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The Effect of Work Migration on Domestic Labour Supply in Albania

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The wiiw Balkan Observatory

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Anna Iara

The Effect of Work Migration on Domestic Labour Supply in Albania

The wiiw Balkan Observatory

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The effect of work migration on domestic labour supply in Albania

Anna Iara

April 2009

Abstract: Using information from the Albania Panel Survey 2002-2003, we study the determinants of labour market states (market work, home production, inactivity) of married women in Albania, looking in particular on the effect of husbands' migrant work activity and the receipt of remittances. We further explore the determinants of joint labour market states of spouses considered in our sample, distinguishing the above three states and work migration abroad in the case of husbands, to account for the possibility that the migrant state of the husband may be endogenous with respect to the state of the wife. Our findings shot what wives of working migrant husbands are most likely to pursue home production, which may be due to weaker labour market attachment of the households sending working migrant men abroad. Our results do not support the view that wives receiving income from family members working abroad choose to consume more leisure as compared with wives lacking such income.

JEL codes: F22, J22, O15

Keywords: work migration, labour supply, remittances, Albania

1 Introduction

The study of labour market effects of labour migration in the home economies has so far mainly concentrated on unemployment, wages, and job creation. On these subjects, both theory and empirical research offer ambiguous conclusions (Lucas, 2005). Certainly, these effects will have implications on domestic labour supply in the economies concerned. However, labour supply in the home country may react to work migration and remittances more directly as well. According to Lucas (2005, Part B: 2), "supporting the family at home [...] can obviate the need to work. Thus, although labour supply is usually reduced by emigration the effect is unlikely to be a one-for-one reduction in the aggregate workforce; the overall labour supply reductions may [...] overshoot".

In the present study, we concentrate on this immediate effect of remittances and work migration abroad on domestic labour supply, studying the case of Albania. A few theoretical and empirical contributions have already dealt with such effects on the micro-economic level already. In a theoretical contribution, Chami et al. (2003) raise that remittances may reduce domestic labour supply due to the presence of moral hazard, and they interpret the negative effect of remittances on economic growth in a panel of up to 113 countries over up to 29 years as supporting evidence. Using household data of Albania, Konica and Filer (2003) find lower labour force participation of females in households receiving remittances as compared to households with no such income.[1] Comparing reasons for inactivity among members of households with and without migrants in Moldova, Görlich et al. (2007) provide evidence that members of the former engage more frequently in home production and university education.

We add to this literature by studying the labour supply of married Albanian women aged 15 to 64 who receive remittances from relatives abroad or whose husbands are working migrants abroad respectively. In a multinomial logit framework, we look at the labour supply state of these women as well as combinations of spouses' labour supply states, thus avoiding problems of potential endogeneity. Albania seems particularly suited for the above topic, given the high significance of both permanent and return migration abroad, and the availability of a suitable micro data set. In the last two decades, Albania has become one of the most important sending countries of international migration from Eastern Europe and the CIS relative to its size. Around one fifth of the population of 1989 has moved abroad in the next decade. At present, every second household is involved in either temporary or permanent migration, predominantly to Greece and Italy, but increasingly often to other European and transatlantic destinations as well, while remitted income of those working abroad is up to 14 per cent of GDP (Carletto et al. 2004, King 2005). Since the mid-nineties, with the involvement of the World Bank, micro datasets have been compiled that allow the study of migration, but smaller field surveys were carried out as well for both quantitative and qualitative research. Various aspects of Albanian migration have been analysed with different methodologies, such as the determinants of emigration and remittances (Kule et al., 1999, Konica and Filer, 2003, Carletto et al., 2004) and the effects of return migration and remittances in particular on private sector development and job creation (Kule et al., 1999, Konica and Filer, 2003, and Nicholson, 2004). A special issue of the Journal of Southern

[1] As the authors admit, their analysis does not account for potential reverse causality i.e. the possibility that members of households with limited domestic employment opportunities are seeking employment abroad, and does not consider heterogeneity across household types. Besides proposing a much broader and more differentiated view on the effect of foreign labour supply and remittances on domestic household labour supply, our envisaged analysis aims at addressing the concern about reverse causality by specifically looking at transitions.

Europe and the Balkans 2005 is devoted to Albanian migration,2 including studies on the relationship between migration and poverty (Zezza et al., 2005), and on the propensity to emigrate (Castaldo et al., 2005).

2 Analytical and methodological framework

According to neoclassical theory, the main determinants of individual labour supply are the wage, non-labour income, and preferences.[3] An increase of non-labour income is thought to result in increased demand for leisure (income effect), while the result of a wage increase may be ambiguous. The income effect again pushes towards the reduction of labour supplied, while foregone working time becomes more expensive: this motivates towards supplying more labour (substitution effect). In the context of household labour supply, labour and non-wage incomes of one household member may affect labour supply decisions of other members as well. For instance, it has been posited that an inactive spouse tends to join the labour force when her partner becomes unemployed: this is known as the added worker effect (see Lundberg, 1985). One may expect a reverse effect of reduced labour supply on behalf of the spouse of a working migrant abroad who can be expected to produce above average earnings abroad as compared to his earnings possibilities on the domestic labour market.

We illustrate our arguments in a simple family decision making framework. The spouses decide upon their labour supply to maximise the following utility function:[4]

$$\text{max! } W(U^f, U^m) = \lambda U^f + (1-\lambda) U^m, \quad 0 < \lambda < 1$$

$$\text{s.t.} \quad C = w^f h^f + w^m h^m + I$$

$$\text{with} \quad U_i(C, L_m, L_f) = C^{1-\beta^{i,m}-\beta^{i,f}} L_m^{\beta^{i,m}} L_f^{\beta^{i,f}} \quad \text{for } i = f \text{ and } i = m.$$

where C is a household public good with price 1, w_i is the marginal wage of spouse i, L_i is the leisure consumed and hi is the time worked by spouse i (such that L_i and h_i add up to the total available time), and I is the household's non-labour income.

In our context, the spouses have various fields of activity to perform their work: they may pursue market work as employees or self-employed in their home country. Alternatively, they may engage in home production. This possibility is particularly relevant in a country like Albania where a large share of households pursue subsistence agriculture. Besides, there is the possibility to perform market work abroad. [5] According to the standard model of labour supply, these activities are pursued in quantities such that their marginal wages equalise, unless indivisibilities arise.[6] Since empirically, we cannot account for hours spent with market work and home production respectively,[7] we treat the choice between the different fields of

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[2] The issue offers a selection from two dozens of papers presented on an international conference in Albania 2004. This documents the heightened research interest in Albanian emigration that is motivated by its scale and significance.

[3] For a textbook summary, see Cahuc and Zylberberg, 2004.

[4] The above presentation is based on the household labour supply model of Barmby and Smith (2001).

[5] In our data, the case of husbands left behind in Albania of working migrant women is extremely rare. Therefore, we only look at the situation of Albanian women whose spouses may or may not be working migrants.

[6] E.g., jobs may not be offered for part-time work on the market. Similarly, as a mode of home production, childcare may require the full-time presence of an adult if other facilities are unavailable in desired, less than full-time quantities.

[7] We cannot distinguish between home production and leisure. Similarly, we have no information on hours worked abroad. Besides, information of the hours spent on market work in Albania is missing for many observations.

activity in a simplified manner: the spouses choose full time work on the market or at home respectively.

$$w_f h_f = \max (w_f^M h_f^M, w_f^H h_f^H) \text{ and}$$
$$w_m h_m = \max (w_m^M h_m^M, w_m^H h_m^H, w_m^A h_m^A)$$

Standard economic theory tells us that, if leisure is a normal good, higher income will increase demand for it, so that as a result, the supply of market labour is reduced. Economic theory further tells us however that, with an increasing and concave home production function, home production will be pursued to the extent until which its marginal productivity equals the wage for market work. In our context, when the husband takes up employment abroad, inputs to home production may become available to the spouse that she could use with higher productivity as compared to her market activities, so that she may reduce her market labour supply for this reason.

However, potentially the market labour supply of a relative of a working migrant abroad may also be higher as compared to a similar person without such relatives. In particular, she may not be offered employment at a wage that exceeds her reservation wage. The receipt of remittances from abroad may allow her to acquire production inputs however so that her marginal productivity in self-employment exceeds both her reservation wage and her marginal productivity in home production. In such a situation, remittances may be used to overcome domestic capital constraints that would prohibit the acquisition of the necessary capital stock for self-employment. Similarly, a domestic household member may take up home production with inputs that have been previously unavailable at the expense of leisure if she can achieve returns to her home activity that exceed her reservation wage.

Based on the above, we can think of different effects of labour supply abroad and the receipt of remittances respectively on the labour supply of household members, in particular wives, left behind: e.g., a non-migrating spouse of a temporary migrant may reduce full-time to part-time work or leave the labour force by quitting a job or stopping to search for employment. Similarly, older parents of temporary or permanent migrants may choose early retirement once they receive remittances from their offspring. In contrast, relatives of migrants may leave unemployment or inactivity into self-employment, overcoming capital constraints with the help of remittances. Relatives of migrants may further move from inactivity, job search or formal employment into home production with higher productivity if inputs for such production are left behind by the migrant working abroad.

Further to the remittances received from abroad, the labour supply of family members of working migrants can be expected to be shaped by their wage that in turn depends among others on the skills of the individual and the type of his or her job, social benefits available to in-actives, available inputs to and demand for home production respectively, such as holdings of farmland or a small business, and the presence of dependent household members demanding care and children in particular. As concerns the move into self-employment, family savings and the local unemployment rate will matter to indicate capital constraints and the lack of employment opportunities. Finally, non-labour income needs to be taken into account.

On the household level, having a family member working abroad and remitting income can induce multiple individual labour market transitions: the spouse can turn to inactivity or home production while the brother opens up an own business. As a result, the total labour supply of the domestic household members, as well as domestic household income from work, may

increase or decrease.[8] With the present study we do not go so far, though. Instead, we are looking at the labour supply of spouses of men working abroad, as a first step towards a more complete analysis. Specifically, we study the odds of married women aged 15 to 64 to occupy different labour force states, including home production and inactivity, conditional among others upon husbands working abroad, as well as the receipt of remittances, in a multinomial logit regression framework. This approach considers the migration state of the husband and the receipt of remittances as exogenous, while the labour supply behaviour of the wife left behind is seen as adjustment. This view can be motivated by the idea that time is needed to obtain information on the viability of wage earnings abroad, the extent and regularity of remittances etc. before domestic labour supply of the household is adjusted to the outcome of a decision taken previously.[9] Still, the decisions on migration of one household member and domestic labour supply of the member left behind may be taken simultaneously. Therefore, we extend our analysis by studying the determinants of joint labour force state combinations of the spouses. Doing so does not prioritise the labour force state of one spouse against the other.

Our approach faces certain limitations resulting from the characteristics of the dataset used. Unfortunately we are only partially able to account for the above mentioned determinants of labour supply states of the individuals and couples studied respectively; we list these in the next section. Besides, ideally we would wish to study married women's transitions between different labour supply states as a response to their spouses assuming migration abroad. Our dataset does not have sufficient length and numbers of transitions respectively such as to allow the interrelation of household labour supply abroad and in the home country with more specific structure in time.

3 The data

3.1 The dataset and variables employed

For our analysis we employ the Albania Panel Survey (APS) 2002-2003. This dataset was compiled by adding a further wave to the 2002 Living Standards Measurement Survey of Albania, in which a subset of the households participating in the former was considered. The data collection was conducted by the Albanian Institute of Statistics with technical assistance of the World Bank; the selection of the households is nationally representative. Detailed individual information is available on household members from age 15 (INSTAT, 2005). In fact the APS covers the year 2004 as well, but unfortunately we can construct our migrant state variable only for the first two years (see below). Besides the APS is not fully consistent across the years (as an example, for 2003 only information about transfers from abroad is available so that we cannot consider the receipt of transfers from family members inside the country). We employ the variables constructed from the APS data as follows.

In our analysis we focus on females aged 15 to 64 who are household heads or spouses of household heads, and their husbands. Our dependent variable is the labour force state of the individual and her and her spouse's joint state combination respectively. We distinguish four categories of individuals' labour supply state, namely home production H, leisure L, market work W, and work migrant abroad M. Home production covers housewives exerting childcare, agricultural activity, and student status. Leisure comprises retirees, housewives

[8] Certainly, any reallocation of household members' time used for various activities will increase the utility of the household members.

[9] Besides, although recent research on household labour supply has stressed the role of household members as individual decision makers, participation in international migration (provided that an opportunity exists) may or may not be subject to intra-household bargaining in the economic and cultural context of Albania.

without children, discouraged workers, and those who declare that they do not want to work. Market work includes work for others, self-employment, and those who declare that their job will start later. Finally, the state of work migrants abroad is assigned to those who declare that they have been abroad and found work in the period specified in the questionnaire. Unfortunately this period is not fully retrospective: it stretches over January 2002 to April 2003 for 2002, and June 2003 to April 2004 for 2003.

Based on the above, we categorise women into either of the states H, W or L (there is no case of a work migrant woman abroad), and men into either of the above states and M. We also construct 12 joint states as the possible combinations of the women's and their spouses' states respectively. We will carry out two sets of estimations, the first analysing determinants of women's labour supply states, the second explaining joint labour force states of the spouses. The sample sizes for these two sets of estimations differ somewhat because information on the labour force state of some of the husbands is missing. In the following, the sample used for women's labour supply state is labelled sample 1, the one on joint states is sample 2.

We use the following variables to explain the probability of the labour supply state of the individual and the labour supply state combinations for spouses respectively.

- Education levels: we attach value 0 to those having no education and distinguish six levels of education in increasing order: namely, 8 years of primary education; general secondary education; 2 years of vocational education; 4 to 5 years of vocational education; university, and post-university education.
- Children: we measure the presence of children in certain age groups in the household by their number. We distinguish children aged 0 to 3, 4 to 6, and 7 to 14, assuming distinct needs for childcare in these age groups.
- Health: the survey provides information about individuals' health state in five categories, 1 is assigned to very good health, while 5 indicates poor health. In the analysis of individual and joint labour supply states, we employ health state information of both the respective individual and her spouse.
- Remittances: we are particularly interested in the effect of income received from abroad on individual labour supply states. To this end, we can use information on the receipt of transfers from relatives abroad by the individual. We distinguish such transfers from the spouse, siblings, children, grandchildren, and other relatives. We construct a dummy variable the value 1 of which indicates the receipt of such a transfer. Alternatively we could have used the number of remitters in the respective category, but the survey does not allow using information on the amount of such transfers distinguished by the sender.
- Agricultural plot: we can further control by a dummy variable whether the household owns an agricultural plot of land. This may add to the explanation of the choice of home production that includes agricultural activities as well.
- District unemployment rate: we use the survey information on individuals' labour force state to impute unemployment rates at the district level.

3.2 Summary statistics

The characteristics of our datasets used are summarised in tables 1 and 2. Note that our estimations of spouses' joint labour force states (sample 2) use fewer observations than those of the labour force state of married women (sample 1) as said above, because information on the labour market state of some of the spouses in the first sample is missing.

We present characteristics of the married women making part of sample 1 in table 1, distinguished by their labour force state H, L and W. Half of the women of this sample are active in home production. The average education level of the women forming this part of the

sample is between the 8-years primary and general secondary level; 77 per cent has only primary education. The mean health state of these women is slightly below average. Only 23 per cent have (one or several) children aged less than 4 years, while about 20 per cent have children aged 4 to 6, and 66 per cent have children aged 7 to 14. Only in nine per cent of the cases have the spouses been working abroad. 19 per cent receive transfers from children abroad, while 14 per cent receive such transfers from siblings, and only 1 per cent are sent remittances by grandchildren. Finally, 82 per cent of the women involved into home production are from households that possess a plot for agricultural production. Those women who are categorised to spend their time predominantly with leisure activities – retirees, housewives without children, discouraged workers, and those who do not want to work – comprise 26 per cent of sample 1. On average, these women are significantly older than those working either on the market or in the home; two thirds of these women have only 8 years of primary education. Compared with the sub-samples of women with labour force state H or W, these women have poorest average health state, 20 per cent declare to have poor or very poor health. 79 per cent of the women in this sub-sample do not have children in the household at all (this may include cases of grown-up children who moved into separate households), but still 13 per cent have children aged 0 to 3, while 3 per cent and 8 per cent have children aged 4 to 6 and 7 to 14 respectively. In very few cases have women categorised to be primarily occupied with leisure spouses working abroad, less than 1 per cent. 32 per cent of these women receive remittances from their children living abroad, while 4 per cent are sent remittances by siblings. Very few obtain remittances from grandchildren. Only about one third of the women in this group are from households who possess agricultural plots. Looking finally at the 24 per cent of the sample comprising married women who perform market work, these women are on average 43 years old. Their education level is on average considerably higher than in the other two sub-groups, with only 30 per cent having less than general secondary and 19 per cent having at least university education. Only around half of the women in the sub-sample have no children at all, while 10 per cent, 14 per cent, and 42 per cent have at least a child in the age categories 0 to 3, 4 to 6 and 7 to 14 respectively. The share of the women whose husbands work abroad is again very small, 1 per cent. While 11 per cent and 20 per cent respectively receive remittances from children and siblings abroad, only less than 1 per cent is sent remittances by grandchildren. Finally, only 18 per cent of the women performing market work are from households who possess plots for agricultural use.

Table 2 presents the average values of the regressors of sub-sample 2, which is used to estimate the joint labour market states of spouses. As can be seen by comparison with the last two columns of table 1, the average values of the samples 1 and 2 are very similar. We discuss the characteristics of sub-sample 2 without distinction of the different potential labour market state combinations of spouses. Women in this sub-sample are on average 46 years old. 65 per cent have only primary education or less; average health in this group is between good and average. The average education level of the spouses is slightly higher, the share of those with up to primary education is 54 per cent, while 13 per cent have at least university education. The husbands also possess slightly better health than the wives, with 68 per cent declaring to have good or very good health. In 54 per cent of the households making part of sub-sample do children aged 14 and less live as well. 33 per cent of the couples considered receive remittances from children, grandchildren or siblings. Finally, 56 per cent of the respective households own plots for agricultural use.

4 Estimation results

We carry out two sets of multinomial logit estimations. First, we seek to explain the probability of a working age married woman's labour market state H, L, or M conditional on her and her spouse's education level, their health state, the presence of children in the three

above age categories in the household, the receipt of remittances from relatives abroad and the possession of an agricultural plot, and the district unemployment rate, as well as the work migrant state of the husband. Here, the husband's decision to assume work abroad is considered exogenous to the labour market state of the wife. In the second set of estimations, we consider the spouses' labour market states to be interrelated and investigate the impact of the above regressors on the 12 combinations of different labour market states of the spouses. We report the final step of a general to specific approach, after a stepwise removal of the insignificant from the above list of potential regressors.

4.1 Married women's labour force states

Tables 3 and 4 in the annex report the estimated coefficients of the likelihood of a woman choosing one of the labour force states H, L or W and the effect of a unit change at the sample means or a discrete change of a dummy variable from 0 to 1 on the probabilities of the three states respectively. In the below discussion we refer to the effects summarised in table 4.

According to our results, the probability of a wife being predominantly employed in home production is 0.6. This probability decreases in the education of the respective woman, considerably increases with the presence of children aged 0 to 3 or 7 to 14 in the household, by 24 and 20 percentage points respectively, as well as with the availability of an agricultural plot (62 percentage points), and has been higher in the year 2002 against the following year. The woman's age is found to have a negative impact on the likelihood of home production. Importantly, spouses of men working abroad have a significantly higher probability of performing home production as compared to spouses of resident husbands: this characteristic of the household increases the probability of home production of the wife by 18 percentage points. Summarizing the estimation results on women employed in home production, this form of labour is characteristic of younger women with lower education, of mothers, of those having the production factors for agricultural home production, and of spouses of working migrants left behind.

The probability of a woman choosing leisure as her main activity is estimated at 20 per cent. Surprisingly, this probability is decreasing with higher age (but at a lower pace with higher age). It is also decreasing with the presence of children aged 0 to 3 and 7 to 14 – by 12 and 15 percentage points respectively -, as well as with the availability of an agricultural plot – with 31 percentage points. While the level of education has no impact on the choice of leisure by the woman, those with more adverse health conditions have a higher probability for this labour force state. Interestingly, the absence of the spouse due to work migration has no impact on the leisure state of the spouse. The respective probability is lower for those obtaining transfers from grandchildren abroad, while transfers from children or siblings have no impact on the woman's choosing leisure as her main activity. In sum, in a complementary fashion to the case of women employed in home production, leisure appears to be the choice of those women who do not have children and who do not possess an agricultural plot. The absence of the spouse for work reasons has no impact on this choice. Strangely, older women are found to choose leisure less frequently, as well as those receiving transfers from grandchildren.

The probability that a woman is performing market work is estimated at 21 per cent. This probability is increasing in age, with a stronger impact of age for younger women; one additional year of age implies a higher probability of around 6 percentage points. Further, women who possess higher education are more likely to choose market work; an education level that is by one grade higher implies a probability of market work that is by 7 percentage points higher. Unsurprisingly, women with better health are more likely to perform market work; and they are less likely to do so if they have children aged 0 to 3 or 7 to 14. The presence of an agricultural plot considerably reduces the probability of market work, by 30

percentage points. Most importantly, a woman whose husband is working abroad is by 15 percentage points less likely to perform market work, while the receipt of remittances from siblings, children, grandchildren or other relatives has no impact. Finally, in 2003 the likelihood of a woman performing market work was by 7 percentage points higher than one year earlier. In summary, the typical woman performing market work tends to be older, healthier and better educated, and has responsibilities for home production neither in education (children aged 14 or younger) nor in agriculture. Spouses of working migrants are less likely to perform market work.

Taking the above results together, younger women tend not to seek market work. The less educated typically perform home production, while the better educated work outside the home; the choice of leisure is not related to the education level of the woman. Those whose health condition is better work outside the home, while poor health conditions are not a driver of the choice of leisure, perhaps because the need for subsistence does not allow less healthy women to exit the labour force in a broader sense. Women with children aged 0 to 3 and 7 to 14 are more likely to perform home production instead of market work or leisure. It is unclear why this relationship does not hold for children aged 4 to 6 (we therefore omitted this variable). This does not reflect correlations between the presence of children in different age categories in the household, as these correlations are significant but far from high. Women who obtain transfers from grandchildren or siblings living abroad are less likely not to work, but we do not see corresponding effects on the choice of market work or home production. Transfers from relatives abroad may thus be used to invest in some sort of productive activity instead of being used to finance higher consumption of leisure. Of course this result may also be driven by reverse causality in the sense that remittances are obtained by those in need, while those affording leisure are less likely to receive remittances. Clearly, the presence of an agricultural plot turns women's labour state choice towards home production and against leisure or market work. Women whose husbands work abroad are not more likely to stay away from working activities: instead, they are more likely to work in the home and less likely to perform market work. We have also checked whether this effect is different for those possessing an agricultural plot and those not doing so, but found no interacted effect. Finally, the education level of the husband and his health state is found to leave the labour state choice of the woman unaffected, so that the reported estimation results do not contain these regressors.

4.2 Labour force states of spouses

Our first set of regressions reflects a view where the work migrant state of the husband is considered to precede the labour market state of the wife. This may be correct if decisions on the career and conduct of life of the male household member are prioritised against those of the women. If both decisions are interrelated however, simultaneity bias will affect our estimates of the impact of the migrant husband dummy. We also present results of a second set of regressions in table 2, where we seek to explain joint labour market states of spouses that are assumed to be the result of one and the same decision making process, be it that one spouse dominates the decision on the activities of the other or that the joint state is the outcome of intra household bargaining.

Tables 5 and 6 summarise the estimation results for the joint labour force state combinations of the married couples including household heads in our sample. The joint states are indicated by combinations of the letters H, L, W and M (the latter one indicating the foreign work migrant state), where the first letter refers to the state of the woman. We discuss the results of table 6 that report the results in the form of effects of unit changes at the sample means or changes from 0 to 1 on the respective probabilities in the case of dummy variables. The estimations do not cover the full set of possible labour force state combinations: we omitted LM, WM, and WH, due to very low numbers of cases. In the following we take a comprehensive look at our results.

The states with highest probabilities estimated are HW (34 per cent), WW (27 per cent), HH (16 per cent), and LW (13 per cent). The estimated probabilities of the other states – HL, HM, LL, WL, and LH – are estimated below 3 per cent. Accordingly, husbands are most likely to perform market work, while wives are predominantly working in the home. Combinations with husbands working abroad have only low probability, 2.7 per cent; the respective wives are most likely to be employed in the home (note that the combinations WM and LM were omitted).

The age of the wife is found to increase the probability of the combinations LW, LH, LL, and WL – combinations where one of the partners has chosen leisure – and to decrease the likelihood of state HM. Because of collinearity, we had to exclude the age of the husband from the regressors: the higher age of the wife has similar implications for the age of the husband. Hence, the above effect relates to retirement activities of retirees.

The higher the education level of the wife, the higher is the probability of the combinations LW and WL. The likelihood of combinations HW, HL and HH decreases with the education level of the wife; in all these combinations women are employed in the home. The education level of the husband has a positive impact on the likelihood of combinations HW and HL, while it is inversely related to the probability of combinations LW and HH. Apparently, women's home production is typical of cases where the husband possesses higher education.

Spouses with healthier wives are more likely to choose WW, where both spouses work; a worse health state of the wife increases the probability of combinations HW, HM, and LH. A better health state of the husband is positively related to HW, while husbands with worse health conditions are more likely to be found in combinations HL and LL: poor health keeps away both wives and husbands from market work. In the case of women, home production is still pursued, while the health states of the spouses have no effect on the pursuit of home production activities (which include agriculture) by the husband; he is rather likely not to work with poorer health.

The presence of dependent aged children is increasing the likelihood that households are found in combinations HW, HM, and HH, and decreasing the likelihood of LW, LL, WW, and LH. The effects are particularly strong for HW, LW and WW. Evidently, the presence of children – not only the very young – strongly increases the need for childcare; in these cases, the wife tends to stay at home.

Only in one case is the receipt of transfers by relatives abroad found to have an impact on the labour force state choices of the spouses: households receiving such transfers are found to have a probability of the combination LW that is by five percentage points lower than otherwise. The receipt of remittances may thus either prompt women to perform market or home work – meaning in practice to enter retirement at a later stage – or prompt men to exit from market work.

The possession of an agricultural plot is found to have a very strong effect on the likelihood that both spouses choose home production. The respective probability is increased by 53 percentage points. In contrast, the probabilities that both spouses work in the market and of combination LW is decreased by 38 and 19 percentage points respectively. The presence of agricultural plots has a much smaller but positive impact on the probability of HW, HM, and LH, while it has a small but negative effect on the probability of LL and WL. These results suggest that once the household possesses a plot for agricultural production, this production factor is employed by the household, at the expense of the pursuit of market work or leisure. It appears to be the wife in particular who then chooses the task of home production.

Looking now at the states with the highest probabilities (see above), combination HW is strongly increased by the presence of children in the household and is comparatively higher

for couples with younger, less educated and less healthy wives, better educated and healthier husbands, and the presence of an agricultural plot. The probability of combination WW is much reduced by the presence of an agricultural plot, and comparatively lower for households with dependent aged children and less healthy and better educated wives. Similarly, combination HH is much more likely to be found in the case of households that possess agricultural properties, and slightly increased by the presence of children, while it is decreasing in the education level of both the husband and the wife. Finally, combination LW is found to decrease with the presence of agricultural plots, the presence of children, the receipt of remittances from relatives abroad, and the education level of the husband, while it is increasing in the education level of the wife.

We are particularly interested in the labour force state choice of wives whose husbands are working migrants abroad. As said, the probability of this state is estimated at a mere 2.7 per cent. It is decreasing in the age and increasing with a worse health state of the wife, with the presence of children in the household, and with the possession of agricultural properties. Interestingly, neither the education level nor the health state of the husband has an impact on the likelihood of this state. This is even more remarkable since these variables are found to matter for the other choices where the wife performs home production. Similarly, the education level of the wife is found significant for all these other choices – HW, HL, and HH, whereas it does not significantly explain the probability of state HM. This suggests that motives inducing a couple to opt for the husband's working abroad are different from those motivating the other combinations where the wife similarly works at home.

5 Conclusion

In the present analysis we have investigated the labour force states of Albanian women with and without working migrant husbands and the joint labour force states of Albanian couples with particular consideration of the possibility for the husband to work abroad in order to assess the impact of work migration abroad on the labour force participation and choice of type of work (home or market) of the spouse respectively. On this issue our results have revealed the following. First, women having a migrant spouse are more likely to perform home production at the expense of performing market work, while the women with spouses working abroad are not more likely to choose leisure. This is also reflected in the study of joint labour market states of the couples, where the number of cases including migrant husbands other than HM (i.e. where the wife is pursuing home production) is too small for consideration. Interestingly, the migrant status of the husband does not affect women's labour force status differently for households that possess and do not possess agricultural plots respectively. We also find looking at joint labour force states of couples that men's migration is driven by other factors than the choice of the other labour force states. In particular, the individual's education and health is not found significant.

It may appear that wives of working migrant husbands are most likely to work in home production to replace the lack of manpower arising from the absence of the husband, in particular in subsistence agriculture. However, this interpretation is not supported by our results, as we have not found differences in the probability of wives' home production between households with and without agricultural plots (interaction effect in the first set of regressions – results are not reported in detail). Therefore it rather seems plausible that it is thee husbands of women already in home production who are more likely to choose

migrating abroad.[10] This could be a sign of weaker labour market attachment of these households, which could be due to the lack of employment possibilities or hidden unemployment in the respective region.

In any case, we find no evidence for the choice of more leisure by women receiving more income from family members abroad, be it their spouses or other relatives. Therefore our analysis does not support the claim that individuals facing moral hazard by receiving additional income from family members working abroad would reduce their labour supply.

[10] Note that the structuring of labour state decisions of the members of the couple in time could not be considered in our study.

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Annex

Table 1

variable	H		L		W		all	
	mean	s.d.	mean	s.d.	mean	s.d.	mean	s.d.
age	42.68 ***	10.11	53.88 ***	8.92	43.02 ***	8.06	45.62	10.53
edu_lev	2.38 ***	1.03	2.69 *	1.35	3.76 ***	1.61	2.79	1.39
health	2.30	0.85	2.69 ***	0.93	1.98 ***	0.81	2.32	0.90
hh_ch03	0.26 ***	0.49	0.14 ***	0.36	0.11 ***	0.35	0.19	0.44
hh_ch46	0.22 ***	0.46	0.03 ***	0.20	0.15	0.38	0.16	0.40
hh_ch714	0.89 ***	0.97	0.11 ***	0.42	0.61	0.83	0.63	0.88
M_sp	0.08 ***	0.28	0.01 ***	0.10	0.01 ***	0.10	0.05	0.21
d_tr_ch1	0.19 *#	0.39	0.32 ***	0.47	0.11 ***	0.31	0.20	0.40
d_tr_gr1	0.01 *+	0.11	0.01	0.08	0.01	0.07	0.01	0.10
d_tr_sb1	0.14 *+	0.34	0.04 ***	0.20	0.20 ***	0.40	0.13	0.33
agrplot	0.82 ***	0.39	0.36 ***	0.48	0.18 ***	0.39	0.55	0.50
obs.	859		432		400		1691	

Table 2

variable	mean	s.d.
age	45.82	10.64
edu_lev	2.77	1.39
health	2.32	0.89
edu_lev_sp	3.17	1.63
health_sp	2.20	0.88
d_ch	0.97	1.10
d_tr	0.33	0.47
agrplot	0.56	0.50
obs.	1551	

Table 3

variable	coef.		s.e.	P>|z|
H				
age	0.1375	**	0.0638	0.0310
agesq	-0.0027	***	0.0007	0.0000
edu_lev	-0.2208	***	0.0717	0.0020
health	-0.1564		0.0988	0.1130
ch_03	1.0255	***	0.2054	0.0000
ch_714	1.0906	***	0.1675	0.0000
M_sp	0.4278		0.5884	0.4670
tr_ch	-0.0411		0.1980	0.8360
tr_gr	1.5258	*	0.7922	0.0540
tr_sb	0.4540		0.3222	0.1590
agrplot	2.9631	***	0.2076	0.0000
y_2003	-0.1415		0.1805	0.4330
const	-0.7284		1.4358	0.6120
W				
age	0.4678	***	0.0756	0.0000
agesq	-0.0063	***	0.0009	0.0000
edu_lev	0.2814	***	0.0615	0.0000
health	-0.3971	***	0.1066	0.0000
ch_03	0.0419		0.2520	0.8680
ch_714	0.4955	***	0.1703	0.0040
M_sp	-1.0212		0.7466	0.1710
tr_ch	-0.3716		0.2394	0.1210
tr_gr	0.8049		0.9836	0.4130
tr_sb	0.4067		0.3237	0.2090
agrplot	0.1088		0.2118	0.6070
y_2003	0.3136		0.1955	0.1090
const	-7.8383	***	1.6625	0.0000

Table 4

variable	dy/dx		s.e.	P>|z|
H				
age	-0.0250	*	0.0136	0.0660
agesq	0.0001		0.0002	0.4500
edu_lev	-0.0884	***	0.0148	0.0000
health	0.0117		0.0206	0.5720
ch_03	0.2427	***	0.0413	0.0000
ch_714	0.2019	***	0.0259	0.0000
M_sp	0.1818	**	0.0885	0.0400
tr_ch	0.0336		0.0435	0.4400
tr_gr	0.2124	*	0.1265	0.0930
tr_sb	0.0544		0.0547	0.3200
agrplot	0.6164	***	0.0265	0.0000
y_2003	-0.0745	*	0.0392	0.0570
P(st=X)	0.5909			
L				
age	-0.0357	***	0.0097	0.0000
agesq	0.0006	***	0.0001	0.0000
edu_lev	0.0141		0.0101	0.1640
health	0.0349	**	0.0144	0.0150
ch_03	-0.1219	***	0.0315	0.0000
ch_714	-0.1485	***	0.0226	0.0000
M_sp	-0.0285		0.0822	0.7290
tr_ch	0.0198		0.0302	0.5120
tr_gr	-0.1410	***	0.0436	0.0010
tr_sb	-0.0634		0.0390	0.1040
agrplot	-0.3122	***	0.0292	0.0000
y_2003	0.0026		0.0258	0.9210
P(st=X)	0.1982			
W				
age	0.0607	***	0.0107	0.0000
agesq	-0.0007	***	0.0001	0.0000
edu_lev	0.0743	***	0.0098	0.0000
health	-0.0466	***	0.0156	0.0030
ch_03	-0.1208	***	0.0347	0.0010
ch_714	-0.0534	***	0.0168	0.0010
M_sp	-0.1533	***	0.0395	0.0000
tr_ch	-0.0534		0.0330	0.1050
tr_gr	-0.0715		0.1128	0.5260
tr_sb	0.0090		0.0403	0.8240
agrplot	-0.3042	***	0.0276	0.0000
y_2003	0.0719	**	0.0314	0.0220
P(st=X)	0.2109			

Table 5

variable	coef.	s.e.	P>|z|	coef.	s.e.	P>|z|	coef.	s.e.	P>|z|
	HW			**HL**			**HM**		
age	-0.0499 ***	0.0118	0.0000	0.0368	0.0290	0.2050	-0.1324 ***	0.0191	0.0000
edu_lev	0.2403 **	0.1048	0.0220	-0.3594	0.2631	0.1720	0.1100	0.1681	0.5130
health	0.1737	0.1290	0.1780	-0.2251	0.2864	0.4320	0.3879 **	0.2104	0.0650
edu_lev_sp	0.2363 ***	0.0767	0.0020	0.4152 ***	0.1466	0.0050	0.2088	0.1272	0.1010
health_sp	-0.2339 *	0.1294	0.0710	0.7484 ***	0.2543	0.0030	-0.1910	0.2131	0.3700
d_ch	0.1078	0.0881	0.2210	-0.0211	0.2313	0.9270	0.0879	0.1352	0.5150
d_tr	0.0681	0.2080	0.7430	-0.2412	0.4442	0.5870	0.3782	0.3804	0.3200
agrplot	-3.4667 ***	0.4711	0.0000	-3.7616 ***	0.6429	0.0000	-1.9467 ***	0.5804	0.0010
y_2003	0.2303	0.2042	0.2590	0.8159 *	0.4263	0.0560	-0.4595	0.4041	0.2550
const	3.4778 ***	0.7868	0.0000	-2.9142	1.8108	0.1080	3.8909 ***	1.0653	0.0000
	LW			**LL**			**LH**		
age	0.0388 **	0.0176	0.0280	0.2788 ***	0.0235	0.0000	0.1377 ***	0.0289	0.0000
edu_lev	0.5555 ***	0.1276	0.0000	0.2213	0.1378	0.1080	0.0657	0.2134	0.7580
health	-0.1079	0.1804	0.5500	0.1373	0.1807	0.4470	0.5835 **	0.2353	0.0130
edu_lev_sp	0.0239	0.1007	0.8120	0.1513	0.1021	0.1380	0.2477 *	0.1426	0.0820
health_sp	-0.0315	0.1804	0.8620	0.3006 *	0.1754	0.0870	0.0934	0.2287	0.6830
d_ch	-0.8370 ***	0.1667	0.0000	-1.1449 ***	0.2521	0.0000	-0.9108 ***	0.3374	0.0070
d_tr	-0.3524	0.2820	0.2120	0.1560	0.2722	0.5670	0.1889	0.3455	0.5840
agrplot	-5.5550 ***	0.5156	0.0000	-6.7072 ***	0.5446	0.0000	-2.1924 **	0.8819	0.0130
y_2003	0.3100	0.2665	0.2450	0.1973	0.2615	0.4510	0.5373	0.3412	0.1150
const	0.6908	1.0542	0.5120	-12.2891 ***	1.3835	0.0000	-9.7164 ***	1.9353	0.0000
	WW			**WL**					
age	-0.0022	0.0147	0.8830	0.1237 ***	0.0382	0.0010			
edu_lev	0.6073 ***	0.1122	0.0000	0.7811 ***	0.2164	0.0000			
health	-0.2127	0.1601	0.1840	-0.0054	0.3433	0.9880			
edu_lev_sp	0.2404 ***	0.0864	0.0050	-0.1924	0.1812	0.2880			
health_sp	-0.1687	0.1612	0.2950	0.4957	0.3222	0.1240			
d_ch	-0.5396 ***	0.1251	0.0000	-0.5682	0.3758	0.1310			
d_tr	0.0482	0.2405	0.8410	-0.0465	0.5259	0.9300			
agrplot	-5.5753 ***	0.4900	0.0000	-7.3944 ***	0.9131	0.0000			
y_2003	0.5874 **	0.2359	0.0130	1.1012 **	0.5113	0.0310			
const	2.4551 ***	0.9046	0.0070	-7.0783 ***	2.1918	0.0010			

Table 6

variable	dy/dx	s.e.	P>|z|	dy/dx	s.e.	P>|z|	dy/dx	s.e.	P>|z|
	HW			**HL**			**HM**		
age	-0.0145 ***	0.0023	0.0000	0.0013	0.0009	0.1390	-0.0033 ***	0.0007	0.0000
edu_lev	-0.0291 *	0.0168	0.0830	-0.0202 ***	0.0065	0.0020	-0.0057	0.0041	0.1640
health	0.0597 **	0.0264	0.0240	-0.0066	0.0082	0.4160	0.0104 *	0.0057	0.0680
edu_lev_sp	0.0224 *	0.0134	0.0950	0.0072 *	0.0040	0.0710	0.0010	0.0031	0.7470
health_sp	-0.0448 *	0.0269	0.0950	0.0252 ***	0.0082	0.0020	-0.0024	0.0055	0.6670
d_ch	0.1245 ***	0.0196	0.0000	0.0069	0.0067	0.3010	0.0092 **	0.0038	0.0150
d_tr	0.0236	0.0426	0.5800	-0.0068	0.0116	0.5560	0.0108	0.0110	0.3280
agrplot	0.0771 ***	0.0290	0.0080	0.0012	0.0084	0.8890	0.0331 ***	0.0084	0.0000
y_2002	-0.0293	0.0421	0.4870	0.0157	0.0137	0.2510	-0.0192 **	0.0095	0.0440
P(jst=X)	0.3428			0.0296			0.0267		
	LW			**LL**			**HH**		
age	0.0063 ***	0.0019	0.0010	0.0051 ***	0.0013	0.0000	0.0012	0.0015	0.4250
edu_lev	0.0314 ***	0.0108	0.0040	-0.0019	0.0019	0.3230	-0.0515 ***	0.0142	0.0000
health	-0.0146	0.0179	0.4150	0.0025	0.0028	0.3770	0.0001	0.0153	0.9960
edu_lev_sp	-0.0200 **	0.0092	0.0300	-0.0004	0.0015	0.8060	-0.0271 ***	0.0099	0.0060
health_sp	0.0097	0.0182	0.5920	0.0073 **	0.0034	0.0350	0.0163	0.0155	0.2910
d_ch	-0.0791 ***	0.0160	0.0000	-0.0160 ***	0.0042	0.0000	0.0405 ***	0.0130	0.0020
d_tr	-0.0453 *	0.0263	0.0860	0.0029	0.0046	0.5320	0.0000	0.0235	0.9990
agrplot	-0.1884 ***	0.0265	0.0000	-0.0544 ***	0.0146	0.0000	0.5347 ***	0.0239	0.0000
y_2002	-0.0010	0.0264	0.9700	-0.0021	0.0039	0.5890	-0.0482 **	0.0227	0.0340
P(jst=X)	0.1361			0.0180			0.1584		
	WW			**WL**			**LH**		
age	0.0014	0.0023	0.5290	0.0010 **	0.0005	0.0460	0.0015 **	0.0007	0.0200
edu_lev	0.0764 ***	0.0140	0.0000	0.0034 *	0.0020	0.0990	-0.0027	0.0023	0.2390
health	-0.0574 **	0.0256	0.0250	0.0000	0.0024	0.9880	0.0061 *	0.0034	0.0750
edu_lev_sp	0.0188	0.0119	0.1150	-0.0027	0.0017	0.1070	0.0008	0.0014	0.5760
health_sp	-0.0178	0.0261	0.4960	0.0044	0.0029	0.1330	0.0020	0.0025	0.4180
d_ch	-0.0769 ***	0.0195	0.0000	-0.0023	0.0027	0.3870	-0.0068 *	0.0035	0.0520
d_tr	0.0131	0.0393	0.7380	-0.0003	0.0036	0.9250	0.0020	0.0039	0.6030
agrplot	-0.3806 ***	0.0318	0.0000	-0.0337 ***	0.0117	0.0040	0.0110 **	0.0052	0.0360
y_2002	0.0752 *	0.0392	0.0550	0.0065	0.0052	0.2140	0.0023	0.0037	0.5300
P(jst=X)	0.2707			0.0074			0.0104		