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Migration and Inheritance Practices in the Bolivian Altiplano

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Abstract

Most theoretical approaches to inheritance assume that parents are the key actors of bequest decisions. However, in a context of important migration, children may play an active role in the inheritance process. Based on a unique data set collected at both ends of the migration link in Bolivia, we are able to show that migrant children significantly influence the way inheritance is distributed through their decision to accept or refuse their share of inheritance. This decision is not only influenced by the migrants need for economic security but also by the transaction costs associated to land ownership. Yet, land inheritance is not completely driven by the demand for inheritance of the children. Parents continue to play an important role and the identity of the person responsible for the migration decision emerges as an important determinant of their bequest decision.

Keywords: land access, inheritance, migration, transaction costs
JEL classification: D10, O12, O15, Q15

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1 Introduction

Land tenure is one of the key determinants of the welfare of rural households, and inheritance from parents remains the principal mean of access to landownership for most families. The role of land inheritance is all the more crucial in developing countries where land markets are highly imperfect and sometimes close to nonexistent. Yet, outside opportunities provided by migration could reduce the importance of land tenure for young rural adults. Migration is indeed a major phenomenon in developing countries and as such has probably had a significant impact on inheritance practices in the native communities of the migrants. On the one hand, parents might change their inheritance strategy and choose to exclude some children, namely those who migrated, from land bequest because they perceive them to have a less urgent need for land than their non-migrant siblings. On the other hand, potential heirs might start to play a more active role in the inheritance decision and some migrant offspring might choose to forgo their share of inheritance. This decision might stem from altruistic motivations. In a context of land scarcity, some migrant children might indeed choose to forfeit their rights in favour of more needy siblings. However, high transaction costs and the relatively low benefits of land property compared to urban earnings could also explain the migrants' decisions to forsake land inheritance.

So far, in the economic literature, inheritance strategies have been principally approached from the parental perspective, assuming that parents are the ultimate decision makers in the inheritance process. In this context, the motives driving the parents' decision to unequally bequeath their assets have received significant attention from scholars in different disciplines and three explanations have been put forward.

The first explanation for unequal bequest is based on the assumption that parents take their decisions following a set of predetermined rules or norms. These will lead to either single heirdom, as it was the case in Europe around the eleventh and twelfth century, or unequal multiple heirdom, favouring sons over daughters, for example. The presence of economies of scales in military expenditure, indivisibility of political power (see Platteau and Baland 2001 for a thorough review), legacy of patriarchy (ibid.) or the maximization of family wealth (Chu 1991) have been advanced as possible explanations for the practice of exclusive inheritance.

Altruism of the parents has been suggested as a second explanation for unequal bequest (Becker 1974; Becker and Tomes 1979). Here, the central idea is that altruistic parents want all of their children to be equally well off. Consequently, they give a higher share of inheritance to those children who are less wealthy in order to equalize the marginal utilities of their children. Although this second explanation might seem rather intuitive, the evidence is mixed. Light and Mc Garry (2004) observe that in a context of important income differences between children, altruism is evoked by the parents to explain unequal bequest and Tomes (1981) finds a strong significant compensatory effect for inheritance based on US data. However, later studies for the USA and France (Wilhelm 1996; Arrondel and Lafferrère 1992) find only limited or even no support for the altruistic model.

The last motive purported to lie behind unequal bequest refers to exchanges between parents and their children. In exchange models, bequest is used by the parents as either a payment for services such as household care, money transfers or remittances provided by the children

(Cox 1987; Cox and Rank 1992) or as an enforcement device to insure that children comply with the obligations they have contracted against their parents (Hodinott 1994). In this context, the strategic bequest model of Bernheim et al. (1985) can be particularly highlighted. Their model is based on the assumption that parents try to influence their children's behaviour by withholding part of their wealth for bequest and by conditioning an children's inheritance share on her caring behaviour. In this setting, the care provided by the potential heirs will increase with family wealth and with the credibility of the threat of disinheritance. Using migration data from Botswana, Lucas and Starck (1985) show that remittances tend to increase with parental wealth. Hoddinott (1992), Schrieder and Knerr (2000) and de la Brière et al. (2002) find the same results for Kenya, Cameroon and the Dominican Republic respectively. Finally, in the context of a matrilineal ethnic group in rural Ghana, La Ferrara (2007) shows that an increase in the threat of disinheritance increases inter-vivo transfers from children towards their parents.

To our knowledge there is, with one important exception, no study that considers the active role of potential heirs in the inheritance decision. In their study of communities of the Peruvian Highlands Goetghebuer and Platteau (2010) find indeed evidence that migrant children may choose to voluntarily forsake their share of family land thus appearing as key protagonists in the inheritance process. Due to a lack of suitable data the authors were nevertheless unable to clearly distinguish between the strategic bequest theory and what they label the demand for inheritance theory.

The assumption that parents take the bequest decision might be reasonable in a context of low migration or for regions which are characterized by land abundance, low transaction costs, and well-functioning land markets. But this assumption is less appealing for most developing countries. In this respect, the Bolivian Altiplano is representative of many other regions in the developing world where malfunctioning land markets, land scarcity and emigration have become key features of rural life. Yet, one aspect makes the Altiplano particularly interesting to study: the *cargo* system that applies to all landholding families. In the communities of the Bolivian Altiplano, access to land is preconditioned on the fulfilment of different types of community charges and duties. Household heads of landholding families have to contribute to community projects by providing money and labour, take regularly part in assemblies, and even more important, they have to assume authority positions following a rotation principle. During their assignment, they are expected to incur important financial burdens and devote a significant amount of time to their task. This is because authorities must organize and finance different ritual festivities and some mandates require regular presence of the office holder. Moreover, it is not possible to avoid these duties as most positions include ritual functions and a neglect of those is believed to be harmful to the community. In two out of the eight communities of our sample community members have lost their land because of a neglect of community duties. In addition, the possibility of land withdrawal as punishment for the non-respect of these duties has been mentioned in all the communities. Land tenure is therefore associated with high costs in the Bolivian Altiplano and while the benefits of land ownership presumably exceed the costs for most members living within the community it is far less obvious if this is also the case for migrants who reside outside of the community. For the latter, some community charges and duties may prove especially constraining possibly prompting them to forgo their land rights.

The identification of the role of potential heirs in the inheritance decision is the major contribution of this paper. We show that a significant percentage of migrant children choose to give up their inheritance share. This has important welfare implications. While the value of

land may seem to be comparatively low for migrant children compared to their non migrant siblings, this is not true in most developing countries where labour markets are highly volatile and most rural migrants work in the informal sector without a contract and job security. In this context of high uncertainty, guaranteed land access in the native community provides a valuable fall-back option for migrants. Understanding whether children chose to forsake their claim on family land or whether the parents denied them access to land in the community is thus very important. Yet, it is not sufficient to draw welfare implications. Indeed we also have to analyse the motives behind migrants' decisions to give up land inheritance. We will show that high transaction costs associated to landownership are among the main determinants of this decision and that these costs might drive migrants with low revenues and precarious work conditions to give up inheritance. Finally, we analyse the determinants of the parental bequest decision and highlight the important role of one factor which has not yet been studied in the context of the inheritance decision, i.e. the identity of the person responsible for the migration decision.

The distinction between the role of parents and potential heirs in the inheritance process and the study of the impact of the migration decision is only possible thanks to the unique structure of our database. Indeed, data concerning migration practices and the inheritance process were collected at two levels: at the level of the migrant and at the level of their family members still living in their native community. This approach enables us to compare the answers of parents and their children and allows us to clearly identify the person ultimately responsible for the inheritance decision. Moreover, the availability of information at the two ends of the migration link also permits us to study the factors which influence the inheritance decisions of both protagonists.

The outline of the paper is the following: Section 2 presents information about the data structure, Section 3 introduces the main variables of interest, Section 4 describes our estimation strategy, Section 5 provides the results, and Section 6 concludes.

2 Data

A survey was conducted at both ends of the migration process. Detailed information on inheritance practices, intra-household organization of property and usufruct rights, the children's migration experience and the caring attitude of children towards their parents were gathered from migrants and their family members still living in the communities. Community surveys have first taken place in eight Aymara communities in the Bolivian Altiplano from October 2008 to February 2009. A year later a migrant survey was conducted in La Paz and El Alto during the same period.

2.1 Sample communities

The eight communities of our sample have been chosen based on their distance from La Paz, so as to try to maximize the variation in the incidence of migration between villages. The community dataset is composed of two parts: data collected at household level, and data collected at community level.

Household survey

In each of the eight communities, sixty households were drawn at random and were questioned following a methodology developed by Goetghebuer and Platteau (2010). Respondents (husband or wife) completed a parent-household and/or couple-household questionnaire. Couple-household questionnaires include questions concerning the inheritance rules that the respondents have adopted, or intend to adopt, vis-à-vis their own offspring and questions about the respondent's children interest and participation in land tenure and migration experience. Parent-household questionnaires, on the other hand, contain questions regarding the respondent's parents' bequest decision and their childrens' interest in land ownership and migration experience. Whenever possible, we collected three family stories per couple (one for the husband's parents, one for the wife's parents, and one for the couple). However, this was only possible for a limited number of families. Indeed, we chose to collect couple questionnaires only for households in which all the children were aged fifteen or above. This is because for those households one can reasonably assume that the number of children is known and should not increase in the future, and that the migration decision has been taken for all of the family members at the time of the interview. Also, we did not collect parent-household questionnaires for women who were not born in the community since inheritance and migration rules might be different in their native communities. In addition, to avoid redundant questionnaires and with a view of reducing the length of the interview, we did not collect data concerning one particular family story if we were already in possession of the data as a result of interviewing another family member. Finally, because of the level of detail and the ensuing length of time needed to complete one questionnaire some respondent couples refused to complete all three questionnaires. Our household-community sample is consequently composed of 454 households (295 parent-household questionnaires and 159 couple-household questionnaires) representing 1,924 individuals.

During our interviews with family members living in the communities, we paid special attention to the heirs' role in the inheritance decision and to the question as to whether some children expressed disinterest in the land granted by their parents, perhaps driving them to refuse or give up the bequest. Concerning migration, emphasis was put on the identification of the person responsible for the migration decision, community rules and norms associated to migration, and the structure and organization of migration networks.

Community survey

Three community authorities, the community head, and two council members were interviewed about community norms associated to customary land tenure rights, land conflicts, inheritance rules, migration flows, migration norms, community governance structures, community investment projects, and other general community characteristics.

2.2 Sample migrants

Migrant surveys have been conducted in La Paz and El Alto, the two main poles of attraction for migrants from the Bolivian Altiplano. Our migrant sample is constituted of migrants belonging to the households interviewed during the community survey. Tracing the migrants has been an extremely difficult task because the family members living in the communities of origin usually did not know the address of the migrants. As a consequence, we had to rely on hand drawings of family members living in the community and community-based migration networks to find the migrants. Moreover, due to its huge expansion, most streets in El Alto do

not possess a name and house numbers are randomly attributed making it even more difficult to locate someone. Consequently, we were only able to collect 354 migrant questionnaires out of a total of 700 migrants declared as living in La Paz or El Alto by our 454 rural households. Given the important attrition rate, we have to consider the possibility of a sample bias. However, based on the information we collected from the family members in the community of origin we can conclude that, concerning the key aspects of our study, the migrants whom we did not get to interview are not statistically different from the migrants we surveyed in the second round .Our final household sample is composed of 871 individuals: the migrants interviewed during the second round and their siblings.

During the migrant survey, we collected detailed data on the migrants' interest and involvement in the family farm in their native community, their migration experience, work conditions, social network in La Paz and El Alto and relations with family members that stayed behind.

3 Key variables and descriptive statistics

3.1 Inheritance

Land is the main bequeathable asset for families in the Bolivian Altiplano. On average, the parents of the final household sample hold 19 hectares of land (Table 1). This seems large compared to family estates in some other countries, yet scarcity of cultivable land and poor soil quality are important issues for almost all households of our survey communities. Land productivity is very low as only a very limited number of vegetables can be cultivated at high altitude (4000 m above sea level) under the harsh weather conditions of the Altiplano. There are also important differences in terms of land holdings in our sample. The biggest landowners, belonging to the highest decile of the land distribution, hold more than 40 hectares whereas the family estates, from the lowest decile of the land distribution are composed of less than 130 m².

Table 1: Family assets

	Mean	Median	Std. Dev.	Min	Max
Land size	19	6	38.76	0	217
Number of sheep	33	20	35.3	0	200

Source: see text.

Inheritance distribution

Inheritance distribution follows an egalitarian norm in the Altiplano and it is very rare that a child living in the community is excluded from inheritance. In our sample, among the children for whom inheritance did already take place only one biological child, still alive at the moment of the inheritance, was excluded by his parents from inheritance. However, this egalitarian rule does not seem to apply to migrant children among which 40 per cent

experienced exclusion and 36 per cent were favourably treated[1]. During the interviews, parents cited migration, a lack of interest in land and poor attention from their offspring as the main reasons why some of them received unprivileged treatment. They explained that some children received privileged treatment because they either cared more for their parents or showed more interest in land.

Migrants' interest in land

The lack of interest in the parents' land was confirmed during interviews of the migrants. Thirteen per cent declared that they told their parents that they were not interested in their land, and 12 per cent stated that they had refused or given away the land bequeathed to them (Table 2). Moreover, 23 per cent of the migrants were unable to report the size of their parents' landholdings, which also reflects a relatively low interest in land.

Table 2: Migrant childrens' interest in land

	%
Migrants informed parents that they were not interested in inheriting land	13.03
Migrants refused their share of inheritance	6.97
Migrants gave away their share of inheritance	5.26

Source: see text.

3.2 Migration

Because of the difficult living conditions within the communities many young adults have chosen or were forced to leave their native communities. At the time of the survey, 84 per cent of the families interviewed in the first round counted at least one migrant, and 57 per cent of the children belonging to the households of our community sample had migrated. In the Altiplano, migration is with very few exceptions permanent and only 4 per cent of the children who have migrated have returned to their community after a short period of time. However, 38 per cent of the migrants interviewed in La Paz or El Alto plan to move back to the community in some distant future. Urban centres within Bolivia are the main destinations for the migrants of our sample, and La Paz and El Alto alone attract 72 per cent of the migrants belonging to the households of our community sample. Important wage differentials make neighbouring South American countries such as Argentina, Chile and Brazil attractive for migrants from the Bolivian Altiplano and 7 per cent of the migrants of our community sample chose to migrate to this second type of destination. Surrounding communities constitute a third important destination for rural Bolivian migrants (14 per cent). Migration starts at a very young age and the migrants of our sample left their community at the age of 18, on average.

[1] We consider on the one hand that a child receives a fair treatment during the inheritance process if her share of land inheritance is equal to the total amount of land owned by her parents divided by the number of children. On the other hand, we consider that a child is unfavourably or favourably treated during the inheritance process if she receives a smaller or respectively larger portion than her fair share.

Migration decision

It appears that as many as 77 per cent of the migrants took themselves the decision to migrate while the rest of them were persuaded or even forced by their parents to leave (Table 3). Among the children who stayed in the community, 72 per cent chose themselves to stay in the community while the others remained following their parents' decision.

We consider that parents are responsible for the migration decision of one of their migrant children in the three following situations: (i) the parents wanted a child to migrate against the child's will; (ii) both parents and child agreed and the parents took the final migration decision; (iii) both wanted the child to migrate and the child took the migration decision to please their parents.

Table 3: Migration decision for migrants

	%
Parents wanted child to migrate while child did not want to	7.36
Parents and child wanted the latter to migrate and parents took the final migration decision	6.35
Parents and child wanted the latter to migrate and child took the migration decision to please parents	9.03
Parents and child wanted the latter to migrate and child took the migration decision but not to please parents	46.82
Child wanted to migrate while the parents disagreed	30.43

Source: see text.

It is important to note that we use data collected at the level of the migrants to ascertain who took the migration decision. During the interviews, parents were reluctant to admit that they pushed their children to migrate whereas the children felt more at ease to discuss the subject. Another important issue concerns the recall nature of the data. Migrants could be tempted to somehow modify ex-post their role in the migration decision, for example by adapting their statement in function of the success of their migration experience. Several elements although indicate that this is not a problem in our case. First, the part of the questionnaire focusing on the migration decision has been constructed so as to avoid this type of problem: we did not directly ask who took the migration decision but constructed the variable from very detailed questions. Moreover, during the interviews, we paid special attention to this part of the questionnaire and we gained the impression that migrants were not unwilling to discuss the topic. Second, the information obtained from siblings, whenever possible, confirmed the statements of migrants in a large majority of cases. Finally, we observe that parents have a higher propensity to send away their first born children and that those children left the community at a younger age than the children who themselves took the decision to migrate.

Network

Migration networks play an important role in the migration decision of most of the migrants who migrated on their own will. The migration network provides the migrant not only with a place to stay upon his arrival (73 per cent of the migrants went to live with an acquaintance) but also with a mean of access to the urban job market (jobs in La Paz and El Alto are almost exclusively obtained through acquaintances).

Table 4: Network size

	Average network size	Std.dev.	Average family network size	Average friend network size
Full Sample	3.88	3.825854	3.12	0.77
Migrant for whom parents took the migration decision	2.86	3.639428	2.29	0.57
Migrant who took own migration decision	4.19	3.833257	3.36	0.83

Source: see text.

Most migrants (85 per cent) knew someone in their first destination and the average network size upon arrival in La Paz was 4 (Table 4). Yet, the size of the initial network is significantly higher for migrants who took themselves the migration decision compared to migrants for whom the parents took the migration decision.

Work

Upon arrival almost all migrants started to work immediately. At the time of our interview, 54 per cent of the migrants were self-employed, of which 37 per cent owned their own business. The three main occupations for men are driver, builder, and tailor, while women mainly work as shopkeepers, stallholders or domestic servants. On average, a migrant earns 1350 bolivianos per month[2]. There are however important income inequalities: the richest 10 per cent earn more than 2560 bolivianos per month, while the poorest 10 per cent of the sample earn less than 400 bolivianos.

A huge majority of parents were unable to tell us the type of occupation of their migrant children in the city. Because of this, we will use the fact that a migrant owns the home she is living in as a measure of her wealth in the inheritance function. Indeed, one can assume that parents are better informed about the home ownership status of their migrant child than about the profession or the income earned in the place of destination. In our migrant sample 53 per cent of the migrants owned the place they were living in.

2 At the time of the survey the exchange rate was: 1US dollar = 7 Bolivianos

3.3 Education

The average number of years of education is very low for the children of the community sample. Unsurprisingly men have higher levels of education than women, 9 years against 6 years on average (Table 5). In our communities parents generally pay for the education of their children and a lack of financial resources at the level of the parents obliges many children to drop out of education even before completing primary school. In a context of important liquidity constraints, parents plausibly choose to educate those children who show the highest abilities at school. We consider that parents interpret the fact that a child belongs to the five best students of their class as evidence that they possesses the capacities to study and we measure the childrens' abilities based on this information. A significant positive correlation between a child's abilities and the number of years of schooling completed then emerges from our data.

Table 5: Level of education

	Full sample	Migrant	Non-migrant	Women	Men
Years of education	7.40	7.73	6.61	6.05	8.71
No education	4.34%	3.30%	6.81%	7.25%	1.51%
Primary	56.12%	54.95%	58.72%	65.8%	46.73%
Secondary	33.29%	34.8%	29.79%	23.06%	43.22%
Higher education	6.25%	6.96%	4.68%	3.89%	8.54%
Best student	23.01%	24.29%	19.82%	19.15%	26.55%

Source: see text.

We also observe a higher proportion of high-ability children among migrants; the latter are also better educated than their non-migrant siblings (Table 5). This could indicate a link between the parents' decision to selectively educate some of their children and their decision to send some of them away. This seems not to be the case in our sample. There is evidence that parents selectively educate their more able children with the objective of sending them away in the future (we observe a significant positive correlation between a child's abilities and the parents' desire for the child to migrate). Yet, there is no evidence that parents play a more important role in the migration decision of more able offspring; there is no significant correlation between a child's abilities and the identity of the person responsible for the migration decision.

3.4. Care

Relations between parents and their migrant offspring are based on frequent visits. On average, migrants whom we interviewed visited their parents 11 times a year and 79 per cent of them returned at least once a year to help their family during the harvest period. Remittances are almost non-existent in the families of our sample, similar to the observation of Goetghebuer and Platteau (2010) for the Peruvian Andean communities. While migrants make gifts in cash or in kind at the time of their visits, the amounts or value of those gifts are negligible. During the interviews, parents told us that they did not expect the migrants to send

them money or gifts because the costs of sustaining a family are much higher in the city and because living conditions are also very difficult outside of the community. Parents only require from their migrant children that they keep contact and visit regularly.

4 Empirical strategy

4.1. Specification of the inheritance function

The central question of this paper is whether potential heirs play an active part in the inheritance decision. To address this question we use individual-level data collected from both the migrants and their family members who stayed in the native community.

As a first step, we estimate an inheritance function for migrant children. It has the following form:

$$x_{ij} = \alpha_{ij} + \beta d_{ij} + \gamma c_{ij} + \delta Y_{ij} + \eta Z_j + \varepsilon_{ij} \qquad (1)$$

where x_{ij} stands for the treatment, of migrant child i belonging to family j, during the inheritance process; d_{ij} is a dummy variable which takes value 1 if a child declared to his parents, at the moment of inheritance or prior to the event, that she was not interested in the family land or if she rejected her share of inheritance at the moment of inheritance; c_{ij} is a dummy variable which takes value 0 if the parents took the migration decision and value 1 if the child took it; Y_{ij} is a vector of individual characteristics which can influence land inheritance while Z_j is a vector of family characteristics.

Our main variable of interest concerns the self-declared disinterest of the migrant child in land in the native community. Indeed, we want to test the hypothesis that heirs play an active role in the inheritance process. If this hypothesis is correct we should observe a positive relationship between d_{ij} and unfavourable access to family land.

A second explanatory variable we are interested in is the identity of the person responsible for the migration decision. In a context of important migration, one might wonder whether the circumstances surrounding the migration decision have an impact on the parents' bequest decision. In the presence of land scarcity, parents may be tempted to push some children to migrate in order to relax the land constraint. In addition, some children may themselves decide to leave the community with a view of escaping poverty and trying their luck outside of their native community. In both cases, we expect inheritance patterns to be unequal between siblings in the sense that either at the prompting of the parents or following their own decision some children will forsake their inheritance share or accept a lower share than their siblings who have remained in the community. In this case it should be immaterial whether the parents or the children made the migration decision. Things may not be so simple, however. On the one hand, parents might choose to send away some offspring whom they will support during the beginning of the migration process and compensate the others by granting them a higher share of inheritance. If this is true, then children for whom parents took the migration decision will have a higher probability of receiving a smaller share of inheritance and we will observe a positive relation between c_{ij} and exclusion from land inheritance or unfavourable access to it. On the other hand, parents might want to punish children who migrated against their will by granting them a lower share of inheritance.

Finally, parents might feel a higher sense of responsibility towards offspring whom they sent away to face an uncertain future and they might want to provide them with the option of returning to the community in case they lose their work.

Two types of econometric models are used to estimate the inheritance function depending on the dependent variable. We rely on a probit specification[3]to determine the factors explaining exclusion from land inheritance, a dummy variable which is equal to 1 if the child receives no land and 0 otherwise. To analyse the factors explaining unprivileged, fair, or privileged treatment during the land inheritance process we use a generalized ordered probit model with x_{ij} ordered from unprivileged to privileged through fair treatment. The generalized ordered probit is the most appropriate model in this case as it takes into account the ordered structure of our dependent variable and relaxes the parallel lines assumption which does not hold in our case. In both specifications we control for community effects and cluster effects at family level.

4.2 Endogeneity

Because of the structure of our data our estimation strategy is potentially vulnerable to different endogeneity biases.

Childrens' disinterest in family land

A first bias might occur if strong equal sharing norms dictate inheritance decisions in the society, as it is the case in the Bolivian Altiplano. In this context, parents might be ashamed to admit that they excluded one of their children from inheritance and consequently declare that the child herself refused the land. This seems, however, rather implausible in our survey area—during the interviews, parents expressed indeed genuine disarray concerning the lack of interest of their migrant offspring in land. Some of the parents even told us that they did not know to whom they will be able to bequest their land because all their offspring had migrated and none of them is interested in the land. This does however not completely rule out the possibility that some parents tried to justify their bequest decision by declaring that the children were not interested in land. To test for that possibility we therefore run another regression where we use data collected at the migrants' level concerning the children's self-declared lack of interest in land inheritance as explanatory variable.

A second problem concerns reverse causality. Children who have not inherited land or do not expect to receive land from their parents might prefer to declare that they do not want to inherit land. This would happen if the excluded children prefer to be perceived as the master of their own fate, rather than as the unfortunate victims of a parental decision. Fortunately, we are able to exclude this possibility of reverse causality by using the twofold structure of our data. Since we have collected information about the migrant children's disinterest in land inheritance from both the migrants themselves and their family members remaining in the communities of origin, we can use the discrepancies in the answers of the two types of respondents to reject reverse causality.

If it is true that children declare that they do not want to inherit land because they anticipate that they will not receive it the following observation should be true: the proportion of

[3] We also used a complementary log log specification because of the high proportion of zeros (80 per cent) which only reinforced our results.

children barred from land inheritance among those who declared that they told their parents that they were not interested in land is identical whether the statement has been or not confirmed by other family members. It is revealing that the proportion of excluded children turns out to be significantly different between the two categories (Table 6). Indeed, all the children for whom the declaration of disinterest was confirmed were excluded while this is only true for 16.4 per cent of those for whom disinterest was not confirmed by family members. Moreover, the proportion of children excluded from land inheritance among the latter category is not significantly different when compared to migrant children for whom both migrant and family members declared that the migrant did not tell their parents that they were not interested in family land.

Table 6: Proportion of excluded children

		Proportion of excluded children	Std. Err.	99% Conf. interval	
Migrants stated that they did not tell parents that they did not want to inherit family land					
(i)	Confirmed by family members	0.196	0.015	0.156	0.235
(ii)	Not confirmed by family members	0.677	0.086	0.457	0.898
Migrants stated that they told parents that they did not want to inherit family land					
(i)	Confirmed by family members	1	0		
(ii)	Not confirmed by family members	0.164	0.034	0.077	0.251

Source: see text.

Migration decision

An initial problem one could worry about concerns reverse causality between the manner a child is treated during the inheritance process and his migration decision. One can reasonably assume that a child who was denied land access has a higher probability to take the decision to migrate. However, inheritance takes almost always place after the migration decision was made by the offspring in our communities, namely when parents are too old to cultivate their land or when the parents die. But this is not sufficient to rule out reverse causality. Indeed, one can still argue that offspring are able to anticipate the results of the inheritance decision based on their personal characteristics and take the decision to migrate anticipating that they will not receive land from their parents in the future. Yet, this is not very plausible for Andean communities where the equal distribution norm between children living in the community is very strong. Childrem living in the community are only excluded for very serious motives and, as we have seen in section 3, the probability of exclusion is close to zero for children remaining in the community.

A second bias could occur if parents justify their bequest decision on the basis of the offspring's migration decision. However, we avoid this type of bias because we use data on the migration decision collected at the level of the migrant.

Finally, given our interest in elucidating a possible causal relationship between the identity of the person responsible for the migration decision and the outcome of the inheritance decision, we have to address the problem of omitted variables. As robustness check for our result concerning the migration decision we will use an instrumental variable approach in which the instrument is the size of the network available to the migrant in La Paz and El Alto before migration. There exists a general consensus in the literature that migration networks play an important in the migration decision (see the studies on rural-urban migration in India (Banerjee 1984, 1991), Germany (Bauer and Zimmerman 1997) and the Philippines (Caces 1986; Findley 1987). We have seen in Section 3 that children who themselves take the decision to migrate know a larger number of persons in La Paz and El Alto prior to migration, and we use this result to instrumentalize the identity of the person responsible for the migration decision in our inheritance function.

4.3 The demand for inheritance function

After establishing the role of migrants in the inheritance process we will turn our attention to the determinants of the migrant's disinterest in land in their native community. We anticipate that the *cargo* system will play a determining role in the migrant's decision to refuse land in the Bolivian Altiplano. It is thus worth providing some more details about the *cargo* system so as to better understand the costs that it involves and the possible variations that are empirically exploitable.

The cargo system

Indeed, in the Bolivian Altiplano, structural elements of traditional Andean organizations are still prevalent today, and the pre-conquest communal decision making power concerning the disposition of land remains largely intact (Albó 1988; Barragn et al. 2007). Neither the Spanish invaders nor the ruling hispanicized national elite of the post-revolutionary period were able to destroy the strong communal structures of the Andean peasant communities of Bolivia. Andean peasants accepted, without really challenging their legitimacy, the heavy tax and labour burdens imposed by the ruling classes, but on the other hand they never accepted to abandon their cultural heritage and their ethnic identities (Albó 1988; Rasnake 1988; Klein 1992).

Within the communities of the Bolivian Altiplano, the assembly and the *cargo* system are perceived as fundamental institutions. They constitute the main vectors of community cohesion and are the real pillars of the community. The assembly, composed of the heads of the landholding families, is the highest level of authority in the community. It is in this assembly that the most important decisions concerning work organization, administrative questions, and relations with the outside world are taken. Participation in the assembly is very important and even mandatory in some communities. If possible, resolutions are adopted by consensus so that all the members of the community regard them as binding.

The *cargo communales* have to be assumed by the heads of landholding families in return to access to land. Authority positions are attributed following a rotation principle, and every head of landholding households has to assume different offices during his lifetime, ideally

ascending the entire hierarchical ladder. The rotation principle for high positions within the *ayllu*, the *kurakas*, was established by the Spanish authorities after the rebellion of the 1780s led by kurakas from different parts of the Andeans. Before this era, kurakaship followed the rule of hereditary succession, while lower authority positions, the ones concerning the organization of smaller *ayllu* units, were probably already attributed following a rotation rule (Rasnake 1988). The fulfillment of the *cargos* implies important financial, labour and time costs since authorities have to organize and bear the costs of different ritual festivities and some authority position require weekly presence in the community. Yet, holding an authority position is seen as a service to the community and does not award any power to its holder. Moreover, the prestige gains proceeding from a *cargo* position are comparatively low leading some members of the community to try to eschew such duties. However, most positions include important religious and ritual functions and the community holds therefore the right to take away land from any member who does not serve his *cargo* (Albó 1988; Rasnake 1988). This said, there exist significant differences in the stringency and enforceability of the rules related to landownership between *ayllus* (communities existing since pre-colonial times) and ex-haciendas (communities originating from the dissolution of the highland haciendas during the 1953 agrarian revolution). While *ayllus* have maintained most of the ancient organizational patterns, ex-hacienda communities have adapted some modern and less restrictive organizational structures. Moreover, in the course of the land revolution, land titles were distributed to members of ex-haciendas and while only a very small number of today's community members is still in the possession of a valid land title this renders the threat of land confiscation less credible in these communities.

Empirical specification of the demand for inheritance function

In the light of the above we include the characteristics of the community regarding the importance of the *cargo* system into our demand for inheritance function for migrants:

$$Refusal_{ij} = \alpha_{ij} + \beta wage_{ij} + \gamma ayllu + \mu\ ayllu*wage + \delta\ Y_{ij} + \eta\ Z_j + \varepsilon_{ij} \qquad (2)$$

Refusal is a dummy variable which is equal to 1 in the following cases : (i) the migrants declared that they were not interested in inheriting land, (ii) the migrants refused the land inheritance at the time of bequest, (iii) the migrants donated it.

Migrants draw three main economic benefits from holding land in their native community: First, there are the incomes obtained from the cultivation of the land even though these are small in the Altiplano of Bolivia where the soil is very poor. Second, we have the insurance benefits associated to community participation (Stark and Levhari 1982). Finally, some migrants may participate in the life of the community because of the political benefits expected from participation. Since the emergence of the 'indianist' movements the membership in a community has indeed become a master card in the political game. These benefits, especially of the first two types, are probably more important for less wealthy migrants so that we expect a positive relation between migrant's income and the probability that he refuses land inheritance.

However, one must also take into account the important costs associated to landownership in the Bolivian Altiplano, and these costs will almost certainly be more constraining for poor migrants. In particular, we anticipate that the migrant's propensity to refuse land bequest is higher if the native community belongs to the *ayllu* category instead of being an ex-hacienda. This relationship is expected to be particularly strong for less wealthy migrants who are less

able to bear the costs arising from the *cargo* system such as it prevails in *ayllu* communities. We expect thus a positive coefficient for γ and a negative coefficient for μ. The sign of β will depend on whether the costs or the benefits associated to land ownership will play a more dominant role in the migrant's inheritance decision in ex-haciendas.

We use a probit specification to estimate the heir's inheritance decision function where we control for cluster effects at family level and community effects. The use of an interaction term in non-linear models is slightly more complex than in linear models and we will use the methodology proposed by Norton et al. (2004) to test for the sign and the significance of the interaction term.

Before discussing our results it is important to stress that, because of the nature of our data and the complexity of the question under investigation, we cannot claim to establish causal relations between our dependent and explanatory variables. We believe, however, that we are able to show interesting correlations which enable us to better understand the factors underlying a child's decision to refuse his share of land inheritance in his native community.

5 Results

To analyse the impact of a child's lack of interest in land on land access we estimate the inheritance function (1) for the migrant children for whom we were able to collect first-hand information concerning the migration decision and other important personal characteristics.

5.1 Inheritance function

The key result of our first regression (Table 7 regression (i)) is that children's declared lack of interest in land in their native community has a positive significant impact on exclusion from land inheritance. Children seem thus to play an active role in the inheritance process.

However, because our first regression is based on data collected from family members living in the community, we have to ascertain that this result is not driven by parents who justify their decision to exclude some offspring from land inheritance under the pretext that the offspring were not interested in the family estate. Towards this end, we estimate a second regression (Table 7 regression (ii)) on the basis of the migrant's declared lack of interest as assessed by themselves rather than by family members. We again observe a significant positive coefficient associated to the migrant's disinterest variable which confirms the results of our first regression. The smaller size of the coefficient in the second regression can be explained by the fact that more migrants than family members, living in the community of origin, reported having told their parents that they were not interested in family land. Indeed, some family members might not have been informed about the migrant's preference, some might have forgotten their child's statement or have preferred not to take it seriously. Lack of interest of their migrant children in the family estate hurts many parents who prefer to ignore their children's disinterest and hope that they will change their mind in the future.

Table 7: Impact of heir's inheritance decision

	Probit - exclusion from land inheritance			
	(i)	Average marginal effect	(ii)	(iii)
Migrant declared disinterest (community data)	2.327***	0.386***		
	(0.806)	(0.150)		
Migrant declared disinterest (migrant data)			0.602**	
			(0.284)	
Migrant stated she declared disinterest (not confirmed by family members)				0.191
				(0.307)
Migrant stated she did not declare disinterest (not confirmed by family members)				1.530*
				(0.828)
Migrant stated she declared disinterest (confirmed by family members)				All excluded
Migration decision (child)	0.847***	0.085***	0.605**	1.133***
	(0.285)	(0.027)	(0.246)	(0.295)
Land size	-0.011	-0.001	-0.014	-0.045
	(0.007)	(0.001)	(0.009)	(0.028)
Frequency of visits	-0.027**	-0.003**	-0.010	-0.024**
	(0.011)	(0.001)	(0.012)	(0.012)
Nr. of migrant siblings	-0.105	-0.012	-0.173*	-0.099
	(0.092)	(0.010)	(0.095)	(0.097)
Nr. of non-migrant siblings	0.726***	0.083***	0.619***	0.711***
	(0.180)	(0.021)	(0.154)	(0.187)
Best student	2.133**	0.297**	2.002**	2.299**
	(0.922)	(0.133)	(0.849)	(0.931)
Years of education	-0.045	-0.005	0.005	-0.055
	(0.058)	(0.007)	(0.051)	(0.055)
Best student*years of education	-0.159*	-0.018*	-0.168**	-0.159*
	(0.090)	(0.010)	(0.084)	(0.091)
Child owns own home	0.517*	0.058**	0.451*	0.479**
	(0.269)	(0.028)	(0.251)	(0.245)
Woman	0.616**	0.071*	0.587**	0.838**
	(0.309)	(0.038)	(0.297)	(0.357)
Nr. of children	-0.249***	-0.029**	-0.318***	-0.357***
	(0.090)	(0.010)	(0.085)	(0.103)
Controls				
Nr. Obs.	260		260	257
Wald Chi	146.63		144.19	140.93
Pseudo R^2	0.5608		0.5122	0.5732

Note: *significant at 10% level, **significant at 5% level, ***significant at 1% level. Robust standard errors clustered at family level between brackets.

Source: see text.

Finally, we can exploit the fact that fewer family members than migrants referred to the latter's disinterest in family land as a further mean to reject reverse causality. As pointed out earlier, if children declared to their parents that they were not interested in family land because they had been excluded or anticipated to be excluded from inheritance, than we should observe a significant positive coefficient associated to the disinterest variable irrespective of whether family members confirmed that the migrants had told their parents of their lack of interest. This does however not come out in our data (Table 7 regression (iii)). It is revealing that among the migrants who declared that they informed their parents about their disinterest, only those migrants whose claim has been confirmed by family members have a significantly higher probability of exclusion.

We can therefore conclude that children take an active part in the inheritance decision by voluntarily forgoing their share of family land in their community of origin. Moreover, a lack of interest in family land is among the most important driving forces behind the exclusion of migrant children from land inheritance.

This result thus strongly supports the demand for inheritance hypothesis of Goetghebuer and Platteau (2010). This said, the children's disinterest in land is not the only explanation for the exclusion of some migrant children from land bequest. Parents also play an important role in the inheritance decision and the second objective of this paper is to understand which factors underlie the parents' decision to deprive some of their migrant children from land tenure. Among the factors influencing the parents' bequest decision, the migration decision and more precisely the identity of the person responsible for the migration decision stands out as one of the key determinants. Indeed, children who took themselves the decision to migrate have a significantly higher probability to be excluded from land inheritance compared to children for whom the parents took the migration decision (Table 7 regression (i)).[4] This result can be explained either by the parents desire to punish those children who took the decision to migrate against their will, or by a stronger feeling of responsibility of the parents towards the children whom they sent away. To separate these two explanations we distinguish among the children who decided themselves to migrate those who moved with the agreement of their parents from those who migrated against the latter's will (Table 8 regression (iv)). We see that both types of decision making children have a higher probability of exclusion compared to children whose migration was decided by the parents. Moreover, the difference in the coefficients between the two types is non-significant. Based on this evidence, the second story appears more plausible: parents are more concerned about a child for whom they took the migration decision.

One might wonder if children who themselves took the decision to migrate continue to face a higher probability of exclusion once the land constraint has been relaxed. Indeed, the results of regression (iv) (Table 8) indicate that land scarcity might be one of the driving forces behind the exclusion of some children. In addition, the previous regression seems to indicate

[4] As a robustness check (Appendix A) we also run the same regression using as explanatory variable a migration decision variable constructed by ordering the five levels of implication of the child in the migration decision. Again, we find a significant positive correlation between the level of implication of the child in the migration decision and their exclusion from land inheritance. Furthermore, we changed our definition of the offspring's responsibility in the migration decision. We constructed a new dummy variable considering that children who took the migration decision are responsible for their migration decision independently of whether they did it to please their parents or not. This even reinforces our results concerning the migration decision

Table 8: Determinants of the parental bequest decision

	Probit – exclusion from land inheritance			Generalized ordered probit	
	(i)	(iv)	(v)	unpriv. vs equal and privileged	privileged vs unprivil. and equal
Migrant declared disinterest	2.327***	2.285***	2.200***	2.935***	-1.623
	(0.806)	(0.812)	(0.782)	(0.930)	(1.095)
Migration decision (child)	0.847***		1.248***	1.693***	0.759
	(0.285)		(0.329)	(0.374)	(0.520)
Migration decision (child)		0.968***			
Parents wanted migration		(0.320)			
Migration decision (child)		0.685**			
Parents did not want migration		(0.314)			
Land size	-0.011	-0.011*	0.002	0.026**	0.015*
	(0.007)	(0.006)	(0.008)	(0.013)	(0.008)
Migration decision*land size			-0.024**	-0.014*	0.001
			(0.011)	(0.007)	(0.007)
Frequency of visits	-0.027**	-0.026**	-0.027**	-0.039**	-0.008**
	(0.011)	(0.011)	(0.011)	(0.016)	(0.003)
Nr. of migrant siblings	-0.105	-0.104	-0.104	0.139	0.018
	(0.092)	(0.092)	(0.090)	(0.113)	(0.095)
Nr. of non migrant sib.	0.726***	0.765***	0.756***	0.695***	-0.598***
	(0.180)	(0.199)	(0.180)	(0.193)	(0.198)
Best student	2.133**	2.263***	2.073**	3.079***	0.519
	(0.922)	(0.918)	(0.885)	(0.931)	(0.999)
Years of education	-0.045	-0.038	-0.051	-0.110**	0.026
	(0.058)	(0.059)	(0.057)	(0.052)	(0.055)
Best student*years of educ.	-0.159*	-0.170*	-0.154*	-0.244**	-0.025
	(0.090)	(0.090)	(0.087)	(0.106)	(0.095)
Child owns his house	0.517*	0.493*	0.483*	0.962***	-0.009
	(0.269)	(0.271)	(0.262)	(0.363)	(0.378)
Woman	0.616**	0.624**	0.652**	0.909**	-0.766**
	(0.309)	(0.302)	(0.321)	(0.374)	(0.331)
Nr. of children	-0.249***	-0.251***	-0.278***	-0.231**	0.447***
	(0.090)	(0.091)	(0.094)	(0.098)	(0.119)
Controls					
Nr obs.	260	260	260	279	
Wald Chi	146.63	147.36	160.10	4580.73	
Pseudo R^2	0.5608	0.5629	0.5676		

Note: *significant at 10% level, **significant at 5% level, ***significant at 1% level. Robust standard errors clustered at family level are between brackets.

Source: see text.

that the exclusion of children who took themselves the decision to migrate is not a punishment for past behaviour but may be rather a default option. To test the impact of land size on the probability of exclusion for children who were themselves responsible for the migration decision, we add an interaction term between the migration decision variable and land size. In agreement with our first intuition, we find that land scarcity is the main driving force behind the exclusion from inheritance of children who took themselves the migration decision: these children have a significantly higher probability to be excluded from land inheritance if land size is small, and this probability decreases with land size.

In a last step, we want to assess the impact of the identity of the person responsible for the migration decision on treatment during the inheritance process. We again observe that a child who made the decision to migrate has a higher probability to receive an unfavourable treatment. Yet, the identity of the migration decision maker does not influence the probability to get a favourable treatment (Table 8 Generalized Ordered Probit). This result is in line with the previous results: if it is true that parents avoid excluding children whom they themselves pushed to migrate (because they feel more responsible towards them) and if they only exclude other migrant children because of land scarcity (and not because they want to punish them), there is no reason why the first type of offspring should receive a preferential treatment compared to the latter.

Secondary results

Turning to our control variables, the first result worth highlighting concerns the caring behaviour of children towards their parents. Our measure of care, namely the number of visits of parents by offspring, is significantly positively correlated with land access (Table 7 regression (i)). This result holds when we control for children who gave up their land rights, and is consistent with the strategic bequest theory of Bernheim et al. (1985). Yet, the positive relationship between caring and land access could also be explained by a stronger mutual bond between the parents and some of their offspring. Nevertheless, the strategic bequest theory seems to be the most credible explanation in our case since in the discussions parents often mentioned a lack of caring from their children as one of the main reasons for the exclusion from inheritance. While the strategic bequest theory thus seems to explain the unfavourable treatment of some migrant children during the inheritance process it does not explain the favourable treatment of other migrant children as the frequency of visits is negatively correlated with the probability of receiving a higher share of family land (Table 8 Generalized Ordered Probit). One possible explanation for this rather surprising result could be that parents have a preference for some children to whom they will grant a higher share of land independently of their caring behaviour. Children might anticipate this and care less for their parents.

With respect to family size, we have to distinguish between the number of migrant and non-migrant siblings because these two categories of siblings might have opposite effects on the probability of inheriting land for a migrant. We then observe that a higher number of non-migrant siblings increases the probability of exclusion for a migrant (Table 7 regression (i)). This first result is not surprising in a context of land scarcity where a higher number of children remaining in the community will tighten the land constraint thereby prompting the exclusion of some children. A larger number of migrant siblings, on the other hand, has no effect on the probability of exclusion (Table 7 regression (i)). This latter result could be explained by the fact that the positive effect of a higher number of migrant siblings on land

pressure is offset by the negative effect of an increase in competition between migrant siblings.

Our results regarding education are in line with both the story of selective education and the reward for education story. Indeed, we observe that children with low abilities and low levels of education have a significantly lower probability of exclusion from land inheritance (Table 7 regression (i)). This is consistent with the selective education hypothesis which predicts that children who have received a lower share of education than their siblings will be compensated by a higher share of land if parents invested smaller resource in them because of credit constraints.[5]On the other hand, we observe a reward for education with respect to high ability children (Table 7 regression (i)). This could be explained by the fact that parents attach more importance to the educational achievements of high ability offspring.

Concerning children's wealth, we find a negative correlation between home ownership and land access: being the owner of one's home increases the probability of exclusion by six per cent, on average (Table 7 regression (i)). This result could be explained by altruistic concerns of the parents which induce them to favour offspring who are less well-off and have consequently a higher need of financial transfers and the insurance provided by the fall-back option of land. But, it is also possible that the result arises from exchanges between parents and children. The exchange model predicts indeed that some parents might prefer to stop interacting with wealthy children and consequently exclude them from inheritance if the share of inheritance they have to allow to those children becomes too large (because of the richer offspring's comparatively stronger bargaining position). Yet, if exchange motivations are the main driving forces in the bequest decision, we should observe that a wealthy child, who inherits land, has a higher probability of getting a favourable treatment. This is not the case in our study (Table 8 Generalized Ordered Probit) so that altruism seems to be the most convincing explanation.

Two last significant coefficients are associated to gender and parenthood. First, we observe that women have a higher probability of being denied land access through inheritance (Table 7 regression (i)). This last result can seem surprising as parents have the legal obligation to share land equally between male and female children. Traditionally, however men inherited larger shares of family land than women and it can take much time before new laws replace ancient customs. Second, as expected and as has been found by Goetghebuer and Platteau (2010), migrant children with a bigger family have a lower probability of being excluded from land bequest and have a higher probability of receiving a larger share of land (Table 8).

Further robustness checks

To address the possible endogeneity bias in our estimation of the impact of the identity of the migration decision-maker on the inheritance distribution we propose an IV approach based on migrant's network size prior to his migration. There is significant evidence that migrant networks reduce the initial migration risk by making information about the job market and housing conditions in the migration destination available to those who stay in the community (Taylor 1986; Gottlieb 1987; Boyd 1989). Moreover, migration networks reduce migration costs. They provide temporary lodging (Grossman 1989) and lower the adaptation costs

[5]As we have seen in section 4, there exists indeed evidence that, in our communities, parents cannot afford as much education for their children as they would like to and that parents make the education decision based on the offspring's ability. We expected thus that children with low abilities and low levels of education would have been compensated with respect to children with higher abilities.

(Massey et al. 1987). Finally, networks have a positive impact on employment and wages (Massey et al. 1987; Munshi 2003).

The crucial role of migrant networks in the provision of accommodation and job search is also confirmed for the migrants in our sample as we have seen in section 3. The importance of migrant networks appears nonetheless to differ significantly between those migrants who themselves took the decision to migrate and those who were sent away by their parents. While the migration network played an important role for the former it does not seem to be the case for the latter. Indeed, many migrants sent away by their parents work as domestic servants and were actually recruited by specialized urban agents who visited the rural communities. Moreover, the parents and not the children's network should have driven the migration decision when parents took the initiative and while the two networks might be related they should not perfectly match. We will therefore use the number of individuals whom a migrant child knew in La Paz and El Alto prior to his migration as instrument for the identity of the person responsible for the migration decision (Table 9).

Table 9: Migration decision

	First stage, siblings included	First stage, without siblings
Network size	0.020***	0.020**
	(0.007)	(0.008)
Controls		

Note: *significant at 10% level, **significant at 5% level, ***significant at 1% level. Standard errors are between brackets.

Source: see text.

As a further robustness check, we removed the siblings who were already living in La Paz and El Alto in our measure of the network.

Table 10: Determinants of the parental bequest decision, IV approach

	Probit (ii)	Reduced Form	IV Probit, siblings included	IV Probit, without siblings
Migration decision (child)	0.847***		2.568***	2.700***
	(0.285)		(0.404)	(0.269)
Network size		0.089***		
(without siblings)		(0.0321)		
Controls				
Nr. Obs	260	260	260	260
Wald test of exog.			5.53	7.85

Note: *significant at 10% level, **significant at 5% level, ***significant at 1% level. Robust standard errors clustered at family level are between brackets.

Source: see text.

The results of the IV approach are in line with the results of our main specification (Table 10). The coefficient associated to the migration decision variable remains positive and significant and its magnitude is even higher than in the probit estimation. This suggests that a hypothetical bias is downwards rather than upwards. However, given the restrictions in the first step of the IV probit we do not want to put too much emphasis on the magnitude of the IV estimate. It is nevertheless reassuring that the reduced form and the IV estimates are consistent with the arguments presented above.

5.2 Demand for inheritance function

The key result emerging from our first set of regressions is that migrant children take an active part in the inheritance process through their decision to accept or to give up land inheritance in their community of origin. In the light of this result, it is essential to understand which factors underlie the child's decision. Towards this purpose, we first estimate a decision function including the standard explanatory variables: income, employment stability, migration duration and other personal and family characteristics (Table 11 regression (1)). In this first regression, the variable measuring employment stability is the only one who is significantly correlated with the decision to forsake land inheritance. The sign of the coefficient associated to this variable seems however counter intuitive: we observe a negative relation between employment stability and the renouncement of land inheritance, which is in contradiction with the prediction of the insurance hypothesis. This is however ignoring the role of transaction costs stemming from land ownership in rural communities. When we take these latter into account, our result appears less surprising: more stable employment conditions allow the migrant to devote more time and resources to community duties and consequently enable her to keep land in her native community. To verify whether this interpretation is correct, we estimate equation (2) including as a new dependent variable ayllu, which takes into account the characteristics of the community regarding the importance of the *cargo* duties.

The central result of this second regression is that a significantly higher proportion of migrants forgo their land inheritance in *ayllus*, where the duties associated to landownership are more burdensome and enforceable than in ex-haciendas (Table 11 regression (2)). Moreover, we now observe a significant negative correlation between income and the forsaking of land inheritance in *ayllus* while the correlation is positive for ex-haciendas. A rise in income has indeed two opposite effects: on one hand, it reduces the value of the fall-back option associated to land tenure but on the other hand it also increases the migrant's ability to face the costs associated to landownership. As expected, the latter effect dominates in *ayllus* while the reverse is true in ex-haciendas.

In the light of this result, one may wonder whether the motives guiding the migrant's decision are different in *ayllu* and ex-hacienda communities. To test for this possibility, we estimate two separate demand for inheritance functions(Table 11 regression (3)&(4)). We then observe that the standard explanations hold in the case of ex-haciendas. Migrants with higher income and higher levels of education are more inclined to forsake their share of inheritance in these communities (Table 11 regression (4)). In *ayllus*, high transaction costs seem however to be the predominant motivation behind the migrant's decision. In these communities, migrants with low income and low employment security have a higher probability of forsaking their share of land inheritance(Table 11 regression (3)). These migrants are probably unable to support the high costs associated to land tenure and are

consequently obliged to give up their inheritance share. If our interpretation is correct, it has important welfare implications since it means that those migrants who are in the greatest need of the fall-back option of land inheritance are also those who are obliged to forego it.

Table 11: Migrant's tenure decision

	Probit	Probit, with interaction	Probit, *ayllus*	Probit, ex-Hacienda
	(1)	(2)	(3)	(4)
Ayllu		1.048*		
		(0.619)		
Wage	-0.097	0.3582***	-0.376***	0.918***
	(0.084)	(0.131)	(0.126)	(0.288)
Ayllu*Wage		-0.7539***		
		(0.172)		
Migrant owns own home	-0.003	0.017	-0.045	-0.038
	(0.227)	(0.228)	(0.263)	(0.660)
Average job duration	-0.037**	-0.037***	-0.044**	-0.069
	(0.015)	(0.014)	(0.021)	(0.044)
Migration duration	0.015	0.014	0.011	0.022
	(0.016)	(0.017)	(0.019)	(0.058)
Years of education	0.043	0.043	0.034	0.155**
	(0.028)	(0.030)	(0.044)	(0.078)
Woman	0.244	0.201	0.520**	-0.491
	(0.215)	(0.216)	(0.254)	(0.476)
Number of children	-0.025	-0.017	0.055	-0.145
	(0.078)	(0.078)	(0.102)	(0.134)
Nr. of migrant siblings	0.008	0.018	-0.028	0.100
	(0.052)	(0.053)	(0.074)	(0.106)
Nr. of non-migrant siblings	0.100	0.090	0.085	0.368*
	(0.108)	(0.111)	(0.145)	(0.207)
Land size	-0.000	-0.001	-0.001	0.112
	(0.003)	(0.003)	(0.003)	(0.086)
Nr. of sheep	-0.003	-0.003	-0.002	-0.104**
	(0.004)	(0.004)	(0.004)	(0.044)
Controls				
Nr. Obs.	280	280	180	98
Wald Chi^2	73.34	98.7	74.32	
Pseudo R^2	0.137	0.180	0.204	0.450

Note: *significant at 10% level, **significant at 5% level, ***significant at 1% level. Robust standard errors clustered at family level are between brackets.

Source: see text.

Finally, a higher number of non-migrant siblings is positively associated with the decision to forgo one's share of inheritance in ex-haciendas, but not in *ayllus*. One possible explanation is that the fulfilment of community norms has given more legitimacy to the migrants' claim on land in *ayllus*. Migrants might consequently feel more entitled to demand their share of

inheritance vis-à-vis of their siblings who remained in the community. Regarding gender, we observe that women are more inclined than men to voluntarily abandon their share of inheritance in *ayllus*, while we see no gender difference in ex-haciendas. Perhaps women feel less entitled to demand land when the respect of traditions is a cornerstone of social cohesion, such as it is the case in *ayllu* communities.

6 Conclusion

In the communities of the Bolivian Altiplano both migrant children and the community intervene in the parents' inheritance decision. The central result of our study, which confirms the demand for inheritance hypothesis suggested by Goetghebuer and Platteau (2010), is that migrant children take an active role in the inheritance process through their decision to accept or refuse their share of inheritance. This result has important welfare implications since the fall back option provided by land tenure in the native community and the associated possibility to return to the community are very valuable for migrants who are often subject to the vagaries of the urban labour market. In this light, the fact that some children choose themselves to forsake their claims on land in the native community, rather than being denied land tenure by their parents under some form of exclusive inheritance practice, suggests that the demand for land inheritance expressed by those migrants who most need it tends to be satisfied. This conclusion is supported by evidence regarding the characteristics of the migrants who forsake their inheritance rights. Yet with an important qualification: when the transaction costs associated to land ownership in a rural community are significant, such as in *ayllu* communities where participation in local activities and responsibilities is mandatory, it is the more economically insecure migrants who forsake their rights to land inheritance. High transaction costs consequently prevent the equalizing effects of demand-driven inheritance from taking place

Finally, land inheritance is not completely determined by the demand expressed by children and parents still play a significant role. In this regard, a salient finding emerging from our analysis is that parents are influenced by the locus of the migration decision. When they themselves prompted a child to leave the community and try her luck in distant urban areas, they seem to feel more responsible for his economic destiny and appear therefore to be more reluctant to deprive him of her inheritance share.

Appendix A

To test the robustness of our results concerning the identity of the person responsible for the migration decision we use two other definitions for the migration decision variable. First we construct a decision variable by ordering the five levels of implication of the child in the migration decision. Second, we create a new dummy variable considering that all the children who took the migration decision are responsible for their migration decision independently of whether they did it to please their parents or not. The results of these regressions are in line with the results of Section 5.

Table A1: Determinants of the parents' bequest decision

	Probit – exclusion from land inheritance		
	(i)	Migration decision (5 levels)	New definition, migration decision
Migrant declared disinterest	2.327***	2.649***	2.398***
	(0.806)	*(0.934)*	*(0.804)*
Migration decision (child)	0.847***	0.211**	1.174***
	(0.285)	*(0.101)*	*(0.339)*
Land size	-0.011	-0.009	-0.011
	(0.007)	*(0.007)*	*(0.007)*
Frequency of visits	-0.027**	-0.052***	-0.030***
	(0.011)	*(0.017)*	*(0.011)*
Nr. of migrant siblings	-0.105	-0.131	-0.112
	(0.092)	*(0.100)*	*(0.091)*
Nr. of non migrant sib.	0.726***	1.034***	0.754***
	(0.180)	*(0.221)*	*(0.184)*
Best student	2.133**	1.867*	2.226**
	(0.922)	*(0.975)*	*(0.945)*
Years of education	-0.045	-0.114**	-0.050
	(0.058)	*(0.055)*	*(0.060)*
Best student*years of educ.	-0.159*	-0.113	-0.176*
	(0.090)	*(0.087)*	*(0.094)*
Migrant owns own home	0.517*	0.498*	0.417
	(0.269)	*(0.280)*	*(0.273)*
Woman	0.616**	0.581*	0.560*
	(0.309)	*(0.348)*	*(0.312)*
Nr. of children	-0.249***	-0.332***	-0.245***
	(0.090)	*(0.100)*	*(0.088)*
Controls			
Nr obs.	260	248	260
Wald Chi	146.63	146.58	155.4
Pseudo R^2	0.5608	0.6045	0.5655

Note: *significant at 10% level, **significant at 5% level, ***significant at 1% level. Robust standard errors clustered at family level are between brackets

Source: see text.

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