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Migration and gender differences in the home labour market: Evidence from Albania ☆

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HIGHLIGHTS

- We study the impact of migration on the male and female labour supply at origin.
- We use detailed survey data from the 2005 Albania LSMS.
- We distinguish between current and past migration episodes of household members.
- We find that women may gain in the local labour market from (male) migration.
- We find no effect of migration of household members on the male local labour supply.

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ABSTRACT

This paper examines the role of migration in affecting the labour market opportunities of male and female household members left behind. We address this question by analyzing the impact of international migration flows from Albania, where migration is a massive and male-dominated phenomenon. We find that the labour supply of men and women responds differently to current and past migration. Controlling for the potential endogeneity of migration, estimates show that having a migrant abroad decreases female paid labour supply while increasing unpaid work. On the other hand, women with past family migration experience are significantly more likely to engage in self-employment and less likely to supply unpaid work. The same relationships do not hold for men. These results suggest that while left-behind women in Albania may take on the extra burden associated with the migration of male family members, they gain employment opportunities upon their return.

1. Introduction

There is a general consensus that international labour migration entails large socioeconomic changes in source communities. At the same time, the closely knit relationship between gendered aspects of migration, such as male-dominated migration, and economic development in countries of origin remains relatively unexplored. This paper addresses this issue by looking at the impact of international migration on labour supply by gender in Albania, a country where, despite a recent increase in female migrants, massive migration flows have remained over the years a predominantly male phenomenon (Stecklov et al., 2010).

Studies on the impact of migration on source households have often overlooked that expanding opportunities for migration will have consequences for intra-household allocation amongst members left behind well beyond the more familiar income effect (see Chen, 2006 for an exception). For instance, while the economic impact of emigration on non-migrant employment patterns, primarily through remittances, has been documented for several migrant-sending economies (Funkhouser, 1992; Rodriguez and Tiongson, 2001; Amuedo-Dorantes and Pozo, 2006), considerably less attention has been paid to the role of gender-specific migration behaviour in differently affecting the

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labour market opportunities of men and women in households at origin (recent exceptions are Lokshin and Glinskaya, 2009; Binzel and Assaad, 2011, and Mu and van de Walle, 2011). Theoretical analysis suggests that due to imperfect monitoring on the one hand, and increases in the household income through remittances on the other, male migration may lead to female bargaining empowerment in the control and allocation of resources at origin, resulting in gender differentials in labour supply behaviour (Chen, 2006; Lundberg and Pollak, 1993; Haddad et al., 1997).

We consider this question by analyzing differences in labour market outcomes across men and women in Albania according to their family exposure to international migration. Over the last 15 years Albania has experienced massive migrant outflows, primarily to Greece and Italy, driven by economic hardships during the transition process and fostered by geographic proximity and the liberalization of migration. Several studies have analyzed the welfare impact of migration and remittances on a number of outcomes such as income and investments in Albania (Miluka et al., 2010; Kilic et al., 2009; McCarthy et al., 2009; Zezza et al., 2005). However, little is known about the effects of migration decisions on the local labour market behaviour by gender. There is some evidence on the labour market performance of return migrants in Albania (Coulon and Piracha, 2005; Piracha and Vadean, 2010; Carletto and Kilic, 2011), but the impact of the male-dominated nature of Albanian international migration on the economic performance of the women left behind remains unexplored.

Based on unusually detailed data on the household migration status of both current and former household members from the 2005 Albania Living Standards Measurement Survey, this study provides new empirical evidence on the gender-differentiated impact of family migration exposure on the home labour market. In particular, the main contribution of our analysis is the distinction between heterogeneous forms of migration, namely current and past migration of household members, which typically entail different returns as well as different effects on total family labour supply. Following Amuedo-Dorantes and Pozo (2006), we further distinguish between paid and unpaid work, in order to test whether the quality of women's work varies according to the nature of migration, as well as to account for the important role played by the informal sector in female employment. Since households are likely to self-select into sending migrants abroad based in part on unobserved characteristics, we use an instrumental variable strategy to estimate labour market outcomes by gender in both paid and unpaid jobs.

From a policy perspective, exploring the impact of Albania's out-migration on employment outcomes is revealing in terms of migrant contributions to household wellbeing and economic growth at origin (Lucas, 2005; Faini and Venturini, 1993). The policy implications are even more telling if a linkage exists between male-dominated migration and a process of gender empowerment at origin, defined by the ability of women to access local earning opportunities. More efficient allocation of women's skills in the labour market is largely recognized to be a building block in the development process of both high and low income countries, and higher female labour force participation is found to reduce poverty and improve living standards among women and future generations (e.g., Duflo, 2005; Duflo, 2003; Thomas, 1990). By exploring the effect of such a key aspect of modernization as economic migration on male and female labour supply, this paper also contributes to the broader literature on the impact of economic development on gender equity and female living standards (Munshi and Rosenzweig, 2006).

The remainder of the paper is organized as follows. Section 2 describes the analytical framework, the background literature, and the context of our investigation. Section 3 presents data and descriptive statistics, while Section 4 illustrates our empirical strategy. Results are reported in Sections 5 and 6; Section 7 concludes. Additional empirical results are reported in the Online Appendix.

2. Background: migration and female labour supply

Migration strongly suggests the interdependence of work decisions within a family. Theoretical analysis, supported by empirical evidence, has shifted its view of migration from an individual decision-making process to a mutually interdependent decision within the family, intended to manage uncertainty, diversify income portfolios, and alleviate liquidity constraints (Stark, 1991; Yang and Choi, 2007; Mendola, 2008). However, it remains unclear how this cooperation operates within families, and whether dispatching members to other places of employment has different effects in the time allocation of individuals at home.

Different mechanisms have been posited, related to time and resource allocation, through which the labour mobility of household members is thought to affect the employment outcomes of people left behind. Much of the emphasis in this literature, however, has concerned the role of remittances in lifting budget constraints, raising reservation wages and reducing employment at home through a standard income effect (Funkhouser, 1992; Rodriguez and Tiongson, 2001; Hanson, 2005; and Amuedo-Dorantes and Pozo, 2006, among others). Yet, the receipt of remittances is an outcome of household members' out-migration, which entails the reallocation of time and resources by individuals left behind to compensate for the migrant's absence. From that perspective, migration has been typically conceived as having a disruptive effect in terms of the loss of productive, working-age household members, who must then be either replaced or compensated for by the household members remaining at the origin (Hanson, 2005; Amuedo-Dorantes and Pozo, 2006; Albanesi and Olivetti, 2006). However, particularly in traditional societies, the absence of one household member may also entail a shift in bargaining power in decision-making within the household, challenging traditional gender roles, for example, and ultimately influencing the final allocation of resources (Chen, 2006).[1] Sociologists have long emphasized that male migration may leave women left behind with a greater burden of responsibility, but also with higher decision-making power and economic independence (Gulati, 1987; De Haan, 2000), associated with greater income control conferring greater family influence (e.g. Boserup, 1970; Blumberg, 1984, cited in Schultz, 1990).[2]

There has been a strong and growing interest in the determinants of female labour outcomes, with studies demonstrating the importance of human capital and family characteristics in impacting gender employment differentials (see Pissarides et al., 2005). In particular, family membership, with its cultural norms and resulting obligations, is known to be an important correlate of the level of female labour supply.[3] Nonetheless, little is known about female labour force response to the common obligation faced by families of dispatching a household member (frequently the husband or the son) to work abroad. Even if male migration may drain off able-bodied adults and increase income through remittances, the ultimate impact on sending households may

[1] Indeed, failure to recognize the existence of the impact of both migration and remittances on labour supply at home is retained as non-problematic by assuming that the sum of the two *opposing* effects still shows the dominant impact (Amuedo-Dorantes and Pozo, 2006). Yet, as argued in the text, the effect of migration itself is not necessarily negative and moreover, a remittance is a necessary but insufficient condition to observe migration (i.e., measurement error).

[2] We are here concerned with gender inequalities in household power, defined as the degree to which a family member can influence important decisions within the family. Obtaining a job for wage outside of the family contributes to women's control over the returns to their labour, hence augmenting their relative power in the allocation of household economic resources (Kabeer, 2000). There is an important body of economic literature pointing out that empowered women shift household decisions away from their husband's preferences, thus changing the choices that are made for their children (see Thomas, 1990; Behrman, 1997; Duflo, 2003).

[3] Although family characteristics may not directly affect potential market wages, they influence the decision to stay home by increasing or decreasing the individual reservation wage, and therefore the bargaining power (e.g. Heckman, 1974; Pencavel, 1986).

be channelled through a change in the bargaining process amongst the female individuals left behind.

Recent empirical studies point to a decrease in the labour supply of women as a result of male migration (Lokshin and Glinskaya, 2009, for Nepal; Binzel and Assaad, 2011, for Egypt; and Mu and van de Walle, 2011, for China). We further explore this issue in Albania where, since the end of the communist regime, massive male-dominated international migration flows to neighbouring countries have been transforming the economy of both origin families and the country as a whole. In doing so, we account for the potential heterogeneous effects of temporary and permanent migration experience by distinguishing between migrant members currently away and past migrants returned home. This is important in order to reduce potential migration measurement error and to account for the multifaceted nature (e.g., timing) and consequences of migration (see Mendola, 2008; Rodriguez and Tiongson, 2001). Indeed, neglecting the coexistence of different forms of labour mobility, such as temporary and permanent migration, and the potential correlation between them, can exaggerate or diminish the effect of having a migrant in the household.

Finally, while analyzing female labour choices, it is important to note that women in developing and transition countries are economically active when providing unpaid work on the family farm or in a small family-run business (Paci, 2002; Hill, 1989). Indeed, important contributions on female work choice have suggested that, in contrast to well-developed labour markets, the composition of the labour force in developing economies must take into account the importance of both unpaid work and the informal sector (Schultz, 1990). The decision to enter the labour force as an employee is distinct from the choice to enter as a family worker because of wage differentials, formal sector constraints in terms of working schedules or fixed costs (e.g., commuting time or child care), and individual preferences for economic autonomy (Hill, 1989; Schultz, 1990; Edwards and Field-Hendrey, 2002). Yet, a persistent gap in the literature on women's employment is that informal and unpaid work remains largely undocumented and unquantified; consequently, a disaggregated picture of female work along these lines is likely to provide a more precise employment pattern, especially in a developing or transition economy (Paci, 2002; Lim, 1996; Mehra and Gammage, 1999). Accordingly, we account for the heterogeneity of female labour market constraints by distinguishing paid from unpaid work.

Albania is a particularly interesting setting in which to study the impact of migration on the domestic (formal and informal) labour market by gender. Since 1990, the country has been largely affected by a rather rapid transition to a market economy and, in the process, dramatic changes have occurred in the local labour market. As in many other transition economies, following the fall of the Communist regime, Albania experienced a substantial decline and stagnation in labour force participation in the new labour market, particularly among women. Public sector employment declined enormously during the transition period, and job growth in the private sector has been too slow to compensate. A bloated public sector employing over 850,000 individuals shrank to less than a quarter of its original size between 1991 and 2001, with private sector employment increasing by only 23,000 between 2001 and 2004 (Labrianidis and Hatziprokopiou, 2006; World Bank, 2006). Two potential consequences of this situation are the migration of many young men to work abroad, and the large withdrawals of women from the labour market.[4] The under-valuation of women's time has generally resulted in significant differences in the time male and female groups allocate to paid and unpaid work, with women spending an inefficiently high proportion of their time in household production and caring activities, while men overspecialize in labour market activities (Paci, 2002). While females represent at least half of the population in Albania, they account for only 40% of the total labour force and face higher rates of unemployment than men (ILO, 2001).

Driven by economic hardships and geographic proximity, Albania has developed strong migration ties with other labour markets, in particular Greece and Italy, and migration and remittances continue to play a significant role in the Albanian economy (Coulon and Piracha, 2005; Carletto et al., 2006). Empirical evidence suggests the existence of a 'migration cycle', involving multiple migration episodes prior to settling, more often than not back in the source country (Labrianidis and Hatziprokopiou, 2006). The empirical analysis presented in the remainder of the paper focuses on how this type of circular, often extended, migration of mostly male individuals affects the labour choices of the individuals left behind.

3. Data and descriptive analysis

The analysis in this paper is based on the 2005 Albania Living Standards Measurement Study (LSMS) survey carried out by the Albania INSTAT with technical assistance from the World Bank. Unlike previous household surveys, the 2005 LSMS provides unusually detailed information on the migration of both current and former household members from Albania to foreign countries. Moreover, the survey includes information on individual labour market status along with a wide range of demographic and socioeconomic characteristics at the household and individual levels.

A total of 3,640 households were interviewed, corresponding to a nationally representative sample of 17,302 individuals. Included in our analysis are all working-age men and women who are not in school, in retirement, disabled, or in the military service. We do so in order to focus on the fraction of the population available for work and not in the position to provide 'voluntary' work in their spare time from their main occupation. Moreover, the main sample restriction is meant to isolate the labour market effect of migration from its effect on human capital accumulation or retirement decisions. Yet, in order to check for potential sample selection bias, we also carry out the analysis by including retired people in our estimation sample and using workers in different age ranges (see below).

After selecting the latter categories and accounting for missing variables, we end up with a sample of 15,547 individuals, 9,742 of whom (63%) are of working age (i.e., 16–64 years old) and 6,592 of whom report having either paid or unpaid work.[5] Identification of paid and unpaid workers is derived from answers to the 'job status' question according to which paid employment and self-employment refer to self-reported wage and salary work (as an employee, paid worker, employer, or worker on own account) either on- or off-farm, whereas unpaid work refers to work performed outside the home (either on- or off-farm) without a corresponding salary.[6]

We also differentiate between permanent and temporary migration by accounting for the presence of both current and past migrant members in the household. It should be noted that we can distinguish between temporary and permanent mobility based on actual individual behaviour, but it is obvious that any migration decision is not irrevocable, as a permanent migrant may decide to return, or a current household member with past migration experience may decide to migrate permanently in the future. This issue is particularly thorny for current and recent migrants who may still be in the process of making a final decision on where to settle indefinitely. This is why the survey instruments define the group of households with current international migrants based on the presence of any former household

[4] For an in-depth analysis of the mass Albanian migration since 1990, see King et al. (2005).

[5] The sample selection criteria are detailed in Table A1 in the online appendix.

[6] We defined unemployed as the working age population without a job and *seeking work*, or *not seeking work* due to the following reasons: (a) tired of looking/believe no work available (i.e., discouraged workers); (b) awaiting results of previous job applications; (c) temporarily absent from a permanent job (due to illness, bad weather, etc.); and (e) waiting for rehire/job recall.

member no longer living in the household who migrated abroad more than 12 months prior to the survey.[7]

Conversely, the group of families with past migration experience are defined as households with members who self-report at least one emigration episode for a duration of more than 1 month since they turned 16 years of age and have now returned to live at home.[8] Indeed, there are important differences to highlight with respect to heterogeneous migration forms. As far as past migrants are concerned, it should be noted that migration from Albania (particularly the flow to the neighbouring Greece) has been traditionally temporary in nature, whether seasonal or circular.[9] In our sample, temporary migrants are mostly men returning from nearby Greece and Italy, where they were primarily employed in the agriculture or construction sectors. These temporary migrants are more likely to migrate without their spouse and/or children (only around 15% travel with their family) and when asked about their intention to migrate again, almost 40% give an affirmative answer, while 16% are uncertain, thus supporting the trend of individual multiple migration episodes. The female migration rate is much lower relative to male, and close to 70% of the female migrants in the sample left for Greece to work primarily as domestic helpers; the remaining subgroups migrated as tied-migrant or to work in agriculture.

Current international migrants, on the other hand, are former household members whose information is collected through proxy respondents within the sample households. Importantly, the survey limits this group to 'core' former household members, i.e., the adult sons and daughters of the household head and their spouses, as well as the spouse him/herself, if abroad. Overall, current migrants are younger, include a higher share of females and, on average, belong to relatively better off households when compared with past migrants.

Bearing these differences in mind, the potential impact of migration exposure may be substantially diverse in terms of financial and human capital accumulation, affecting migrants' occupation and investment opportunities both before and upon return. For instance, the current absence of recent migrants may lead to an intra-household call for labour compensation, while the past migration of household members may entail the return of both human and physical capital to be re-allocated or invested by household members. Yet, these effects may differ according to whether individuals have themselves worked abroad at least once in their lifetime. Consequently, we further distinguish individuals having a direct migration experience (albeit the latter is less relevant for women).

Table 1 reports individual characteristics in the working age population (i.e., persons aged 16–64 years old) by gender and type of migration experience. The latter is defined in terms of the presence of any current international migrant in the household and past migration either of the individual him/herself or of someone else in the household. Figures show that 30% of the total sampled individuals have at least one migrant household member currently living abroad and that there is a small but significant difference between women and men. On average, 15% of the sample has migrated abroad at least once since turning 16 years of age, with the vast majority being male (only 3% of females report having migrated abroad).[10] On the contrary, 32% of women report having experienced international migration through someone else currently in the household, while the percentage for men is less than one half of that number. In Table 2, we present some individual demographic characteristics of the working age population differentiated by direct or indirect migration experiences and by gender. Overall, individuals having current international migrants are more likely to be female, to be above 40 years of age, to come from smaller families with fewer grown children (likely as a result of migration of a male adult), and to have lower education levels than the sample with no migration experience of any kind. The same pattern seems to hold within the male and female sub-populations, consistent with the idea that these individuals are mostly parents of better educated grown children who have migrated long-term or permanently. Individuals with own past foreign experience are mainly young males, married but with a few young children and with an average level of education higher than those without any migration experience. Conversely, individuals with current household members who migrated abroad at least once in the past, are mostly female (74%), younger (less than 36 years old on average), with larger households and lower levels of education. The same pattern holds for both men and women.[11]

Table 1
Individual characteristics and migration experience by gender (working age population[a]).

	Male	Female	Total
Married (%)	0.68**	0.70**	0.69
Single (%)	0.31***	0.25***	0.28
Age (years)	37.98***	36.99***	37.46
Household size	4.8	4.76	4.78
No. of children (age<15)	1.03***	1.09***	1.06
Years of education	9.90***	9.35***	9.62
Migration status[b]			
Current migrants in the household (%)	0.28***	0.33***	0.3
Past individual migration (%)	0.27***	0.03***	0.15
Past migration of household members (%)	0.12***	0.32***	0.23
Obs.	4667	5075	9742

*Significant at 10%; **significant at 5%; ***significant at 1%.
Notes: (a) Persons of 16–64 years of age. (b) The last 3 binary variables capturing migration experience are respectively: (i) individual has at least one household member currently abroad; (ii) individual has migrated abroad at least once; (iii) individual has never migrated abroad but someone else in his/her household migrated at least once in the past.

Table 3 presents the employment rate of the working age population by gender, differentiating between wage employment, paid self-employment and unpaid work. Working women appear to be more concentrated in unpaid jobs, followed by wage- and self-employment. Differentiating by sector, our data find women more concentrated in the unpaid agricultural sector and paid non-agricultural sector, followed by self-employment, with very few women working as agricultural wage workers.

Finally, Table 4 reports labour force participation rates (in both paid-formal and unpaid-informal jobs) and migration experience by gender. Overall, the gender employment gap, defined as the difference in the employment rate between men and women, is around 29% when considering only paid work, and around 6% if unpaid work is also taken into account. When we consider only individuals having experienced some form of migration, the gender gap significantly decreases, largely because of an increase in the female employment rate. If individuals have one current international migrant in

[7] The 12-month threshold is the internationally recommended length to define long-term/permanent migration (see, for example, Bilsborrow et al., 1997 and Vargas-Silva, 2012). Therefore, by excluding households with a member abroad for less than 12 months from the "treated" group, our results could be interpreted as lower bound estimates of the impact of "any" current migration on the labour supply of individual members left behind.

[8] The 1 month cut-off is based on the fact that the LSMS questionnaire was meant to capture as many migration episodes of current household members since 1990 as possible, irrespective of length. Yet, in our sample, the vast majority of the past migrants (97%) have migration experiences well beyond 3 months.

[9] Compared to Italy, the process of obtaining legal status in Greece is more difficult for Albanian migrants, as family reunification has been discouraged and migrant regularization has been slower (Kilic et al., 2009). In this respect, it should not be surprising that the flow to Greece in particular has been more temporary in nature.

[10] The vast majority (82%) of households with past migration experiences have had only 1 member migrate abroad. This suggests that temporary migration is generally taken up by only one household member, usually the male household head.

[11] The trend and gender composition of migration out of Albania for the period 1990–2003 is shown in Figure 1 in the online appendix.

Table 2
Individual characteristics by migration status and gender (working age population [a]).

	Current migrants	Past migration of household members	Past individual migration	No migration
Panel A: Total				
Female (%)	0.56***	0.74***	0.11***	0.51
Married (%)	0.68	0.69	0.79***	0.67
Age (years)	40.93***	35.94**	37.05	36.37
Household size[b]	4.27***	5.33***	4.79	4.88
No. of children (age<15)	0.66***	1.15***	1.22***	1.19
Years of education	9.17***	9.09***	10.21***	9.93
Panel B: Male				
Married (%)	0.67	0.49***	0.79***	0.67
Age (years)	41.62***	36.07***	36.99***	37.05
Household size[b]	4.28***	5.53***	4.88**	4.88
No. of children (age<15)	0.58***	0.82***	1.25***	1.16
Years of education	9.62***	9.09***	10.09**	10.13
Panel C: Female				
Married (%)	0.69	0.76***	0.79**	0.67
Age (years)	40.39***	35.90***	37.53	35.74
Household size[b]	4.27***	5.26***	4.12***	4.87
No. of children (age<15)	0.72***	1.26	0.93**	1.23
Years of education	8.83***	9.09***	11.16***	9.74
Obs.	2964	2205	1439	5296

*Significant at 10%; **significant at 5%; ***significant at 1%.
Notes: (a) Persons of 16–64 years of age. (b) Household members here are only those currently living at home (i.e. current international migrants are not considered to be household members). (c) *t*-tests on the equality of means (of the current category with respect to the 'no migrants' category) are performed and the level of significance is indicated by stars (*significant at 10%; **significant at 5%; ***significant at 1%).

their family, the gender gap is 28%, whereas if they experienced migration in the past, either directly or through another household member, the gender employment gap is 22% and 16%, respectively. In the case of non-self past migration, however, employment rates decrease for both males and females, suggesting that those who stay behind are either more likely or more willing to withdraw from the labour market (men relatively more than women). Moreover, the paid plus unpaid employment rate decreases in all cases except

Table 3
Labour outcomes by gender (% of working age population [a]).

	Male	Female	Total
Unemployed	0.14***	0.19***	0.16
Wage employee (paid)	0.43***	0.24***	0.35
Self-employed (paid)	0.23***	0.12***	0.18
Unpaid workers	0.21***	0.44***	0.31
By sector			
Employee agriculture	0.03***	0.00***	0.02
Employee non-agriculture	0.39***	0.24***	0.33
Self-employed agriculture	0.08***	0.06***	0.07
Self-employed non-agriculture	0.15***	0.06***	0.11
Unpaid worker agriculture	0.19***	0.38***	0.27
Unpaid worker non-agriculture	0.02***	0.06***	0.04
Obs.	3740	2852	6592

*Significant at 10%; **significant at 5%; ***significant at 1%.
Notes: (a) Persons of 16–64 years of age.

Table 4
Employment rate and gender gap by migration experience (% of working age population)[a].

	Total	Men	Women	Gender gap[b]
All				
Paid employment rate	0.53	0.65	0.36	0.29***
Unpaid employment rate	0.31	0.21	0.44	−0.23***
Current migrants in the household				
Paid employment rate	0.47	0.6	0.32	0.28***
Unpaid employment rate	0.37	0.24	0.5	−0.26***
Past individual migration				
Paid employment rate	0.67	0.68	0.46	0.22***
Unpaid employment rate	0.18	0.17	0.23	−0.06***
Past migration of household members				
Paid employment rate	0.35	0.47	0.31	0.16***
Unpaid employment rate	0.49	0.39	0.53	−0.14***
No migration				
Paid employment rate	0.57	0.69	0.42	0.27***
Unpaid employment rate	0.26	0.17	0.37	−0.2***
Obs.	6592	3740	2852	

*Significant at 10%; **significant at 5%; ***significant at 1%.
Notes: (a) Persons of 16–64 years of age. (b) The difference in the employment rate between men and women.

for return migrants: women upon return are significantly less engaged in unpaid work and more in paid employment, although this subgroup is very small.

In summary, the descriptive statistics demonstrate the importance of international out-migration in Albania and its male-dominated nature, as well as the multifaceted aspects of potential migrant selection and the resulting implications for household members left behind.

4. Empirical strategy

In order to test the linkages between migration and the home labour market, we model participation in the labour force by gender and predict the employment outcomes according to household migration experience. To do so, we use a discrete occupational choice model based on the extensive theoretical literature on labour market behavioural models (see Moffitt, 1999; Killingsworth and Heckman, 1986 for a review). According to these models, family member decisions about leisure time and labour supply are affected by other members' behaviour through cross-substitutions and income effects. While the latter is expected to have a negative effect on labour supply (particularly for women; see Altonji and Blank, 1999), the signs of the former are unknown, as they depend both on individual bargaining power and on whether household members' work are complements or substitutes. Hence, it is not clear a priori whether male-dominated migration impact in terms of female labour force participation will result in an increase or reduction of the gender employment gap (see also Pissarides et al., 2005).

We model labour outcomes of working age population as a function of the household migration status, controlling for a large set of individual-, household-, and regional-level characteristics. Yet, causal interpretation of cross-sectional migration effects on labour supply will be problematic because of endogeneity concerns. An immediate claim is that migration is a selective process and unobservable characteristics at the individual and household level shape the choice of engaging in different forms of migration. Thus, we address the potential endogeneity bias by using an instrumental variable (IV) strategy to estimate the labour choice model in either paid or unpaid work. The system of equations we estimate is as follows:

$$Y_i = \beta_0 + \beta_1 \mathrm{MigC}_i + \beta_2 \mathrm{MigP}_i + \beta_3 \mathrm{MigD}_i + \beta_4' X_i + \varepsilon_i \quad (1)$$

$$\mathrm{MigC}_i = \gamma_0 + \gamma_1' X_i + \gamma_2' Z_i + u_i \quad (2)$$

$$\mathrm{MigP}_i = \alpha_0 + \alpha_1' X_i + \alpha_2' Z_i + \nu_i \quad (3)$$

$$\mathrm{MigD}_i = \delta_0 + \delta_1' X_i + \delta_2' Z_i + \omega_i \quad (4)$$

where Y_i is either the individual employment status or the total hours of work; hence, we run separate regressions for Y based on whether the i^{th} person is wage employed, paid self-employed or an unpaid worker.

$\mathrm{MigC}_i, \mathrm{MigP}_i, \mathrm{MigD}_i$ are binary endogenous variables equal to 1 if the i^{th} individual has a household member currently abroad, a household member migrated in the past but currently at home, or he/she has direct foreign work experience, respectively.[12]

X_i is a vector of controls. We include individual- and household-level characteristics such as education and age, which reflect the potential market wage, in addition to family attributes, such as the number of dependents and their age structure, as well as the partner's position and income. We further differentiate the number of children in the household into four groups (i.e., children younger than 4, children 5–10, male children 11–14, and female children 11–14) in order to reflect different child care costs and opportunity costs of participating in the labour force. Along with demographics, we include a set of household asset variables (e.g., land and car ownership, water and landline phone inside dwelling, etc.) in order to proxy for the wealth position of the household, which is likely to be more exogenous than household income flows. Finally, we control for a range of regional-level characteristics as proxies for local economic settings and labour demand, namely the 2002 national unemployment rate at district level, the existence of a police station and garbage collection service in the community, and regional dummies.

Migration stati depend on the same set of individual-, household-, and regional-level characteristics included in the labour force participation equation, in addition to a set of exogenous variables Z_i that are solely included in the migration equations as instrumental variables. Given the simultaneity of time allocation decisions in concomitant occupational opportunities, we estimate the system of Eqs. (1)–(4) above through a 3SLS estimator, which produces consistent estimates and accounts for correlation structure in the disturbances across labour choice equations. We estimate a system of linear probability models, as the latter are generally more tractable for assessing causation with limited-dependent outcome variables and dummy endogenous regressors (Angrist, 2001).[13]

The key to such an instrumental variable approach is a set of well-behaved instruments. For this purpose, we use the following variables: (i) a binary variable equal to 1 if the head of household or his/her spouse had any family friends or relatives (out of the core family) already living abroad in 1990; (ii) a binary variable equal to 1 if there is more than one male in the "extended" family (i.e., all household members, including those currently abroad); and (iii) the percentage of other households with members abroad in the municipality of residence in 1995. The latter is a standard proxy for migration networks within each municipality that influence the opportunity to migrate by reducing potential hazard and costs, both at home and in migration destinations (Massey et al., 1993; Massey and Espinosa, 1997). We use migration intensity 10 years prior to the year of the survey in order to minimize potential contemporaneous correlation between the latter variable and employment outcomes. Thus, as long as we control for the district-level unemployment rate and regional fixed effects, we assume that previous migrant networks do not affect current labour market outcomes directly, except via the migration behaviour of household members. Similarly, by employing the degree of contact with people abroad in 1990, which marks the end of people's mobility controls,[14] we capture the presence of migration networks within the family that are assumed to directly influence the migrant status of households while being orthogonal to the labour market behaviour in Albania.[15] Finally, based on a feature of migration that is peculiar to the patriarchal Albanian context, we argue that a discontinuity in the family gender composition may be particularly significant in relaxing some gender-specific constraints to migration, without directly affecting individual employment outcomes. Indeed, we argue that, if there is only one man in the household (11% of households in our sample have a single male), he will be less likely to leave the household and migrate abroad, due to his male-specific obligations within the household economy.[16] Thus, the presence of more than one man in the household may affect the migration decisions of household members, without being relevant for the labour market behaviour of the rest of the household.[17] The exclusion restriction is satisfied as long as we control for the household structure in the first stage estimates, such that if there is any direct impact of the household structure on labour supply decisions, the latter is captured by these controls. However, in order to avoid potential remaining concerns about a direct impact of the discontinuity in the family gender composition on female employment outcomes, we exclude the latter variable from our set of instruments where possible.

5. Results

We are ultimately interested in examining the impact of having a migrant household member on the relative and absolute female labour force participation in concomitant occupation opportunities (i.e., wage employment, paid self-employment and unpaid work). We first test for potential endogeneity of the migration variables through a Durbin–Wu–Hausman test. The Chi-square statistics are very high in almost all of the cases, suggesting that the null hypothesis that the migration variables are exogenous should be rejected. In the wage employment equation only, the Chi-square statistic is close to the critical value, suggesting that there is moderate correlation in the error terms of the structural model. Yet, the IV estimates may be preferable to the OLS ones, as they would be consistent albeit less precise.[18]

Hence, we employ the set of instrumental variables described in the former section and estimate the system of equations above

[12] Migration variables are constructed such that different migration experiences are not mutually exclusive within the household. However, the incidence of households with multiple types of migration is not particularly high in our sample, with only 3% of households having both current and any past migration experience, 6% having current and indirect past migration experience, and 3.8% having both direct and indirect past migration experience. Overall, less than 10% of sample households have more than one migration experience. We also estimated the same model with mutually exclusive migration experience variables and results are not significantly affected by alternative definitions of migration categories - see the online appendix.

[13] Heckman and MaCurdy (1985) show that in case of simultaneous linear probability models, the IV procedure produces consistent estimates. Moreover, it should be noted that since we estimate linear employment equations with the same regressors, 3SLS point estimates for those equations are identical to 2SLS estimates.

[14] During the communist government (1944–1990), migration had come to a virtual halt, with migration officially prohibited and emigrants and family members left behind ostracized or severely punished. With the fall of the government, the end of the controls on internal and external migration and the unraveling of the centrally planned economy unleashed a demographic shift at an unprecedented pace, as individuals and entire households started migrating to the cities or leaving the country altogether (Carletto et al., 2004; King and Vullnetari, 2003).

[15] It should be recalled that the framework of the survey is such that the past migration experience of household members occurred after 1990 and was self-reported by current members of the core households. On the contrary, past migration experience that occurred before 1990 refers to friends and relatives out of the core household (i.e., the two variables do not overlap).

[16] Just as women are assigned different roles in the society, they tend to have different roles from men within the family. Women in Albania (especially in rural or remote areas where mentalities are more conservative) are still dependent on men for many different activities such as credit access, house maintenance, agricultural work (due to relatively little use of mechanization), and personal security concerns (see Albanian Center for Economic Research (ACER), 2002).

[17] Indeed, in our sample the presence of only one male is irrelevant to female labour supply: the female participation rate is not statistically different according to the presence of more than one male in the household. Also, controlling for appropriate demographic characteristics, the number of males exercise no influence on gender differentials in labour supply. Yet, male-specific obligations make Albanian households with a single male much less likely to undertake migration.

[18] OLS results are reported in Tables A2-A4 in the online appendix.

through a 3SLS estimator.[19] Results are reported in Table 5, where we present labour outcome specifications using 'any migration' as well as specific types of family migration experience as explanatory variables. As already mentioned, the dependent variable is either (i) a dichotomous labour outcome indicator for whether the person is in wage employment, paid self-employed, or unpaid work (col. 1–9); or (ii) a continuous variable for the reported number of job-specific hours worked in the previous week (col. 10–12). We perform a sensitivity analysis on the instruments when possible: in particular, in col. 1–3 and 7–9 we estimate identified specifications, while in col. 4–6 we use two of the three instruments we have, i.e. the migration density at the municipality level in 1995 and the presence in the household of relatives/friends who migrated abroad before 1990. Overall, the high values of the F-statistics for the excluded instruments and the Sargan over-identification test (when applicable) support the validity of our instruments.[20]

Results from the IV regression show that household migration experience is negatively associated with male and female wage employment, and positively associated with engagement in paid self-employment for women only. When disaggregating by types of migration, however, it becomes clear that it is the past international migration of household members that significantly increases the probability of women to supply labour in paid self-employment. In further detail, women with household members currently abroad are 32% more likely to supply unpaid work (at a 5% significance level). This may be the result of the ongoing stage of the migration process that requires more effort at home to replace people currently abroad. Nonetheless, we do not find evidence of such an effect on the male labour force population. On the other hand, women with household members that migrated in the past are 38% more likely to be self-employed (at a 1% significance level) and 18% less likely to work in unpaid activities (at a 10% significance level). The same effect does not hold for male labour market behaviour. Finally, having own past migration seems not to be significant for labour market behaviour. Yet, as we discussed above, the incidence of female past migration is very low in Albania (around 3% in our nationally representative sample).[21]

In order to check for sample selection concerns due to potential gender-specific interactions between age and labour force participation (e.g., females being either in tertiary education or early retirement as a result of male migration), we repeat the analysis for women on different subsamples: (i) working age females including those that have retired, and (ii) working women aged 24–55. The results (reported in Table 6) are reassuring in that they are qualitatively similar to those discussed above.[22]

On the whole, we interpret our IV results on gender differentials in the labour market as evidence that, in a traditional society, temporary male-dominated migration exposure may lead women left behind to ultimately gain access to labour market opportunities and improve their earning potential. These findings appear to reconcile the mixed existing evidence on female labour supply as a result of family migration experience, showing that migration (and/or remittances) decreases both male and female labour supply (Hanson, 2005), decreases female labour supply in low-paid jobs (Amuedo-Dorantes and Pozo, 2006), and increases female employment in unpaid/informal work (Binzel and Assaad, 2011). Indeed, our findings show that, while the presence of current emigrants causes women to compensate for the loss of family labour due to the migrant's departure by increasing their labour supply for unpaid work, once the migrants return, women are both more likely to be self-employed and less likely to engage in unpaid jobs. While we do not find the same pattern for men, we argue that the male-dominated migration behaviour and the high incidence of temporary or circular migration in countries with a long migration history (such as Albania and Mexico) may lead men to increasingly depend on this source of foreign earnings while being at home, while women obtain access to more remunerative local market jobs in the longer-run or make use of the capital acquired by men during migration spells to enter self-employment. To some degree, this outcome may be viewed as an emancipating mechanism for women, increasing their control over decision-making within the household and therefore their socio-economic role in society. Furthermore, despite being unable to estimate the direct impact of migration on the employment gender gap in Albania, our findings on the presence of past migrants in the household suggest that over time, male-dominated Albanian migration may lead to a comparative improvement in the access to income-earning opportunities for women at origin, thereby contributing to closing the gender gap in employment.[23]

6. Heterogeneous effects on female labour supply

It should be noted that the migration behavioural impact on female household members left behind may be at work through additional channels, such as a change in human capital accumulation or fertility choice on the one hand, or different economic and labour market environments through general equilibrium effects on the other. Although we do not engage with these mechanisms directly, we investigate heterogeneous effects across subgroups which may help in the interpretation of results. Table 7 presents IV estimates for a set of subsamples defined by observable attributes correlated with female labour supply, i.e., by age profile, education, family structure, rural/urban areas, and municipality migration density.

As shown in Panel A, labour market outcomes of older working-age women (i.e., age 33 or older) are qualitatively similar to the results obtained using the entire sample of women. They are more precisely estimated than is the case for younger women, as they are less likely to be confounded by the human capital bias (i.e., as a result of household migration, young women may stay longer in part-time education), or possibly because younger women are less sensitive to labour market returns due to lower earnings potential. However, Panel B shows that results differ when splitting the whole sample by educational levels. Household migration status changes the labour market outcomes of less-educated women, but has a small and statistically insignificant effect on those with a secondary education degree or higher. This finding suggests that less-educated women left behind gain more from the migration empowerment implications, as they are on average more likely to supply unpaid work but, when exposed to temporary emigration of household members, are more likely to shift to paid self-employment activities. Moreover, Panel C shows that our results are more precisely estimated in the subgroup of women without children under 4 years of age, even though the signs of migration effects are also stable for the other subsample. This finding is also consistent with the larger body of evidence on women's work choices being constrained by the presence of children in the absence of child care services. In Panel D, we report female labour market outcomes estimated separately for urban and rural areas. Results are more precisely estimated for women living in rural areas, suggesting that changes in labour supply behaviour among women as driven by male-dominated migration in Albania are mostly associated with the reallocation of traditional female farm work rather than a change in urban women's labour supply.

[19] The summary statistics of the IVs are reported in Table A5 in the online appendix.

[20] Full regression results for the most comprehensive specifications for women and men (col.(7)-(9)), joint with first stage migration regressions, are reported in Tables A6-A9 in the online appendix.

[21] Excluding the share of female population with own migration experience from our estimation sample does not deliver different migration estimates (see results in Table A10 in the online appendix).

[22] We further check the robustness of our IV results to specific instrument selections and alternative specifications: see Tables A11-A12 in the online appendix. Furthermore, results are robust to alternative (mutually exclusive) definitions of our migration categories - see Tables A13-A14 in the online appendix.

[23] A thorough analysis of the impact of migration on the gender gap in the labour market would require larger longitudinal survey data.

Table 5
Labour supply by gender: IV results.

Dependent variable	(1) Wage employment	(2) Paid self-employment	(3) Unpaid work	(4) Wage employment	(5) Paid self-employment	(6) Unpaid work	(7) Wage employment	(8) Paid self-employment	(9) Unpaid work	(10) Hours wage employment	(11) Hours paid self-employment	(12) Hours unpaid work
	Female											
Any migration	−0.130*	0.273***	−0.098	−0.118	0.250**	−0.095						
	(0.08)	(0.10)	(0.13)	(0.08)	(0.10)	(0.12)						
Current household migrants							−0.190	−0.270	0.319**	−0.752	−0.908	1.101*
							(0.17)	(0.19)	(0.16)	(0.65)	(0.70)	(0.60)
Past household migrants							−0.084	0.380***	−0.188*	−0.264	1.415***	−0.881*
							(0.11)	(0.14)	(0.11)	(0.43)	(0.52)	(0.50)
Past individual migration							0.663	−1.156	−0.016	2.179	−4.092	0.307
							(0.83)	(1.09)	(1.09)	(3.04)	(3.97)	(4.21)
Instruments												
Migration density at municipality in 1995	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Family/friends living abroad in 1990	No	No	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
More than 1 man in the household	No	No	No	No	No	No	Yes	Yes	Yes	Yes	Yes	Yes
Durbin–Wu–Hausman test	1.77	21.88	7.65	4.38	4.87	6.90	4.44	25.10	9.98	58.98	28.76	57.43
Chi-sq(.) *P*-value	0.08	0.00	0.01	0.03	0.02	0.00	0.02	0.00	0.01	0.00	0.00	0.00
F-test 1st stage		46.76			24.16		13.43	17.9	9.64	13.43	17.9	9.64
P-value joint		0.00			0.00		0.00	0.00	0.01	0.00	0.00	0.01
Over-identification Sargan test	Exact identification			0.968	0.267	0.026	Exact identification			Exact identification		
Chi-sq(1) *P*-value				0.325	0.407	0.871						
Obs.	2,852	2,852	2,852	2,852	2,852	2,852	2,852	2,852	2,852	2,852	2,852	2,852
	Male											
Any migration	−0.165	−0.259	0.177	−0.165	−0.248	0.172						
	(0.30)	(0.26)	(0.26)	(0.30)	(0.25)	(0.26)						
Current household migrants							−0.228	0.214	−0.031	−0.922	0.721	−0.193
							(0.25)	(0.24)	(0.19)	(0.98)	(0.90)	(0.73)
Past household migrants							−0.071	−0.964	0.499	−0.391	−3.445	3.038
							(1.02)	(1.02)	(0.83)	(3.99)	(3.89)	(3.32)
Past individual migration							0.005	0.048	−0.027	0.072	0.175	−0.322
							(0.21)	(0.21)	(0.17)	(0.82)	(0.79)	(0.68)
Instruments:												
Migration density at municipality in 1995	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Family/friends living abroad in 1990	No	No	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
More than 1 man in the household	No	No	No	No	No	No	Yes	Yes	Yes	Yes	Yes	Yes
Durbin–Wu–Hausman test	1.98	12.42	5.67	2.13	12.38	6.66	5.63	21.65	8.98	25.72	29.85	32.54
Chi-sq(.) *P*-value	0.09	0.00	0.01	0.05	0.00	0.00	0.02	0.00	0.01	0.00	0.00	0.00
F-test 1st stage		11.69			9.90		18.94	8.4	28.09	18.94	8.4	15.39
P-value joint		0.00			0.00		0.00	0.01	0.00	0.00	0.01	0.00
Over-identification Sargan test	Exact identification			0.010	0.985	0.239	Exact identification			Exact identification		
Chi-sq(1) *P*-value				0.983	0.321	0.625						
Obs.	3,740	3,740	3,740	3,740	3,740	3,740	3,740	3,740	3,740	3,740	3,740	3,740

Robust standard errors clustered at the household level in brackets; *significant at 10%; **significant at 5%; ***significant at 1%.
Notes: The table reports 3SLS estimation results. Specifications in columns (1)–(3) include any household migration experience as an endogenous variable. The model is exactly identified by using municipality historical migration rate as an IV. Col. (4–6) differ from previous ones by using two IVs to identify the model, i.e. municipality historical migration rate and having family/friends living abroad in 1990. Col. (7–9) include different forms of family migration experience, i.e. current migrants, past migration of household members and past individual migration, as endogenous regressors while using the same IVs as before. Col. (10–12) use job-specific hours of work as dependent variables, while having the same regressors and IVs as in Col. (7–9). All individual, household and regional level controls are included.

Table 6
Female labour supply: IV results on alternative estimation samples.

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
Dependent variable	Wage employment	Paid self-employment	Unpaid work	Wage employment	Paid self-employment	Unpaid work	Wage employment	Paid self-employment	Unpaid work	Hours wage employment	Hours paid self-employment	Hours unpaid work
	Panel A: Working age females including retired											
Any migration	−0.102	0.243***	−0.011	−0.091	0.222**	−0.006						
	(0.07)	(0.09)	(0.11)	(0.07)	(0.09)	(0.11)	−0.247	−0.225	0.260**	−0.947	−0.759	0.899*
Current household migrants							(0.16)	(0.15)	(0.13)	(0.58)	(0.53)	(0.48)
							−0.017	0.325***	−0.107*	−0.027	1.217***	−0.579*
Past household migrants							(0.10)	(0.11)	(0.06)	(0.38)	(0.40)	(0.31)
							0.632	−0.666	0.006	2.168	−2.358	0.316
Past individual migration							(0.62)	(0.65)	(0.85)	(2.28)	(2.37)	(3.21)
Instruments												
Migration density at municipality in 1995	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Family/friends living abroad in 1990	No	No	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
More than 1 man in the household	No	No	No	No	No	No	Yes	Yes	Yes	Yes	Yes	Yes
F-test 1st stage		54.52			28.12		15.51	11.81	17.46	15.51	11.81	17.46
P-value joint		0.00			0.00		0.00	0.00	0.00	0.00	0.00	0.00
Over-identification Sargan test				0.895	0.242	0.064						
Chi-sq(1) *P*-value	Exact identification			0.3442	0.318	0.7999	Exact identification			Exact identification		
Observations	3,548	3,548	3,548	3,548	3,548	3,548	3,548	3,548	3,548	3,548	3,548	3,548
	Panel B: Working females aged 24–55											
Any migration	−0.170*	0.276***	−0.135	−0.158*	0.257**	−0.138						
	(0.10)	(0.11)	(0.14)	(0.09)	(0.11)	(0.14)						
Current household migrants							−0.204	−0.259	0.285*	−0.81	−0.828	0.997
							(0.4)	(0.16)	(0.17)	(0.8)	(0.95)	(0.66)
Past household migrants							−0.232	0.505**	−0.153**	−0.773	1.852**	−0.692*
							(0.18)	(0.23)	(0.06)	(0.8)	(0.78)	(0.39)
Past individual migration							1.415	−1.987	−0.558	4.62	−7.094	−1.286
							(1.35)	(1.73)	(1.24)	(4.85)	(6.15)	(4.37)
Instruments												
Migration density at municipality in 1995	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Family/friends living abroad in 1990	No	No	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
More than 1 man in the household				No	No	No	Yes	Yes	Yes	Yes	Yes	Yes
F-test 1st stage		47.55			24.37		10.5	16.1	13.6	10.5	16.1	13.6
P-value joint		0.00			0.00		0.00	0.00	0.00	0.00	0.00	0.00
Over-identification Sargan test				1.096	2.629	0.029						
Chi-sq(1) *P*-value	Exact identification			0.2951	0.177	0.8653	Exact identification			Exact identification		
Observations	2,322	2,322	2,322	2,322	2,322	2,322	2,322	2,322	2,322	2,322	2,322	2,322

Robust standard errors clustered at household level in brackets; *significant at 10%; **significant at 5%; ***significant at 1%.
Notes: The table reports 3SLS estimation results. Specifications in columns (1)–(3) include any household migration experience as an endogenous variable. The model is exactly identified by using municipality historical migration rate as an IV. Col. (4–6) differ from previous ones by using two IVs to identify the model, i.e. municipality historical migration rate and having family/friends living abroad in 1990. Col. (7–9) include different forms of family migration experience, i.e. current migrants, past migration of household members and past individual migration, as endogenous regressors while using the same IVs as before. Col. (10–12) use job-specific hours of work as dependent variables, while having the same regressors and IVs as in Col. (7–9). All individual, household and regional level controls are included.

Table 7
Female labour market outcomes by age, education and family structure: IV results.

	(1)	(2)	(3)	(4)	(5)	(6)
	Wage employment	Paid self- employment	Unpaid work	Wage employment	Paid self- employment	Unpaid work
	Panel A					
Sample	Age 16–32			Age 33–64		
Current household migrants	−0.297	0.045	0.196	−0.117	−0.543**	0.318*
	(0.24)	(0.20)	(0.27)	(0.23)	(0.27)	(0.19)
Past household migrants	0.124	0.133	−0.227	−0.196	0.448***	−0.095
	(0.21)	(0.21)	(0.32)	(0.12)	(0.17)	(0.17)
Past individual migration	0.200	−1.189	0.136	1.194	−0.880	−0.598
	(0.85)	(1.20)	(1.48)	(1.17)	(1.53)	(1.35)
Obs.		1172			1651	
	Panel B					
Sample	Primary education or lower			Secondary education or higher		
Current household migrants	−0.268	−0.260	0.501	−1.253	0.512	0.575
	(0.26)	(0.27)	(0.41)	(2.86)	(2.01)	(1.19)
Past household migrants	0.122	0.312***	−0.345*	−2.489	1.635	0.992
	(0.10)	(0.11)	(0.18)	(6.14)	(4.33)	(2.55)
Past individual migration	−0.232	−0.465	0.181	7.775	−5.893	−3.153
	(0.62)	(0.87)	(1.33)	(21.32)	(14.98)	(8.89)
Obs.		1553			1251	
	Panel C					
Sample	Young children (0–4)			No young children (0–4)		
Current household migrants	−0.005	−2.446	4.074	−0.163	−0.254*	0.206
	(4.62)	(24.72)	(36.65)	(0.16)	(0.15)	(0.15)
Past household migrants	−0.254	2.760	−4.321	−0.108	0.246**	0.082
	(4.15)	(22.25)	(33.13)	(0.10)	(0.11)	(0.13)
Past individual migration	2.685	−10.511	14.088	0.235	−0.483	−0.609
	(14.03)	(75.00)	(111.96)	(0.76)	(0.77)	(0.89)
Obs.		626			2197	
	Panel D					
Sample	Urban			Rural		
Current household migrants	0.490	−1.010	0.159	−0.321	−0.295	0.559*
	(1.31)	(1.68)	(0.71)	(0.27)	(0.36)	(0.34)
Past household migrants	−1.479	1.782	−0.443	−0.010	0.362**	−0.230
	(2.58)	(3.32)	(1.42)	(0.11)	(0.15)	(0.19)
Past individual migration	1.369	−1.235	0.249	0.111	−1.178	−0.148
	(2.98)	(3.50)	(1.37)	(1.05)	(1.75)	(1.87)
Obs.		1,368			1,455	
	Panel E					
Sample	Migration density <0.15			Migration density >0.15		
Current household migrants	−1.591	−1.520*	4.976	−0.198*	−0.248**	0.210
	(0.99)	(0.86)	(9.42)	(0.11)	(0.13)	(0.14)
Past household migrants	0.220	0.328**	−0.497	−0.123	0.326***	−0.166
	(0.59)	(0.15)	(1.64)	(0.09)	(0.09)	(0.12)
Past individual migration	0.230	−1.185	−0.349	−0.147	−0.417	1.246
	(1.03)	(1.15)	(2.92)	(1.18)	(1.179	(1.45)
Obs.		579			2,244	

Robust standard errors clustered at household level in brackets. *significant at 10%; **significant at 5%; ***significant at 1%.
Notes: All specifications include the full set of controls and IVs as in Table 5, specifications in col. (7–9).

Finally, in Panel E, we report migration estimates according to different degrees of aggregate migration density in 2005, by splitting the sample according to whether families live in municipalities with more or less than 15% of other households with current international migrants. Results do not show systematic differences across the two subsamples, ruling out potential migration general equilibrium effects in our sample estimates.

Overall, findings are consistent with the literature showing that more disadvantaged groups (such as women with respect to men, or less-educated women compared to skilled ones) are more responsive to new market opportunities made available by economic globalization and the opening of borders (Munshi and Rosenzweig, 2006; Luke and Munshi, 2007).

7. Conclusions

This paper has examined the role of male-dominated international migration in shaping labour market outcomes by gender in migrant-sending households. Using detailed information on family migration experience from the 2005 Albania LSMS, we find different patterns of labour market responses across gender lines. Unlike earlier studies, we distinguish the income effect from the disruptive labour supply effect of household members' departure by differentiating different types of migration and investigating their impact on the paid and unpaid labour market status of household members left behind. Estimates show that male and female labour supplies respond differently to current and past migration episodes. Accounting for the endogeneity

of migration behaviour using an IV estimation strategy, we find that having household members currently living abroad decreases the probability that women will engage in paid employment and increases their unpaid work supply. On the contrary, having household members who migrated abroad in the past significantly increases female labour supply in self-employment while decreasing unpaid work supply. We do not find evidence of the same pattern for the male labour force population. Moreover, by accounting for key factors (related to age, education, child caring and environment) that exert a significant influence on female labour supply, we find that more disadvantaged Albanian women (for example, women who are less educated) with male-dominated household migration experience are more likely to shift their occupational choices and gain access to remunerative employment.

Our findings support the argument that in a traditional society like Albania, migration of household members may be a source of both income and bargaining power among members of the family at origin. In particular, according to our results on both current and past mobility, household members left behind, especially women, may be willing to take on the extra burden associated with the male migration of household members because they expect to further benefit from migration upon return. This evidence contributes to our understanding of the impacts of migration on economic development at origin by drawing on existing gender differentials in international and local labour market behaviour.

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