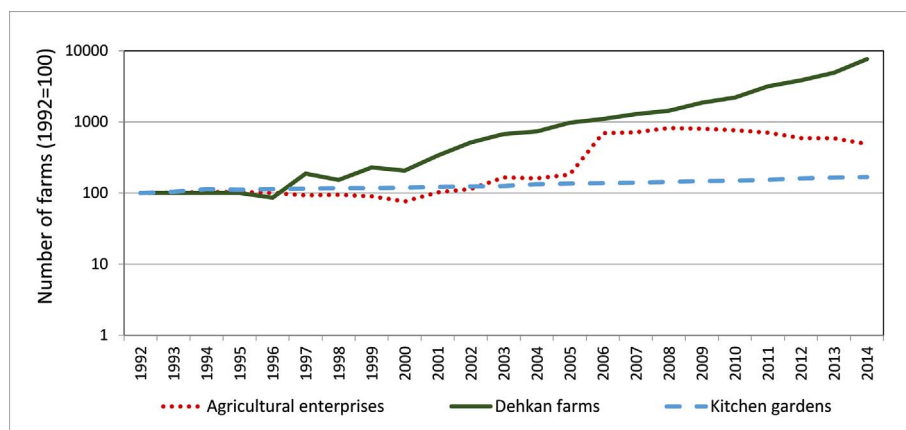


Fig. 5. Farm dynamics for the Sughd province (relative to 1992).

Source: Agency on Statistics under the President of the Republic of Tajikistan

sector. Centrally functioning water management and allocation was altered by transformed institutional arrangements and the appearance of new water users. As a result, in the beginning of 2013 there were 21 Water Users Associations (WUAs) registered within the Sughd province. Along with farms using water for agriculture, households extensively use the canal/river water for a whole range of different household uses including subsistence gardening and often for drinking (Yakubov, 2013). The cooperative farms were created based on former *kolkhoz* boundaries and the WUAs were created on the administration-territorial areas of ex-*kolkhoz* farms and currently serve private *dekhkan* farms inside the WUA territory. The ongoing land and water reforms have resulted in the appearance of distinct forms and structures of farms.

Collective farms established during the Soviet Union varied in terms of area occupied, capacity of production, and workers. Once restructured, farms changed in form and size. The total *kolkhoz* land was supposed to be divided by the number of existing *kolkhoz* members. This assignment of lands to *kolkhoz* members turned members into *sahimdor*. Mukhamedova and Wegerich (2014b) point to the

consequences of unequal land privatization processes and inequality between *sahims* of different divided *kolkhozes* as a possible key factor for explaining the establishment of private farms. In addition, as a consequence of the process, potentially small subsistence farms as well as larger farms were created from the start. The subsistence farms could possibly imply more de facto female heads of farms.⁴

5.2. Case study methodology and data

The qualitative design of this study involved data collected through site visits, participant observations, semi-structured in-depth interviews, and focus group discussions, which covered various topics linked with the overall research objective on the feminization of Tajik agriculture. The first author with the help of a local interpreter conducted

⁴ In addition to the inequality of the size of *sahims*, the location of the *kolkhoz* along the canal or *sai* appears to be a key factor for the economic activity of women. Possibly because they are located disadvantageously at the tail end of the canal and of the Khodjanbakirgan Sai River, women of this WUA are more active as *mardikors*.

60 interviews in the Sughd province of Tajikistan during one month in 2011 and followed up with two weeks of visits in October 2012. Five focus group discussions were conducted with different types of workers including *sahimdors*, *hektarchi* and *mardikors* in 2011.

To ensure the diversity of cases and inclusion of all existing employment varieties in the study region, we selected five formerly Soviet collective farms as units of study based on 1) their location relative to the main water source (*Khodjabakirgan Sai*): head, middle, tail; and 2) the variation of their legal status (after the reforms) and type. Current selection criteria were used to eliminate possible differences in structure, organization of labor, and performed activities connected with water access in this region. Location relative to the water source and farm type criteria were used to ensure internal generalization between agricultural laborers working in various settings that could create a bias in the answers of the respondents. The focus units were diversified to adequately understand and represent the diversity of the phenomena of feminization.

The interviews were conducted with agricultural laborers on private *dekhkan* farms and agricultural enterprises as well as with rural household members who were randomly available on the farm fields. Around two-thirds of all interviewees were women.

In order to be able to find contrasts and/or similarities between the variations, we also carried out targeted interviews with Water Users Association (WUA) staff, independent water masters, and *mardikor* leaders of the region. These groups represented pure female, pure male, and mixed groups, and served to triangulate the data in our interviews. We provided open-ended questions concerning the feminization of agriculture, new gender roles within rural societies, and the organization of *mardikor* labor groups. Interview responses were then transcribed, coded, and based on typical cases and issue topics identified during the theoretical and empirical literature reviews as well as open coding.

We analyzed the data by creating major categories, and defining and differentiating links between them (Corbin and Strauss, 2008). We considered definitions of employment groups as well as types of groups that are further used for creating categories of employment within the Central Asian context. In the field study sites, the majority of the represented agricultural workers were women, whereas men were mainly represented in managing positions and as official staff of the Water User's Associations or community representatives. The categorization of interviewees by their job position is presented in Table 1. The age range for female agricultural workers was between 18 and 65 years with the average respondent being 40 years old. The category of *dekhkan* and collective farm representatives included both employers and their workers (*sahimdors*). Seasonal workers were represented by *hektarchi* and *mardikors*.

6. The feminization of agricultural production

6.1. Manifestation of feminization

Structural changes occurring in the Sughd province forced households to rely on several economic activities including food and cash-crop farming, farm wage work, off-farm work, and migrant remittances. High risk aversion among the rural population triggered a

diversification of jobs to improve the stability of incomes, and up to a certain level, to provide more efficient use of household resources. In comparison to their male counterparts, female farm owners, accounting for 15.4 percent (TAJSTAT, 2015) of the total number of *dekhkan* farms in the Sughd province, rely more on other income sources such as agricultural wage work, non-farm jobs, kitchen gardening, and remittances.

The actors and status of their participation are considered to be the main drivers in the process of changing roles in agricultural employment (Bolwig et al., 2010). We distinguish between three different types of contractual relationships of rural feminization in agriculture: *sahimdor*, *hektarchi*, and *mardikor* (Table 2).

Sahimdors, due to their labor book, have the most formal position. However, it is necessary to note that this formal position does not provide livelihood security, although it may potentially lead to a farm plot (varying in size) as well as a small pension (which, however, is still not sufficient for livelihood security).⁵ While the *hektarchi* position offers flexibility and stability, only in-kind salary is obtained. While from the outside this could appear to be an undesirable position, cotton sticks are allowed to be gathered at the end of the harvest season, which provide essential energy sources. They are crucial for food preparation or for heating during the winter. The *mardikor* position, which could likewise be considered undesirable in terms of social security compared to other agricultural employment groups, is actually considered the most preferable and provides the highest income (Table 1). Therefore, this position would be the best for covering daily household expenses.

The remuneration of *sahimdors* is stable and based on formal contracting as only the in-kind reward can be harvest dependent. The *hektarchi* job position, although attached to the cultivation of only one crop (cotton), is dependent on the agricultural season as wages are only provided during that time. *Mardikors* take the least secure position, which is sensitive both to the seasonal availability of jobs and the harvest yields. *Mardikors* work under pre-agreed-upon outputs in days and hectares and receive daily payments (*kun-bai*).

Mukhamedova and Wegerich (2014b) present a classification of the occupations *sahimdor*, *hektarchi*, and *mardikor*. They distinguish between formal or informal, and secure or flexible, highlighting overlappings in agricultural positions. Flexibility of positions, type of remuneration, as well as various household needs guide women's choices in accepting formal and/or informal jobs. Although female unskilled agricultural workers have not moved far from the type of activities they were performing before farm restructuring, the organization of labor along the production value chains and the dynamics of relations among the agricultural actors have changed. Women took over several new niches in the agricultural service sector and stepped into market relations, which allowed them to increase their bargaining power. Restricted in access to land and farm management as well as to permanent, high paid jobs (ADB, 2010; Mandler, 2016; Boboyorov, 2013), the majority of rural women in Sughd have been opting for *mardikor* jobs (Mukhamedova and Wegerich, 2014b). These jobs became attractive due to their flexibility in labor arrangements and the highest short-term cash remunerations. Since the *mardikor* position is the best paid job, it has also contributed to a shift in bargaining power within the household. Hence, through the new position as *mardikor*, women receive recognition as income earners and providers for the family. The social system that existed during the Soviet times has been reduced to pension payments guaranteed by the government and based on registered years of experience (minimum three years) as well as the average salary for

Table 1
Categorization of interviewees.
Source: Field report produced by the first author.

List of Interviewees	Total	Female	Male
WUA representatives	7	0	7
<i>Mahalla</i> (community) representatives	12	12	0
<i>Dehkan</i> and Collective farm representatives	29	15	14
Seasonal workers (<i>hektarchi</i> , <i>mardikors</i>)	12	10	2

⁵ The tradition of children taking care of elderly parents and living with them has been preserved in Central Asian societies to the present day. The youngest son must prepare himself to take care of his parents in their old age (Ember and Ember, 2001). Therefore, pensioners often rely more on their children and less on pensions. Parents work hard to cover the needs of their children for education at least to primary school level, "putting them on their legs," meaning to support them in finding jobs and establishing their own families.

Table 2

Characteristics of agricultural employment groups. Summary table of interviews gathered in five organizations situated in the Sughd province, Tajikistan.

Types of groups	<i>Sahimdor</i>	<i>Hektarchi</i>	<i>Mardikor</i>
Definition of employment group	Shareholder and formal employee of a Collective Farms (CFs) or a Dekhkan Farms (DFs). The land shares can be inherited. <i>Sahimdors</i> can obtain land certificates through registration a process but as members of DFs or CFs they don't have decision-making power over what to plant or how to distribute the profits.	Informal farm worker who can make an inquiry to the farm managers about taking a small cotton plot. Informal agreement about tasks to be performed and receiving agreed-upon remuneration. Well performing <i>hektarchi</i> might receive up to 3 ha of the farm plot.	Seasonal wage workers who appeared after the collapse of the Soviet Union. Majority of <i>mardikors</i> are women who are involved in seasonal work on private <i>dekhkan</i> farms growing fruits and vegetables.
Females % from total # of workers	Over 50%	Over 95%	Over 98%
Age ranges	40–80	25–65	16–60
Period of seasonal work	April–November	April–December 3–4 days per month	April–December
Types of work performed	<ul style="list-style-type: none"> Land preparation Cotton planting Weeding Trimming the top foliage of cotton plant Cotton harvesting Gathering fire wood from the cotton fields Performing agro-technical jobs on all other crops on the farm 	<ul style="list-style-type: none"> Land preparation Cotton planting Tilling and weeding Trimming the top foliage of cotton plant Cotton harvesting Gathering fire wood from the cotton fields 	Mardikor female group members <ul style="list-style-type: none"> Tilling and weeding Harvesting vegetables, potatoes, fruit trees, rice
Remuneration type: Cash payments	Contractual (formal) Salary: 30–80 USD/month	Non-contractual (informal) Wage: 180–200 USD/season	Mardikor group members Non-contractual (informal) Fee: 3–5 USD/day and person DF harvest offered to <i>mardikors</i> at below market prices
Remuneration type: In-kind payments 1 USD = 4,8 TJS Date: Nov, 2011	Variable crops: rice-100 kg, wheat-150 kg, vegetable oil-10 kg, fodder-20 kg, flour-50 kg. Total ~ 150 USD/season In-kind compensation is constant	Variable crops: fodder, corn, firewood-700 sheaf of cotton stems Total ~ 300 USD/season In-kind compensation is constant only for firewood (cotton stems)	
Organization of work	<ul style="list-style-type: none"> Individual and/or family work Hired to do mandatory job in collective enterprises Plots are not assigned on constant basis to <i>sahimdors</i> but rotated due to annual replanting process	<ul style="list-style-type: none"> Individual and/or family work <i>Hektarchi</i> are given 1–2 ha and do various jobs 3–4 times per month	<ul style="list-style-type: none"> Individual work in a group Individual <i>mardikors</i> jointly appoint a woman leader

Source: Authors' compilation based on thematic qualitative analysis of the interviews. Note: 1 USD = 4,8 TJS Date: Nov, 2011.

the last 10 years of work. Nevertheless, *dekhkan* farms prefer not to register workers as official staff members, and very often hire wage workers for temporary, informal agreements to avoid taxation and supervision costs. Therefore, *mardikor* jobs also fall under farmers' preferences.

6.2. Mardikor teams

With the rise of female *mardikor* workers as well as the rise of private *dekhkan* farms, there appears to have been an increase in the organization of female *mardikor* workers. While in the beginning *mardikor* workers might have gathered in specific places—so called *mardikor bazaars* (markets)—currently *mardikor* workers appear to be organized in groups directly under a leader (*brigadir*). According to interviewed *mardikors*, *mardikor brigadirs* are selected from within the *mardikor* group of the local *mahalla*⁶ (community), and are more widely described as older (40–50 years old), trusted, and respected. *Mardikor* leaders did not make reference to a selection process, but only mentioned their experience in working and specifically communicating with different administrations (former *kolkhoz*). There appears to be competition between *mardikor brigadirs* regarding clients (*dekhkan* farms as well as still existing *kolkhozes*), as well as individual *mardikors*. All *mardikor brigadirs* try to uphold their quality of service provision to acquire and maintain farmer clients as speed and quality of work are important if they wish to compete with other groups. Some *mardikor brigadirs* have a list of farmer clients which hire them every year. The benefit for the *dekhkan* farmers is that they don't have to spend time and

effort gathering and monitoring the work of the wage groups, but can contact senior *mardikor brigadirs* to manage a group of *mardikors* in their field. The fact that *mardikor* groups generally consist of over 90 percent women also makes it inappropriate for male farmers to gather such groups on their own, especially if the workers must be found outside of the farmer's village. *Mardikors* pick their leaders based on their ability to communicate clearly, organize work continuously, and provide better daily wages.

Mardikor brigadirs receive a fee for organizing a *mardikor* team from their clients. Having different teams for different clients at the same time would imply multiple fees (the trade-off for the *mardikor brigadir* is less quality and time control). Different *dekhkan* farms mentioned that while some *mardikor brigadirs* also work in the field with the other *mardikors*, others only organize the *mardikor* team, transport them to the farm, and provide performance control. A group of *mardikors* has about 30–50 members, depending on the type of work and the size of the *dekhkan* farm land. The emergence of *mardikor brigadirs* as well as the competition regarding clients and labor force is prove the rise of a specialised business providing labor services. Within the context of local traditions in rural Tajikistan, this labor service provider business is gendered and allows for brokering services between the male-dominated labor demand and female-dominated labor supply side. Given other country evidence, it is not certain whether the former higher position of women on the collective farms, the cultural setting, or the high number of new farms competing over labor triggered an exclusively female-dominated organization of female agricultural laborers. Domination of female workers can also be attributed to agricultural cropping patterns. The dependency of the Sughd province on cotton during the Soviet period has been inherited by the present farming system, as well as the organization of agricultural employment that relied heavily on manual female labor for cotton harvesting. Considering that the other regions of Tajikistan have distinct

⁶ *Mahalla* is a residential community organization and refers broadly to a neighborhood or local community. According to Sievers (2002), *mahalla* has several institutional channels that mediate between *mahalla* and family, *mahalla* and culture, *mahalla* and survival, and *mahalla* and commerce. Fundamental *mahalla* divisions include family, sex, and status. Often *mahalla* is differentiated on the basis of administrative subordination.

agricultural characteristics and cropping patterns, more comparative research is needed to understand the development of agriculture related occupations that are becoming feminized and the reasons behind this development.

7. The feminization of agricultural services

The diversity of feminized contract relations provides an important step in understanding the nuances of women's livelihood strategies within agricultural production (Mukhamedova and Wegerich, 2014b); however, essentially, it still portrays feminization as women taking on agricultural labor positions only. Feminization goes beyond the role of women working as laborers on farms. It appears simultaneously on multiple spatial and social scales and impacts various levels of the value chain for different inputs of agricultural production, such as water management and other non-farming activities that position women beyond being unskilled agricultural workers.

The process of feminization grew from a need to take on jobs and the role of the breadwinner, and led to women gaining knowledge and experience in new employment positions. The growing decision-making power and income earning possibilities provided by *dekhkan* farms established a female-dominated service sector, which allowed for contracts to be brokered between female labor groups (*mardikor* teams) and male farmers.

Women, to some extent, have also taken over roles in irrigation services. These roles include women working as *mahalla* (community) *mirobs* (water masters) and as *mirobs* of private *dekhkan* farms. A *mahalla* woman representative shared her opinion about female *mirobs*:

Our daughter-in-law is a mirob; she distributes water to 200 households. She takes the water from the canal and distributes it to smaller ditches according to the turns assigned to each household. All the households know that every two hours they have to pass the water to the next household and the mirob is responsible for making sure everybody gets the water. Three times per week she is involved in irrigation. She has three children and that is why she cannot go far for seasonal work; too far so we offered her the position of mirob in our mahalla. (Interview: 17112011_6).

The importance as well as utilization of kitchen gardens in rural communities increased due to the economic and political transition. Social changes placed female members of households as the primary users and managers of kitchen gardens. In one of the interviews, a female respondent said:

It is better if men are doing the irrigation, but it's a fact that whether in Tajikistan or Uzbekistan many men are leaving in search for jobs in Russia. And many women are left to do all the work by themselves. Men do not create any obstacles for women to work and women are performing well. There are women who are even more effective than men in irrigation since the main recipients within the households are women (Interview: 17112011_3).

Water allocation to rural households is very limited due to the overall water scarcity in peak irrigation seasons and prioritization of state ordered crops. Therefore, the competition over water resources within villages is high. However, because of the feminization of villages, the role of male *mirobs* began to be contested and the implementation of water rotations became difficult. The reason for this lies within the cultural setting: traditional and religious distancing of females from other non-relative men (Interview: 171111_2). A man must never enter a home where there are only women, and a girl must never be left alone with a boy. At large social gatherings, men and women are often separated (Countries and Their Culture, 2013). A female *mahalla* representative said:

I think it's possible for a woman to become a mirob although it is considered to be a man's job. Male mirobs, who worked previously, had

difficulties communicating with women water recipients. In the absence of a male representative, a male mirob would not be able to enter a house with only women or shout at a woman in case of a turn violation or water theft, neither could he fine her nor restrict her off-take. A woman mirob is in a better position to be strict and shout at the women who do not fulfill the irrigation turn rules and do not pay for water. (Interview: 16112011_1).

The collection of water fees from rural households presents a similar case. In different settlements of the research area, multiple women were involved in water management as well as fee collection. Women do not have the direct responsibility of irrigating kitchen gardens, but they are responsible for organizing and enforcing agreed-upon turns. Hence, women are responsible for water governance issues among female users in the village. However, the WUA *mirobs* who deal with water deliveries to main off-takes of farms and villages are males (Interview with female village *mirob*: 22112011_1).

Within some of the farms, women were also *mirobs* at the farm level, providing water to male farmers. A male WUA accountant explained: "At night usually men are doing the *mirob* job. Even though we have a lot of men in Russia there are still some men left, but where there is no other option, of course, women do the irrigation." (Interview: 18112011_1). A female *mirob* (Interview: 22112011_1) stated that two other female *mirobs* were working in her district. However, all three female *mirobs* were working at existing *kolkhoz* type collective farms and were *brigadirs* for a certain area within these farms—they did not work for a WUA.

The female *mirob* (Interview: 22112011_2) explained how she came to learn irrigation management skills: "I worked as a leader of a brigade in the *kolkhoz* [during Soviet times]. We had a pensioner *mirob* and he asked me one day, 'how long are you going to wait for men to do the irrigation?' He explained and taught me all the skills for becoming a *mirob*. I think it took me two to three weeks to learn the tasks of a *mirob* and the rest is long-term experience on the field." Today, there are few experienced male *mirobs* left. Due to the shortage of younger men, women are learning the *mirob* job. However, this learning process is on-the-job training only. The female *mirob* continued: "Now [end of November] there are men available, but at the peak of the agricultural season when men are in need, the majority of them are not available. That is why women also have to handle irrigation services. Some older *mirobs* might remain and they have to join forces with women to do the irrigation."

Finally, private *dekhkan* farms are also employing female *mirobs* (Interview: 17112011_1, Director of a WUA). The newly established private *dekhkan* farmers were former *kolkhoz* members, and therefore specialized workers. Private *dekhkan* farmers already employ *mardikors*; therefore, they also do not hesitate to hire female *mirobs*. Due to the fragmentation of land and the pressing need to irrigate with scarce water resources within a given time period, *dekhkan* farmers hire specialists—in this case, newly trained female *mirobs*. Although women still consider irrigation to be a man's profession they recognize the importance of women's involvement in the irrigation of farm lands. A *mirob* woman from the Gulakandoz district said:

I'm a mirob working within a farm and I, by myself, irrigate all the lands on a dekhkan farm. I started working on Khodji Inoyat farm after the division of our kolkhoz. As the mirob was too old there were no other candidates and I agreed to be assigned to manage the irrigation activities on this farm. I have two women that work for me as my assistants. I think that irrigation is a man's profession but women can also do this job (Interview: 18112011_3).

Cases of women working as *mirobs* within village communities highlight the fact that service providers such as water providers to rural settlements found themselves having to turn to a female labor force to engage with the now dominant female clients. The shift to female employees can be traced to existing cultural settings and a lack of men

willing to take on low paid work. It is likely that this shift is not limited to the water sector as door-to-door billing and fee collection from the households is additionally common for other utilities as well as for gathering taxes. Because women were also responsible for the enforcement of water turns it is likely that other roles of responsibility will see some form of feminization such as *mahalla* organizations or policing to keep harmony within the village. Similarly, it is likely that some crafts will undergo a feminization due to the demand for only female craft masters to enter the house.

Women working as *mirobs* within collective farms or for private male-dominated farms manage and are involved in decisions concerning irrigation methods, amounts to be applied, and negotiations with other water users. Interviews within the case study area show that some of the old organizations as well as new male players within the agricultural sector have already adapted to the situation of feminizing rural societies by hiring female specialists in various sectors. It is likely that the absence of men initially triggered the shift to hiring female specialists. However, it is also likely that trust and confidence based on the quality of the services of these first female specialists led to a wider acceptance among male farmers and, therefore, triggered a rise in female apprentices in this field. While originally the *mirob* position was a male position, the case study highlights the way in which feminization has changed this and thus a female *mirob* has become acceptable to both men and women.

8. Conclusion

Our results confirm the previous findings (Katz, 2002; Deere, 2005; World Bank, 1999; Standing, 1999) that suggest economic and social transition as well as structural changes in farm systems may alter the occupational segregation of labor towards a feminization of positions conventionally attributed to men. Existing local systems of power, male-dominated relationships, and a social structure based on patriarchal values are being challenged due to male outmigration resulting in a feminization of the labor force as well as recipient clients. The present empirical study set out to explore and categorize gender roles in a post-Soviet society in transition. Structural reforms in the agricultural sector of Tajikistan and the continued gender-based assignment of activities influenced the formation of social roles and decision-making power of rural men and women. A systematic review of reforms and social changes occurring since the collapse of the Soviet Union and the beginning of the transition period in Tajikistan has shown that various types of contractualization were constructed from a mix of historical gender system legacies (cultural, religious, and political elements), socio-economic and legal transformations, as well as labor market changes. Economic transition, agrarian reforms, male outmigration, and the subsequent increase in women's labor participation facilitated changes in gender norms and contractual relations.

This study reviewed previously unobserved new contractual

relationships based on women filling a gap within the agricultural services sector. The new actors within the agricultural value chain were faced with a reduced labor force which needed to be supplemented by rural women who were ready to work for low wages. Similar to Taylor et al. (2006), we find that economic and social transition as well as structural changes led to the erosion of traditional roles. New employment positions acquired by women follow patterns of informality (Standing, 1999; Katz, 2002), which, in our case study region, is considered to be essential because it offers flexibility of time management and the opportunity to earn while also fulfilling other family obligations. In transition countries such as Tajikistan, although the jobs women perform remain subject to low protection, security, and earnings, increased participation in the labor force is a sign of their entrance into a wider spectrum of labor opportunities as well as greater sensitivities to economic, social, and political events and the growth of their decision-making power. The vitality of often informal employment relationships grew through the building of trust on the part of the male employer and the performance of female workers in various positions as well as their mutual cooperation. The break from the male-dominated society and patriarchal values in our case study is based on structural reforms and economic changes and the development of new social environments (out-migrating men, and women becoming the majority in rural areas). The feminization of agriculture has brought about some modification of social behavior and cultural norms, yet it is still under question whether these changes are positive and sustainable over time.

The involvement of women in collecting fees and their direct participation in irrigation activities shows how the feminization of agriculture led them into jobs in support services. Cultural norms restrict male water masters in the communities from entering houses for collecting fees or arguing with women about water provision. Women laborers in this case are more able to negotiate and collaborate with female households. Thus, female water service providers have become important where the predominant users of water are women. The involvement of women in farm irrigation activities has allowed them access to some shares of land for cultivation within farms, providing them with production and income control as well as chain ownership opportunities. The cases mentioned in this paper have shown how women evolved from being outsiders to become participants in value chains and move beyond the conventional female positions. However, the feminization of agriculture differs within various family contexts and has both positive and negative impacts on women. Women are involved in an occupation in which they were previously not allowed to participate. Nevertheless, the feminization process is accompanied by low wages and an informal job status, that excludes women from access to public social security benefits. Further analysis should be conducted to look deeper into occupational gender segregation in agriculture with special attention to social security measures and farm employment regulations and policies in Tajikistan.

Appendix 1. Timeline of land reforms with changes in structures and members

Period	References to legislation	Institutional characteristics	Characteristics of reform implementation in the study area	Employment and gender related changes
1930–1987	Soviet law and legislation specific to Tajik SSR	Establishment of <i>kolkhoz/sovkhoz</i> collective farms	State owned collective farms, subsidized by the state, with a state monopoly on cotton crop	Establishment of positions: <i>rais</i> (leader), <i>brigadirs</i> (foremen), members/workers Men and women are members and workers of collective farms, entitled to salaries based on the common Soviet labor code
1987–1990	Law “On Leasing in Tajikistan”		<i>Kolkhoz/sovkhoz</i> restructuring. Each member responsible for	Members become individual or group tenants (<i>hektarchi</i>)

Kolkhoz/sovkhoz farms allowed to function as lease enterprises (podryad/pudrat)			2–3 ha of land to increase productivity and motivation	
1991			Independence of Republic of Tajikistan	
1991–1993	Law No. 544 of the Republic of Tajikistan “On Dekhkan Farms” Law No. 604 of the Republic of Tajikistan “On the Land Reform”	Division of kolkhoz/sovkhoz into dekhkan farms (DFs), lease share enterprises, agricultural cooperatives Every member entitled to a land share (<i>sahim</i>)	Restructuring formalized but not implemented Members entitled to land shares, but do not always receive them (often because of kolkhoz/sovkhoz debts)	<i>Rais, brigadiers</i> , members/workers positions maintained and individual <i>dekhkan</i> farmers appeared Establishment of Women's and Family Issues Committee Tajikistan becomes a member of the Convention on the Elimination of All Forms of Discrimination against Women CEDAW
1992–1997			Civil War	
1995	Presidential Decree No. 342, “On the Assignment of 50 Thousand Hectares of Lands for Personal Husbandry of the Citizens” Decree No. 621 “On the Structural Reorganization of Kolkhoz/Sovkhoz Farms and Other Agricultural Enterprises”	50,000 ha. allocated to household plots (presidential lands) Land continues to be allocated to DFs in 1997 Unprofitable farms reorganized into lease share enterprises Profitable farms reorganized into collective farms	Presidential lands allow only crops to be planted and are allocated from poorly irrigated lands Land share size and locations not defined Management of reorganized farms follows old state order style	Establishment of collective enterprises, new <i>dekhkan</i> farms, presidential land owners, <i>sahimdors</i> , and <i>hektarchi</i>
1996	Presidential Decree No. 522 “On the Reorganization of the Agricultural Enterprises and Organizations”	Reorganization into collective/corporate farms Distribution of land certificates to all ex-kolkhoz members	Ad-hoc issuance of land use certificates and uneven implementation caused by unclear rules, water availability, enforcement of rights by members, collective farm leaders unwilling to comply and dependence on government authorities	No significant change
1998–2000	Presidential Decree No. 1021 of the President of the RT “About Ensuring the Right to Land Plots” Resolution No. 244 on “Measures for Implementation of the Decree “On Realization of the Right to Land Use”	Farms scheduled for restructuring determined and land use certificates issued within collective enterprises, <i>dekhkan</i> farms, joint ventures, cooperatives, joint-stock companies, associations	<i>Sahim</i> (share)owner, however, is not entitled to make cropping or production decisions Intra-farm and government intervention in farm planning dominates	In 1998 the Government of the Republic of Tajikistan approves a national action plan for increasing the status and role of women 1998–2005 In 2000 the country ratified the CEDAW Protocol
2002– on-going	Law “On Dekhkan Farms” (replacing the 1992 law)	Establishment of individual farms, family farms, associations and <i>dekhkan</i> farms (partnerships) <i>mardikors</i> , land use owners and tenants, farm <i>mirobs</i> .	Reforms trigger the need for additional workers in areas of marketable vegetables and crops such as rice, onions, and potatoes	Implementation of the state policy for Ensuring Equal Rights and Opportunities of Men and Women in Tajikistan for 2001–2010 Law On Reproductive Health and Reproductive Rights (December 2002)

Source: author's compilations based on selected legislation from: www.cis-legislation.com.

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