Self-employment and labour market dynamics of men and women in El Salvador and Nicaragua

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Abstract: We study the labour market dynamics of men and women in El Salvador and Nicaragua, focusing on the factors that help men and women move into an advantageous labour market state from an unfavourable state. We consider 'advantageous' states to be formal salaried employees and self-employed workers with a decent income or a successful and growing firm. Among our findings are that education and access to public services such as utilities promote transitions into advantageous states.

Key words: employment, women, Latin America, labour market dynamics, self-employment, poverty

JEL classification: J62, J63, O17, O54

Figures and tables: at the end of the paper.

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1   Introduction

We use individual-level panel data to study the labour market dynamics of men and women in El Salvador and Nicaragua, with a focus on what factors help to achieve advantageous jobs in the labour market and whether those factors differ between men and women. Specifically, we examine the influence of personal characteristics (such as education), family characteristics (such as the number of children), and job characteristics (such as the industry sector of employment) in determining whether a woman (or man) moves up into an advantageous labour market state from an unfavourable state.

In identifying 'advantageous' labour market states, we recognize the heterogeneity of both self-employment and salaried employment, dividing the first into advantageous and unfavourable self-employment and the latter into formal and informal salaried employment. We consider three labour market states to be 'advantageous' ('favourable' in Spanish): (1) formal salaried employees; (2) non-agricultural self-employed workers and employers with a decent income (defined as a household consumption above the poverty line or a salary above the legal minimum wage) or an employer with a successful and growing firm (defined as employers with more than five employees or an employer of firms with fewer than five employees whose firm increased the number of employees last year); and (3) agricultural self-employed workers or an employer with a decent income or an employer of a successful and growing firm. We examine the transitions into and out of these advantageous labour market states and other labour market and non-labour market states including informal salaried employment, unfavourable non-agricultural self-employment, unfavourable agricultural self-employment, unemployment, unpaid family work, and out of the labour force (distinguishing between those going to school and those engaged in unpaid domestic work).

Our study contributes to the literature by recognizing the heterogeneity of self-employment in El Salvador and Nicaragua. Another contribution is that we provide new information on the answer to two questions: (1) what are the characteristics of the men and women who move up to an advantageous labour market state from an unfavourable one?; and (2) what are the characteristics of the men and women who fall out of advantageous labour market states into unfavourable ones?

Our results demonstrate that, in both countries, men are more likely to be found in advantageous labour market states compared to women. We find that there is substantial mobility of men and women between informal salaried employment and self-employment. For women, there is also substantial mobility between unpaid domestic work and these two states. On the other hand, we find very little mobility into formal salaried employment. Those who work as formal salaried employees tend to enter this sector soon after graduating from school (some after short periods as informal employees, unemployed, or unpaid family workers), and then remain in this sector for a long time. Very few older workers transition from unfavourable labour market states into formal salaried employment. For older workers, the most likely transition from an unfavourable state into an advantageous labour market state is into advantageous non-agricultural self-employment. Most of the advantageous non-agricultural self-employed are older workers who gained experience working as informal salaried workers or unfavourable self-employment before succeeding as advantageous self-employed.

Our findings suggest that education is the most important personal characteristic promoting transitions into non-agricultural advantageous labour market states and reducing transitions out of advantageous labour market states. In particular, a tertiary (post-secondary) education is a

strong predictor of whether a man or women is found in, and stays in, the most advantageous labour market state, formal salaried employment. Along with a tertiary education, a secondary education also promotes advantageous self-employment.

A finding with relevance to public policy is that the provision of public services such as utilities (electricity, water, etc.) and health care significantly increases the probability that men or women will transition into advantageous non-agricultural self-employment. This suggests providing these services to poor families can be an effective way to promote transitions by the poor into advantageous non-agricultural self-employment.

The next section of this paper reviews the literature. Section 3 describes the panel data used in this paper. Section 4 describes and compares the labour market characteristics of men and women in the Salvadoran and Nicaraguan labour markets. Section 5 uses the panel nature of our data to measure the degree to which men and women move from unfavourable states to advantageous labour market states, and vice versa. Finally, Section 6 identifies the characteristics that determine whether or not men and women transition into or out of advantageous labour market states. Section 7 concludes and presents policy recommendations.

2   Literature review

In one of the first studies of labour market dynamics in a developing country, Funkhouser (1996) examines transitions within and between formal and informal employment in El Salvador. He found that transitions between jobs increase with education and decrease with age and that more men than women move across sectors. While all workers who change jobs tend to experience increases in earnings, the increase in earnings is larger for those who transition from informal to formal employment compared to those who transition from formal to informal employment. Martínez-Cuenca (1999) examines transitions within and between formal and informal employment for the urban labour market in Nicaragua. According to his conclusions individuals who are willing and able to enter the informal market can do so. But, on the other hand, employment in the formal market appears to be selective, and here the market discriminates in favour of young educated males.

Maloney (1999) examines mobility between formal employment, informal employment, self-employment, contract workers, out of labour force, and unemployed in Mexico. The evidence presented in the appendix of Maloney (1999) shows that more education reduces the probability of transitioning from formal employment to informal employment (but has no impact on transitions into formal employment from the informal sector, self-employment, or contract work). Maloney (1999) is sceptical of the labour market segmentation argument for the existence of the informal sector. Among the evidence presented to support this scepticism is that mobility between the formal employment, informal employment, and self-employment is high, and that transition rates from formal to informal employment are equal to transition rates from informal to formal employment (after controlling for terminal sector size).

Bosch and Maloney (2010) focus on transitions between formal employment, informal employment, and informal self-employment (excluding professional, technical, and administrative self-employed) in Argentina, Brazil, and Mexico. Among these three states, they find that duration is the highest in formal salaried employment and lowest in informal employment. They further find that there is more mobility into informal self-employment from informal employment than from formal employment. Patterns across age groups imply that older workers are more likely to transition into self-employment, while younger workers are more likely to transition into informal

employment. They find a high turnover among informal employees, especially among the young. One important contribution of Bosch and Maloney (2010) was to examine how transition rates change over the business cycle. They find that as the economy expands over the business cycle, transition rates into self-employment increase while transitions out of formal employment and into informality decline (especially for the young). They interpret this as evidence that workers transition into self-employment voluntarily but transition into informality from formality involuntarily.

Calderon-Madrid (2000) also studies mobility in Mexico and finds that duration in formal employment is highest of any job state. For example, the median duration in formal employment is approximately 3.5 times higher than the median duration in informal employment. Gong et al. (2004) study mobility in five Mexican cities between out of the labour force, formal employment, and informal employment. They also note that the probability of remaining in formal employment is largest of any sector. More education increases the probability of being in formal employment, while higher incomes of other family members decrease the probability of being in formal employment.

Duryea et al. (2006) study transitions between formal employment, informal employment, non-agricultural self-employment, agricultural self-employment, out of the labour force, and unemployment in three Latin American and six Eastern European countries. As with other studies, they find that formal employment is the least mobile sector while unemployment is the most mobile sector. Workers in the formal sector tend to stay in formal employment, while there is no evidence that workers are trapped in unemployment for long. Transition rates into formal employment are higher from the informal sector than from self-employment; very few workers move into formal employment from self-employment.

Pages and Stampini (2009) examine mobility in urban regions of three Latin American and three transition countries between formal employment, informal employment, self-employment, and unemployment. They find higher levels of mobility from informal to formal employment than from self-employment to formal employment, or from formal employment to self-employment and informal employment. Bernabè and Stampini (2009) find similar trends in Georgia. Bernabè and Stampini (2009) also find that young workers are more likely to transition into informality and that women are much more likely to drop out of the labour force than men. Further, in urban areas (but not in rural areas), a university education increases the probability of staying in or transition into formal employment.

Cunningham and Bustos Salvagno (2011) examine employment transitions in Argentina, Brazil and Mexico, with a focus on youth. They find that men and the young are more likely to be mobile. Cunningham and Bustos Salvagno (2011) suggest that many successful self-employed workers and entrepreneurs first spend a short time as informal sector employees acquiring job-relevant skills, then move on to formal jobs or return to school, and only then start their own small businesses. Even then, they may spend short periods of time in informal wage-paying jobs or more education on their way to long-term successful employment states. Cunningham and Bustos Salvagno (2011) present evidence that segmentation and formal–informal wage gaps decrease with age. Workers with more experience (especially in the formal sector) are also more likely to be successful entrepreneurs (Cunningham and Bustos Salvagno 2011).

Some studies suggest that human capital is a more important factor in explaining the success in the case of women entrepreneurs compared to men (Bardasi et al. 2011). Selection of economic activity has also been found to differ between men and women entrepreneurs. Women entrepreneurs are predominantly concentrated in service activities, while men tend to be owners of companies engaged in manufacturing and construction activities (Bardasi et al. 2011).

Tansel and Kan (2017) examine transitions between formal employment, informal employment, formal self-employment, and informal self-employment in Turkey. As with other studies, they find that formal employees are the least mobile and the unemployed are the most mobile. Ninety per cent of formal employees remain in that sector from one year to the next vs. 78 per cent in informal employment, and less than 3 per cent of formal employees transition into the informal sector compared to 13 per cent of informal employees who transition into the formal sector. There is also very little mobility among women who are out of the labour force (compared to substantial mobility for men in this state). Women are more likely than men to transition from any other state into unfavourable labour market states such as informal employment and informal self-employment. Tansel and Kan (2017) write that 'our findings clearly support the view that females are significantly disadvantaged in terms of labor mobility' (Tansel and Kan 2017: 32). Education increases the probability of transitions into formal employment and decreases the probability of transitioning into informal employment. A larger household size increases the probability of remaining in informal employment and unemployment.

Tansel and Ozdemir (2015) examine transitions in Egypt between formal private employment, informal private employment, irregular work, agricultural self-employment, non-agricultural self-employment, unpaid family work, government employment, and out of the labour force. They find significant differences between men and women. Women are more likely to be out of the labour force or government employees. Men are more likely to be private formal or informal employees and to be self-employed. For men, unemployment, out of the labour force and agricultural self-employment are the most mobile sectors. Irregular work is one of the least mobile sectors for men but one of the most mobile sectors for women. Out of the labour force is among the least mobile sectors for women. For both men and women government employment is the least mobile sector. Education is a key characteristic promoting favourable employment in Turkey. More education increases the probability of transitioning into formal employment from informal employment and decreases the probability of leaving formal employment for any of the unfavourable labour market states. More education also increases the probability of transitioning from out of the labour force into formal employment and formal self-employment. Larger households also matter; more children increase the probability of transitioning into and of being in informal employment.

3   Data

3.1   Nicaragua

To study the labour markets dynamics of women and men in Nicaragua, we use annual panel data collected by *Fundación Internacional para el Desafío Económico Global* (FIDEG) between 2009 and 2012. This data set allows us to follow women and men as they change jobs or as the characteristics of their jobs change. The survey is based on a two-stage probabilistic stratified sample of 1,700 households (50.5 per cent from urban areas and 49.5 per cent from rural areas) distributed across the whole country. The sample was designed using as frame the cartography of the Population and Dwellings Census conducted in 2005 by the National Institute of Statistics (INEC), it is representative at national, urban, and rural levels. The primary sampling units were *segmentos censales* and the second stage units were dwellings within each segment. Eight dwellings were selected in each segment using systematic sampling with random start. The principal household in each of these dwellings was interviewed between the months of August and September from 2009 to 2012. The survey is a short version of the Living Standards Measurement Surveys (LSMS) and had the technical support of the World Bank.

Each household and each household member were carefully tracked during this period. For

example, the interviewer first determined whether the household had been interviewed the previous year or if this was the first interview. From 2010 through 2012, the questionnaires had printed the first and last names of each household member interviewed the previous year, with a designated line item for all years that could never be occupied by any other household member. If a member was no longer in the household, questions were asked about that person's location in order to catch migration flows. New household members were designated in a line in the questionnaire with explanation about their origin in the household (by marriage, birth, etc.). Consistent with official labour force statistics in Nicaragua and the availability of data, in our analysis we consider anyone ten years of age or older in Nicaragua.

We have observations on 10,766 individuals (men and women ten years of age or older). For 28.6 per cent of these individuals we have four years of panel data (the maximum); for 15.7 per cent we have three years of data; for 20.0 per cent we have two years of data; and for 35.8 per cent we have only one year of data. In order to check the representativeness of the sample, we compared some basic characteristics of the workforce with those of the Nicaraguan *Encuesta de Medición de Nivel de Vida* carried out by the National Institute of Statistics in 2009. The distribution of the workers by economic activity, the distribution by employment status, and the unemployment rate are quite similar for the two samples. We find that the FIDEG's sample presents a higher labour force participation rate and higher percentage of employees working less than 40 hours per week. Descriptive statistics on the analytical sample in Nicaragua and a comparison with the census can be found in the appendix of Alaniz et al. (2015).

3.2 El Salvador

To study labour markets dynamics in El Salvador, we created an annual panel data set using the Multipurpose Household Surveys (MHS) from the years 2008–12. These survey data have been collected by the General Directorate of Statistics and Census (DIGESTYC) since 1975, although we only use the surveys from 2008 to 2012 because it is only in those years that the necessary variables are available to allow us to match individuals across surveys. Consistent with official labour force statistics in El Salvador and the availability of data, in our analysis we consider only those 16 years of age or older.

The MHS includes information related to social, economic, and demographic aspects of households. In addition, the survey contains the most comprehensive household information for both the rural and urban areas of the country. This data set allows us to follow women and men as they change jobs or as the job characteristics change.

The MHS is based on a census mapping technique, developed by DIGESTYC. Every five years, DIGESTYC updates and renews the sampling frame of households. During a five-year period, the sample is created in a single rotating base from the same sampling framework. The base census map divides the territory into basic units called 'segments', consisting of one or more blocks (each block with a group of 12–16 households), and there is a specific unique number for each segment. Some segments are kept, and others are partially rotated every year.

The division of segments allowed us to create year-to-year panels for the years 2008–12. The total sample contains 407,737 observations—194,508 males (47.7 per cent) and 213,229 females (52.3 per cent). However, our analysis is restricted to the working age population, therefore, 266,546 observations—122,403 males (45.9 per cent) and 144,143 females (54 per cent). From this sample, 165,360 belong to the economically active population—101,089 males (61.1 per cent) and 64,271 females (38.9 per cent).

To create the panel data we matched households, then household heads, and finally all the members of the household. This methodology considers key variables such as the segment number, geographical location, year of birth, and gender and age of each individual to create a unique identifier that allows a matching process of the head of household and the members living in the household for each home. We are able to match the same individuals across two consecutive years but cannot follow the same individuals for more than two years. Thus, our data effectively consists of four panel data sets, each of which follows households and individuals for two years (2008–09, 2009–10, 2010–11 and 2011–12).

On average, 23 per cent of the MHS observations were repeated the following year. Between 2008 and 2009, observations were repeated for 22.6 per cent of the 2008 survey sample; from 2009 to 2010, 21.6 per cent; for the 2010 and 2011 period, 23.9 per cent; and finally, between 2011 and 2012, 23.9 per cent. The percentages for women are as follows: 22.4 per cent from the period 2008 and 2009; 21.6 per cent between 2009 and 2010; 23.7 per cent between 2010 and 2011; and, finally, 24.1 per cent between 2011 and 2012. In order to check the representativeness of the panel data sample, we compared some basic characteristics of the panel data with the full cross-sectional data set. The distribution of workers by gender, region of the country, economic activity, and the distribution by employment status are all similar in the panel and full data. Descriptive statistics on the panel data sample in El Salvador and a comparison to the full cross-sectional data set can be found in the Beneke de Sanfeliu et al. (2015).

4   Women and men in the labour markets of El Salvador and Nicaragua

During the period that we study, in both El Salvador and Nicaragua, the labour market is characterized by low rates of unemployment, a high rate of underemployment, and a high degree of informality (see Table 1). For example, in El Salvador only 29.1 per cent of employed workers are covered by social security and more than 55.6 per cent work in firms with five or fewer workers. In Nicaragua, these percentages demonstrate even less formality: 11.2 per cent covered by social security and 74.6 per cent in firms with five or fewer workers. Women are much less likely than men in both countries to be participants in the labour force, and if they are employed women are more likely to be in precarious employment. For example, in Nicaragua 55.7 per cent of employed women are underemployed in comparison to 34.3 per cent of men; 12.3 per cent of employed men are covered by social security while only 10.3 per cent of employed women are; 41.3 per cent of employed women are self-employed compared to 30.6 per cent of men; and 19.3 per cent of women are unpaid family workers compared to 17.8 per cent of men.

In both countries, the level of education of the labour force is low compared to other countries in Latin America. In El Salvador, the mean worker has 7.6 years of education and only 13.3 per cent have any type of tertiary education, while in Nicaragua the mean worker has only 5.9 years of education and only 8.7 per cent per cent of the labour force has any type of tertiary education.[1] On average, women in the labour force have higher education levels than men. For example, in El Salvador women in the labour force have 7.8 years of education compared to 7.4 for men. It is also more likely that women in the labour force have some type of tertiary education compared to men.

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[1] In 2009 in Argentina and Chile the average education level of the population was 11 years of study, in Uruguay in 2011 the average worker had 9.8 years of education, and in Mexico 8.7 years of education (SEDLAC 2017).

The distribution of the employed by economic activity indicates that men are concentrated in agriculture, while women tend to work in commerce, services of low complexity, and manufacturing. Services of low complexity include personal and social services, domestic service, and services for the home. Highly complex services include public utilities (electricity, gas, and water), transport, telecommunications, financial services, and public administration.

Table 2 presents the gap in average hourly wages between men and women (measured as the percentage difference in the average hourly wage earned by men and women, controlling for education and potential experience). Women with the same education and experience earn less than men in both El Salvador and Nicaragua. In El Salvador the average hourly wage of women is 34.2 per cent less than that of men; in Nicaragua the average hourly wage of women is 27.2 per cent less than that of men.

5   Labour mobility of men and women in El Salvador and Nicaragua

In this section we use individual-level panel data to study labour market dynamics with a focus on what factors help men and women to achieve advantageous jobs in the labour market. We consider three labour market states to be 'advantageous' ('favourable' in Spanish): (1) formal salaried employees, (2) non-agricultural self-employed workers with a decent income, and (3) agricultural self-employed workers with a decent income. In El Salvador, we define 'decent income' as a wage above the legal minimum wage; in Nicaragua we define 'decent income' as household consumption spending above the poverty line. We examine the transitions into and out of these advantageous labour market states and other labour market and non-labour market states including informal salaried employment, unfavourable non-agricultural self-employment, unfavourable agricultural self-employment, unemployment, unpaid family work, and out of the labour force (distinguishing between those going to school, those engaged in unpaid domestic work, and those engaged in other activities).

BOX 1: Definitions of labour market and non-labour market states considered in this study

> *Advantageous labour market states:*
>
> 1. **Formal salaried employees:** includes wage and salaried workers who are benefiting from social security, either employed full time or part time. Compared to other labour market states, wages and household income are highest for formal salaried employees. This is the most advantageous labour market state by these measures.
> 2. **Advantageous non-agricultural self-employed:** includes self-employed workers who are not engaged in agriculture, with household per capita consumption above the poverty line (in Nicaragua) or whose labour earnings are greater than the legal minimum wage (in El Salvador). In Nicaragua, this category also includes employers of firms with five or more workers and employers of firms with fewer than five employees whose firm increased the number of employees last year. Advantageous non-agricultural self-employment is the second most advantageous labour market state in terms of wages and household income.
> 3. **Advantageous agricultural self-employed:** includes self-employed workers who are engaged in agriculture, with household per capita consumption above the poverty line (in Nicaragua) or whose labour earnings are greater than the legal minimum wage (in El Salvador). In Nicaragua, this category also includes employers of firms with 5 or more workers and employers of firms with fewer than 5 employees whose firm increased the number of employees last year.

Our definition of 'advantageous' labour market states is similar to the International Labour Organization (ILO) concept of 'decent work'. Two key components of the ILO concept of 'decent work' are social security and remunerative employment (Ghai 2003). 'Social security serves to meet people's urgent subsistence needs and to provide protection against contingencies, and as such is an important aspect of decent work' (Ghai 2003: 122). Our first advantageous labour market state is formal salaried employment, defined as paid employment where workers are insured by social security. Remunerative employment is work that pays sufficiently to allow a worker's family to live at an adequate level. 'For developing countries, a good indicator of remunerative work is provided by data on absolute poverty' (Ghai 2003: 119). The ILO suggests that a good indicator of whether workers do not have remunerative employment is the proportion of the working population earning below the household poverty line (Ghai 2003: 118). The definition of advantageous self-employment that we apply in Nicaragua includes those who live in a household with an income above the poverty line, while in El Salvador advantageous self-employment includes those earning less than the minimum wage (which is set below the poverty line).[2] We do not use the term 'decent

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[2] We also construct a measure of 'advantageous' self-employment in El Salvador which is based on whether or not the worker lives in a family with incomes below the poverty line. For comparison, tables using this definition are presented in the Appendix. In general, the conclusions about mobility using this alternative definition in El Salvador are the same as the conclusions reported in the body of this paper. We do not highlight this alternative definition of 'advantageous' in El Salvador because we have more confidence in the wage and earnings data from El Salvador than in the income data. Neither the minimum wage definition nor the poverty line definition of 'advantageous' in El Salvador is identical to our definition of 'advantageous' in Nicaragua because we did not have access to the same

work' in this paper because our measure of advantageous labour market states does not take into account other components that the ILO considers when defining decent work, such as basic worker rights and social dialogue (i.e. access to collective bargaining).

Figure 1 presents the distribution of men and women in these 11 states separately for El Salvador and Nicaragua. The most noticeable difference between men and women in both El Salvador and Nicaragua is that women are much more likely than men to be in unpaid domestic work. This difference between men and women is likely a consequence of the traditional expectation that wives will provide unpaid domestic care to children and other dependents, while husbands are expected to have full-time jobs outside of the home. A larger percentage of women are in unpaid domestic work in El Salvador compared to Nicaragua. This may reflect a greater prevalence of these types of traditional family relationships between men and women in El Salvador compared to Nicaragua.

In both El Salvador and Nicaragua, men are more likely to be in advantageous labour market states compared to women. For example, men are more likely to be in formal salaried employment (the most advantageous labour market state). This is especially noticeable in El Salvador, where the formal sector is larger than in Nicaragua and men are almost twice as likely as women to be in this most advantageous sector. In El Salvador, it is more likely that men (compared to women) are in advantageous self-employment (non-agricultural or agricultural). In Nicaragua, where advantageous self-employed workers are those who live in families with incomes above the poverty line, it is more likely that women (compared to men) are in non-agricultural advantageous self-employment. This apparent inconsistency may be because in Nicaragua many self-employed women live in households where the spouse earns above the poverty line but earn very low wages themselves. The evidence from El Salvador supports this hypothesis; if we define 'advantageous' using the poverty line measure in both El Salvador and Nicaragua, then it is also true in El Salvador that women (compared to men) are more likely to be in advantageous self-employment (see Tables A5 and A6 in the Appendix).

Women are more likely than men to be found in unfavourable non-agricultural self-employment in both Nicaragua and El Salvador. This may be because women in El Salvador and Nicaragua continue to have the primary responsibility for domestic work (childcare, etc.) even if they are working. Women may therefore be more likely to be in unfavourable self-employment in both El Salvador and Nicaragua because women value the flexibility of self-employment, in terms of hours and location of work, more than men. On the other hand, this may also reflect that the traditional division of labour between the sexes in Central America forces women into unfavourable employment, while men are free to spend more time searching for and working in advantageous labour market states.

While a substantial proportion of men are unemployed in both El Salvador and Nicaragua, few women are unemployed in either country. To be considered unemployed one must not have a job and also be actively searching for a new one. It may be that when women lose their jobs they do not spend very much time searching for a new one but rather move directly to unpaid domestic work or another sector, while men spend more time searching for advantageous employment before accepting less advantageous work or leaving the labour force. This suggests that policies focused on speeding up the transition from unemployment to advantageous employment are likely to have a larger impact on men than women (simply because a higher proportion of men are

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variables in both countries (for example, wages are not available in the Nicaraguan data, while household consumption is not available in the Salvadoran data). However, the fact that our results are similar using either definition (and in both countries) gives us confidence that our results are robust.

unemployed). On the other hand, policies focused on promoting the transition from unpaid domestic work into advantageous employment are likely to have a bigger impact on women than men (simply because more women are in this state).

Agriculture in both countries is dominated by men: almost no women are agricultural self-employed workers. This suggests that policies that promote advantageous agricultural self-employment will have little impact on the ability of women to obtain advantageous employment in El Salvador and Nicaragua.

A major focus of this study is to understand the mechanisms by which people in El Salvador and Nicaragua transition into and out of advantageous labour market states. Because we have panel data, which allows us to follow the same individuals and families from one year to the next, we can calculate how likely it is that a person switches states (transitions). Figure 2 presents the magnitudes of mobility into each state. That is, Figure 2 presents the proportion of our sample that transition into each state from a different state the year before (excluded from Figure 2 are those who remained in the same state). For men, the most mobility is into informal employment, followed by unemployment. For women, on the other hand, the most mobility is into unpaid domestic work, followed by non-agricultural self-employment (advantageous and unfavourable) and unpaid family work, then followed by informal employment. In both countries, there is less mobility of women into informal employment or unemployment, and more mobility into self-employment, compared to men. For women, there is more mobility into advantageous self-employment in Nicaragua compared to El Salvador.[3] For both men and women, there is relatively little mobility into formal salaried employment.

Figures 3a and 3b show the origins (one year before) of those found in the three advantageous labour market states. As noted before, there is very little mobility into or out of the most advantageous labour market state—formal salaried employment. Approximately 83 per cent (El Salvador) and 70 per cent (Nicaragua) of workers in formal salaried employment in one year were also in that sector the year before. This compares to approximately 40 per cent of men and 50 per cent of women (in both countries) who remain in advantageous non-agricultural self-employment from one year to the next. Men and women who work as formal salaried employees tend to enter this sector soon after graduating from school (although not necessarily right away in the first year), and then remain in this sector. Of those who do enter formal salaried employment from other states, the largest number come from informal salaried employment, followed by unemployment. Some women (but almost no men) also enter formal salaried employment directly from unpaid domestic work. Our evidence suggests that women may leave formal salaried employment for a time to take up unpaid domestic work and then return in a later year. Women may temporarily leave formal salaried employment to have children or for unpaid domestic work. Few men do this.

Almost no one of either gender enters formal salaried employment from self-employment, and very few workers enter advantageous self-employment from formal salaried employment. However, this does not mean that there is no mobility into and out of advantageous self-employment; it is just that workers move into and out of advantageous self-employment from other states. Our results show that for both men and women there is substantial mobility of

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[3] We also examined the relative magnitudes of the transitions out of advantageous labour market states. We do not present these figures in the paper because the conclusions regarding mobility are the same as those in this paragraph. That is, the states that men and women are most likely to move into are also the states that men and woman are likely to move out of (see Tables A1 to A4 in the Appendix).

workers between informal employment and advantageous non-agricultural self-employment.[4] For women, there is also substantial mobility between unpaid domestic work and these two states—this is an important difference between men and women and reflects the fact that women have primary responsibility for childcare and other unpaid domestic work in both Nicaragua and El Salvador.

Most of the advantageous non-agricultural self-employed are older workers who gained experience working as informal salaried workers or unfavourable non-agricultural self-employment before succeeding as self-employed. As we will see, younger workers are more likely than older workers to transition into formal salaried employment, while for older workers the most likely transition into an advantageous labour market state is into advantageous non-agricultural self-employment. Men in advantageous non-agricultural self-employment are most likely to come from unfavourable self-employment (especially in El Salvador) or informal employment. In both El Salvador and Nicaragua, women in advantageous non-agricultural self-employment are also likely to come from unfavourable non-agricultural self-employment and informal employment. Women in advantageous self-employment are also likely to come from unpaid domestic work and unpaid family work.

Figures 2, 3a, and 3b summarize year-to-year moves by men and women between states. This may miss longer term trends. In Nicaragua, we can follow the same individuals for longer than one year. Figure 4 presents the results of transitions over a three-year period (2009 to 2012). This figure confirms many of the conclusions from the year-to-year transition data. For example, we still see very little mobility into the formal sector; the majority of both men and women who are in formal salaried employment in 2009 are still found in that sector in 2012. Even over the four-year period, almost no one has moved from self-employment into formal salaried employment. Once workers are self-employed, there is very little chance that they will transition into formal sector employment. Those who do transition into the formal sector are most likely to start out as students, informal employees, or unemployed workers.

Women who transition into advantageous self-employment are most likely to start out as unpaid domestic workers three years earlier, with a smaller yet significant percentage starting out as informal sector workers and unfavourable non-agricultural self-employed. Again, this is consistent with the hypothesis that it is unlikely for self-employment to be advantageous unless the worker already has experience.

Figure 4 suggests a slightly different story about the advancement of recent students than do Figures 1, 2, and 3. In these figures we found that it is not likely that workers transition into the formal sector or into advantageous self-employment directly from school. For both men and women, most students who leave school enter the informal sector or work as unpaid family workers the first year after leaving school (see the year-to-year transition matrices in the Appendix). After 3 years, however, those who left school are much more likely to have become formal salaried employees and advantageous self-employed. These results suggest that men and women who leave

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[4] Tables A1 to A4 in the Appendix present a complete picture of these transitions between all states for men and women. These types of tables are referred to in the literature as transition matrices, where each cell measures the number of people in each county and gender who transition from one state to another. Specifically, these tables present the probabilities of finding person i in status j at time t+k, conditional on being in status z at time t:

$$P_{izj} = Pr(S_{i,t+k} = j \mid S_{it} = z)$$

Where S_{it} = the labour market state of individual i in time t.

school may take a short period of time before transitioning into salaried formal employment or advantageous self-employment. Both men and women may spend a short time unemployed and searching for work, as informal sector employees or as unpaid family workers, before transitioning into the salaried formal sector or advantageous self-employment. Women are also likely to spend time out of the labour force directly following school before obtaining employment. This is consistent with the key role of education in obtaining formal salaried employment and advantageous self-employment, even though students may not find salaried formal employment immediately after graduation.

6   Variables correlated with mobility into advantageous labour market states

Next, we focus our study on the personal characteristics, family characteristics, and job characteristics that may help men and women to achieve advantageous jobs in the labour market. We use pooled data from El Salvador and Nicaragua and regression analysis to measure the impact of each personal, family, and job characteristic on the probability that a person moves up to an advantageous labour market state. Using a sample of workers in unfavourable states in time t, we estimate a Probit equation of the form:

$$Prob(INADVANT_{it} = 1) = f\left(\alpha_o + X'_{it}\beta + \sum_{t=1}^{T} \gamma_t YR_t + \mu_{it}\right)$$

(1)

In this equation, $INADVANT_{it}$ equals one if the individual i is in an unfavourable state at time t but is in an advantageous state at time t+1, and zero if the individual i is in an unfavourable state at time t and stays in an unfavourable state at time t+1. We estimate equation (1) using Probit regressions. X_{it} is the explanatory variables vector which includes the variables described below in the text. In addition to these personal, family, and job characteristics, to control for year-specific factors such as aggregate supply and aggregate demand changes or design changes in the household surveys, we include a dummy variable for each year, YR_t. From the estimated coefficients, β_{it}, we can calculate the marginal impact of each explanatory variable on the probability of a transition from a not advantageous state to each advantageous labour market state.

The characteristics that we consider include: individual specific human capital variables (age, years of education); whether the individual lives in a high population density area; the relationship to the household head; change in the marital status, industry sector, household characteristics (number of young children, number of school age children, number of working age household members, number of household members older than 65 years of age); whether the individual has access to public services (tube water and electricity); non-labour income of the family; and the amount of remittances.

According to previous studies, those with more human capital are more likely to be in the labour force, and if they work are more likely to be full-time formal sector employees (Duryea et al. 2006; Bosch and Maloney 2010; Cunningham and Bustos Salvagno 2011). We use age as a proxy for experience. Older workers with more experience (especially in the formal sector) are more likely to be successful entrepreneurs while younger workers are more likely to be informal employees (Cunningham and Bustos Salvagno 2011). Some studies suggest that human capital is a more important factor in explaining success in the case of women entrepreneurs compared to men (Bardasi et al. 2011).

It has been argued that the reasons for becoming self-employed may differ between men and women; specifically, it has been argued that women become self-employed because they seek more

flexible work schedules (Delmar and Davidson 2000). To examine this possibility, other explanatory variables include some that describe the structure of the family (marital status, number of young children, number of school age children, number of working age household members, and the household members older than 65 years of age). Others have argued that women start fewer businesses and are less successful than men because they have difficulty obtaining credit. If this were true, we would expect to find that women from households with higher income levels (and therefore with fewer restrictions for credit) tend to survive and grow as entrepreneurs. Therefore, we include non-labour income of the family and the amount of remittances.

It has also been found that the selection of economic activity differs between men and women entrepreneurs. Women entrepreneurs are predominantly concentrated in service activities, while men tend to be owners of companies engaged in manufacturing and construction activities (Bardasi et al. 2011). It has also been shown that in developing economies, women are less likely to operate in high-technology activities (Anna et al. 1999). To examine the role of the selection of economic activity as a determinant of success, the regressions include economic activity dummies as explanatory variables.

We also measure the impact of characteristics on the probability that a worker will leave an advantageous state. Specifically, using a sample of workers in advantageous states in time t, we estimate a probit equation of the form:

$$Prob(OUTADVANT_{it} = 1) = f(\alpha_o + X'_{it}\beta + \sum_{t=1}^{T} \gamma_t YR_t + \mu_{it})$$

(2)

In this equation, $OUTADVANT_{it}$ equals one if the individual i is in an advantageous state at time t but is not in an advantageous state at time t+1, and zero if the individual i is in an advantageous state at time t and stays in advantageous state at time t+1. X_{it} is the explanatory variables vector which includes the same variables as those in the previous estimated equation.

Our estimates of equations (1) and (2), estimated separately for men and women and for each advantageous labour market sector, are reported in Tables 3 and 4. A positive number in Table 3 indicates that an increase in the corresponding explanatory variable increases the probability of transitioning from an unfavourable state to each advantageous state indicated by the column of the table. A positive number in Table 4 indicates that an increase in the corresponding explanatory variable increases the probability of transitioning from an advantageous state to each unfavourable state indicated by the column of the table. In our discussion, we focus on those results that are statistically significant (which are starred, and where more stars indicate greater statistical significance).

Our findings suggest that education is the most important personal characteristic promoting transitions into non-agricultural advantageous labour market states and reducing transitions from advantageous labour market states. In particular, a compete secondary and a tertiary (post-secondary) education is a strong predictor of whether a man or woman transitions into, and stays in, the most advantageous labour market state—formal salaried employment. Both a tertiary education and a complete secondary education also promote advantageous non-agricultural self-employment.

The positive impact of education on transitions into advantageous labour market states is bigger for men than women. That is, our results suggest that women need more education than men in order to get the same advantage in obtaining an advantageous labour market state. This result is consistent with Esquivel (2007) who finds that, on average, women in Latin America need

substantially more education than men in order to obtain a job in the formal sector. This suggests that in El Salvador and Nicaragua even educated women are at a disadvantage relative to men when they seek to obtain advantageous employment.

Our results provide no evidence that education increases the probability of advantageous self-employment in agriculture. This does not mean that young people in rural areas do not benefit from education. More education increases the probability that everyone, including the children of farmers, enter non-agricultural advantageous labour market states.

Access to public services such as utilities (electricity, water, and electricity) significantly increases the probability that men or women will transition into advantageous non-agricultural self-employment. This suggests another policy to promote advantageous non-agricultural self-employment is for the government to provide these services to poor families.

For both men and women, dependent children in a household reduces the probability of a transition into advantageous non-agricultural self-employment and increases the probability that a woman will leave advantageous non-agricultural self-employment.

In general, our results suggest that receiving more remittances decreases the probability of men transitioning into formal salaried employment and decreases the probability that they will leave the private salaried employment. This may be because these workers are substituting leisure for labour now that the increase in non-labour income makes this affordable. On the other hand, remittances and other non-labour income promote advantageous agricultural self-employment for men; receiving more remittances and other non-labour income increases the probability of transitioning into advantageous agricultural self-employment and decreases the probability of transitioning out of this advantageous state. This may be because the inflow of money helps fund capital, inventories, or training for small businesses.

Older workers are more likely to become successfully self-employed than are younger workers; the probability of transitioning into advantageous self-employment increases with age until men are about 50 years old and women are about 30 years old. After 30 for women and 50 for men, the probability of becoming successful in non-agricultural self-employment decreases with age. This suggests that the most likely age at which people enter advantageous non-agricultural self-employment for men is in the mid- to late-40s. On the other hand, the age at which people are most likely to transition into the formal salaried sector is at a much lower age; the maximum probability of transitioning into the private formal sector is the high 30s for men and the low 30s for women. This again suggests that workers enter formal employment soon after leaving school, while those who are successful in self-employment gain experience first before becoming successful in non-agricultural self-employment. The probability that a worker leaves formal employment is largest for those in their mid-40s (for both men and women). This is also consistent with the conclusion that the best age to transition into advantageous self-employment is in the mid- to late-40s.

For men and women, those who transition into both formal salaried employment and advantageous non-agricultural self-employment (and least likely to transition out of these advantageous sectors) work in the industry sectors of manufacturing, construction, commerce, and services (vs. agriculture, forestry, and mining). The magnitudes of the impacts of sector of employment are similar for men and women except in high complexity services. Our results imply that advantageous self-employed men are more likely than women to come from high complexity services. This is consistent with Anna et al. (1999), who present evidence that in developing economies, entrepreneurial women are less likely to operate in high-technology activities.

7   Conclusions and policy implications

The most advantageous labour market state in both El Salvador and Nicaragua is formal sector salaried employment. Those in this state are the highest paid, have pensions, and have access to social security medical care. Most people enter this sector soon after graduating from school and remain in this sector for a long time; 80 per cent of formal employees in El Salvador and 70 per cent in Nicaragua remain as formal employees from year to year, and very few older workers transition from non-advantageous labour market states into formal salaried employment. A complete secondary and a post-secondary (tertiary) education are particularly useful for obtaining formal salaried employment and significantly reduce the probability of transitioning out of these advantageous sectors. These results suggest that there should be clear efforts to reduce school drop-out rates, especially among girls, and to promote secondary school completion through alternative programmes for those already outside of the school system.

Improving educational outcomes for women is necessary but not sufficient to promote the success of women in the labour market. For example, our results suggest that women need higher levels of education than men in order to access advantageous formal sector jobs. Other factors also hold women back from obtaining favourable employment. In our discussions with policy makers and civil society activists in El Salvador and Nicaragua, one barrier to the success of women in the labour market that was mentioned frequently was domestic violence against women. This suggests that programmes to change social norms against traditional stereotypes of the role of women are important for improving access of women to advantageous employment.

The focus of any policy to increase education levels will be on the young. Our results suggest that it is not likely that older people who are in informal salaried employment, self-employed, or are in unpaid domestic work will transition into formal salaried employment, even if they obtain more education. This suggests that most progress towards expanding advantageous employment, especially formal salaried employment, will be intergenerational. That is, those currently self-employed will not become formal sector employees, but their children may.

Our results suggest that access to electricity, potable water, sanitation and schools is particularly important in promoting transitions from unfavourable states into all advantageous sectors. This suggests that it is important for these public services to be widely provided.

Women who transition into advantageous self-employment are most likely to have unpaid domestic worker as a previous job, possibly their first job. This suggests that policies focused on promoting the transition from unpaid domestic work into advantageous employment are likely to have a bigger impact on women than men (simply because more women are in this state).

While a substantial proportion of men are unemployed in both El Salvador and Nicaragua, few women are unemployed in either country. To be considered unemployed one must not have a job and also be actively searching for a new one. It may be that when women lose their jobs they do not spend very much time searching for a new one but rather move directly to unpaid domestic work or another sector, while men spend more time searching for advantageous employment before accepting less advantageous work or leaving the labour force. This suggests that policies focused on speeding up the transition from unemployment to advantageous employment are likely to have a larger impact on men than women (simply because a higher proportion of men are unemployed).

Agriculture in both countries is dominated by men: almost no women are agricultural self-employed workers. This suggests that policies that promote advantageous agricultural self-

employment will have little impact on the ability of women to obtain advantageous employment in El Salvador and Nicaragua.

Both men and women are more likely to transition into advantageous non-agricultural self-employment when they are older and have more working experience. For both men and women, those who transition into advantageous non-agricultural self-employment are most likely to come from informal sector employees or unfavourable non-agricultural self-employed, and not formal salaried employment. These conclusions suggest that policies to promote advantageous self-employment should be targeted towards older workers who already have some relevant work experience and should target those currently working as informal sector employees or unfavourable non-agricultural self-employed, and not salaried formal sector employees.

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Figure 1: Distribution of the working age population according to their labour market state, comparison by country and gender
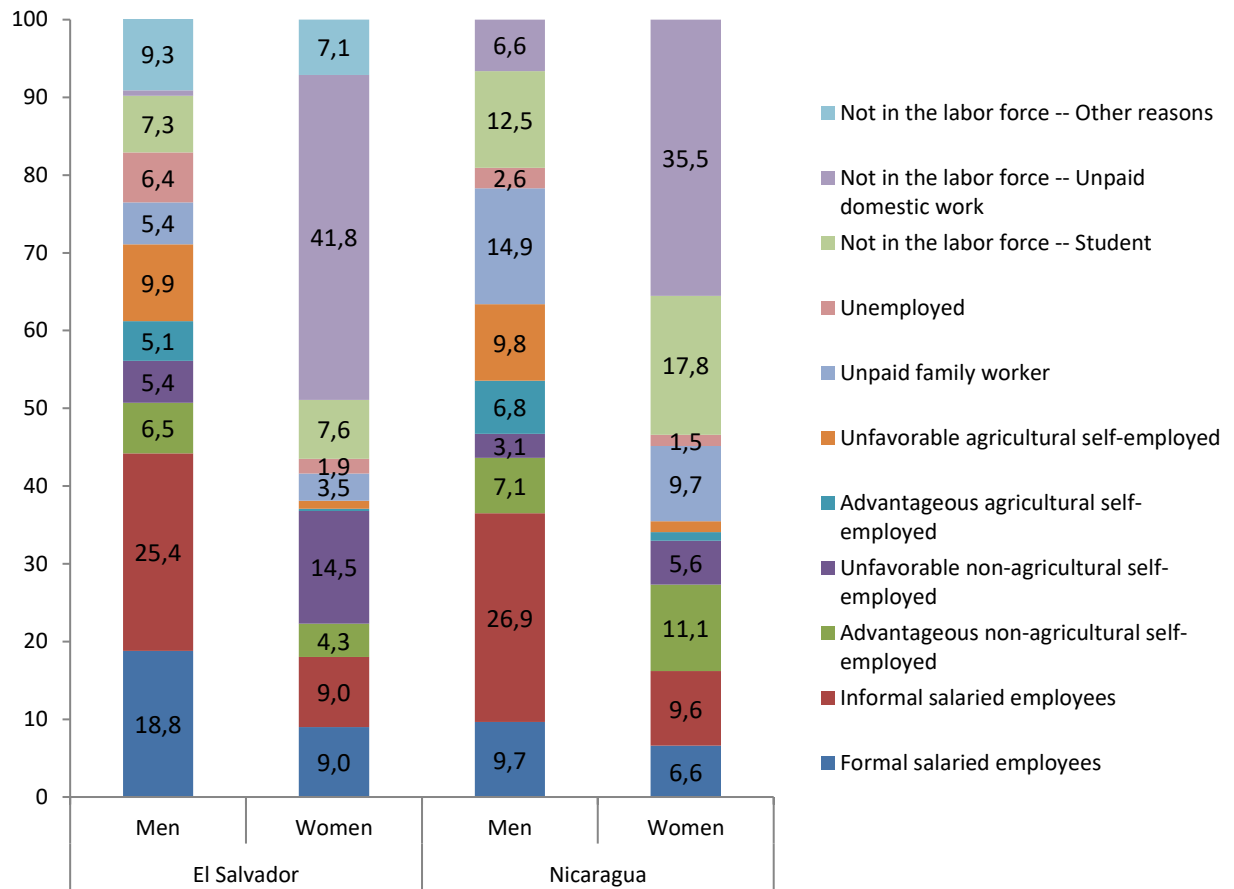
Source: Authors' calculations based on the data described in Section 3.

Figure 2: Percentage of working age population who transition into each state
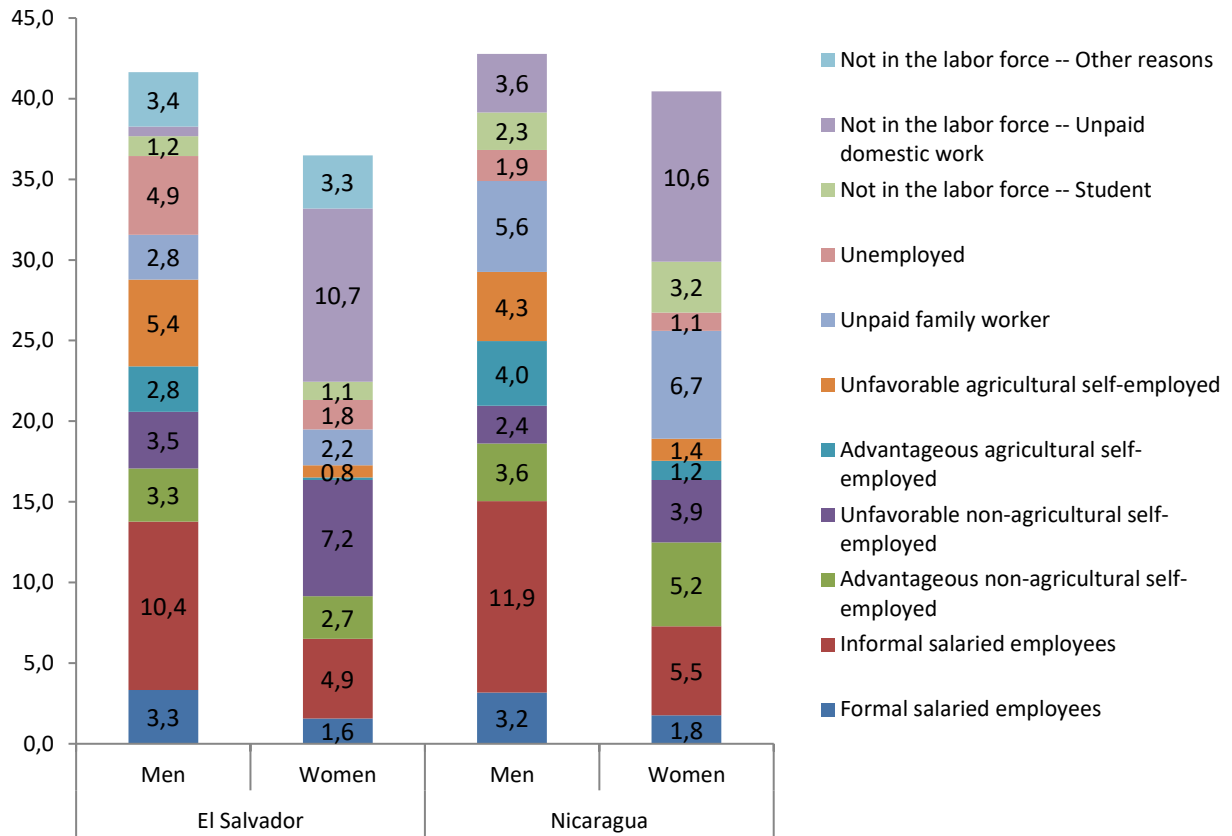
Source: Authors' calculations based on the data described in Section 3.

Figure 3a: Distribution of cases who transition into advantageous state according to their state of origin, comparison by gender, El Salvador
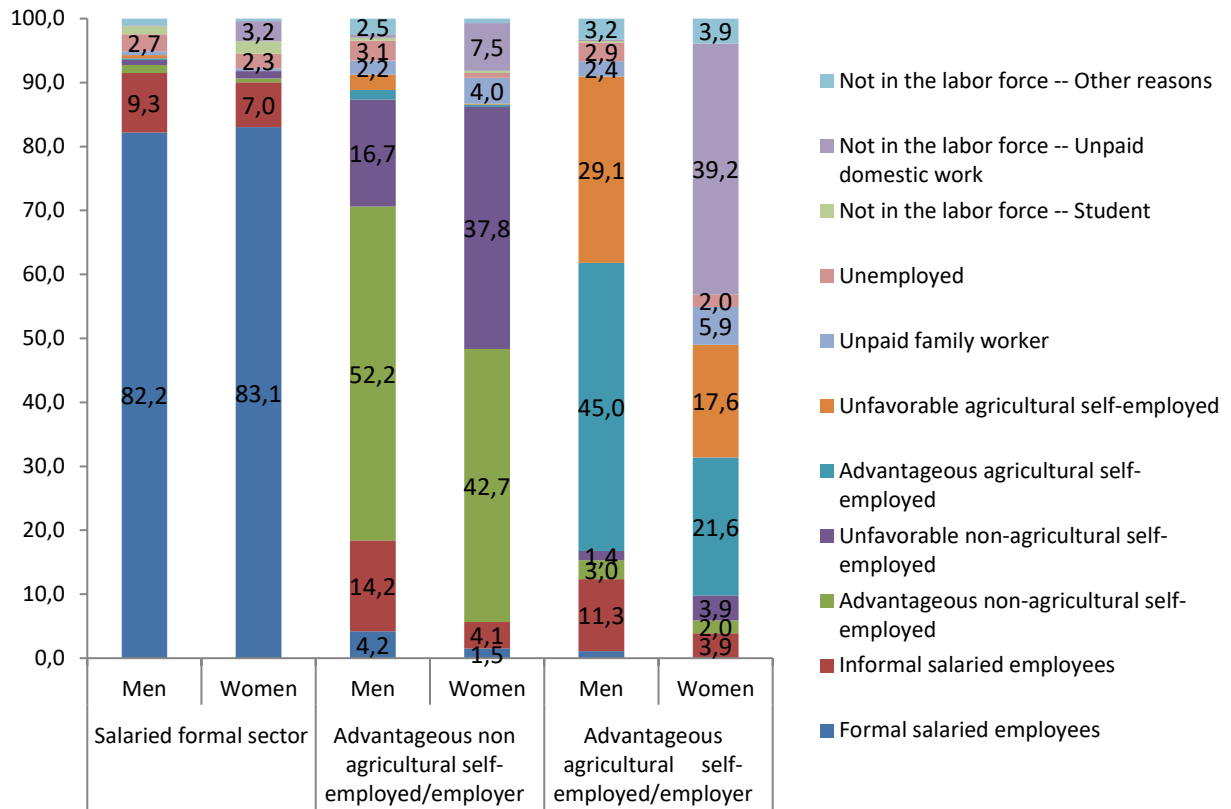
Source: Authors' calculations based on the data described in Section 3.

Figure 3b: Distribution of cases in each advantageous states according to their state of origin, comparison by gender, Nicaragua
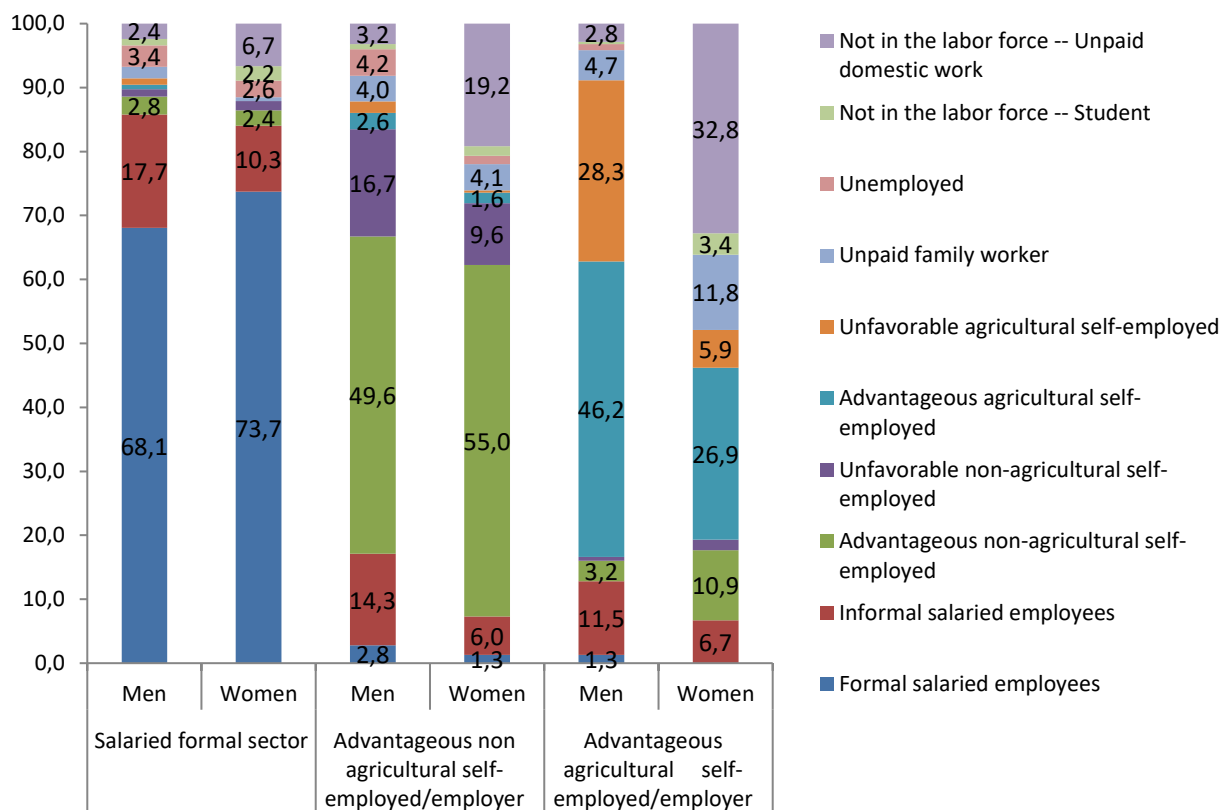
Source: Authors' calculations based on the data described in Section 3.

Figure 4: Distribution of cases in each advantageous state in 2012, according to their initial state in 2009, comparasion by gender, Nicaragua
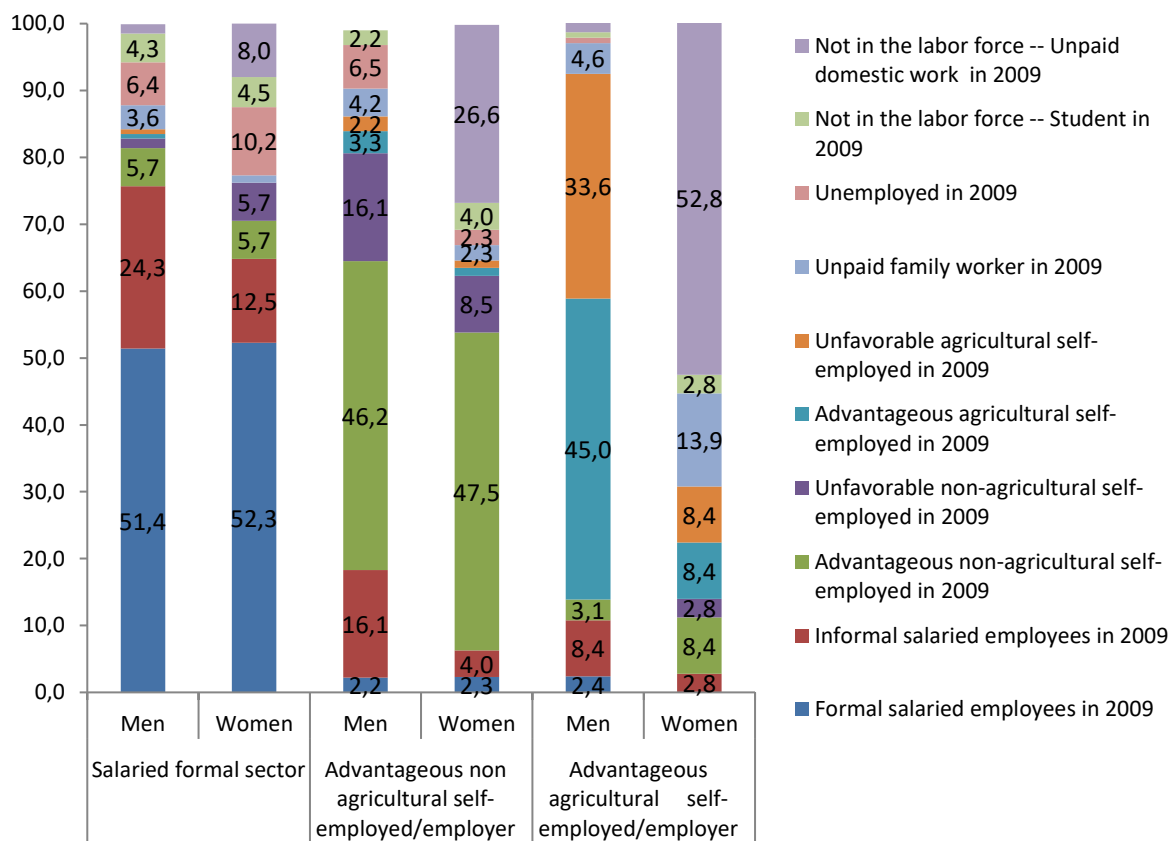
Source: Authors' calculations based on the data described in Section 3.

Table 1: Selected labour market indicators and labour force characteristics, comparison by country (2008–12)

	El Salvador (average 2008–12)			Nicaragua (average 2009–12)		
	All	Men	Women	All	Men	Women
Participation rate	62.8	81.2	47.4	63.4	79.3	47.8
Unemployment rate	6.6	8.1	4.5	3.4	3.6	3.3
Underemployment rate	27.2	25.1	30.0	42.7	34.2	55.7
Proportion working in firms with 5 or fewer employees	55.6	55.2	56.0	74.6	72.0	76.8
Proportion of workers insured by social security	29.1	29.2	29.0	11.2	12.3	10.3
Distribution of the labour force by economic sector:						
Agriculture and mining	22.2	33.8	5.7	38.5	52.6	16.2
Manufacturing/construction	20.6	21.9	18.7	16.9	15.3	19.4
Commerce	28.5	19.1	42.0	21.6	14.2	33.1
High complexity services	17.4	18.6	15.8	9.4	9.5	9.2
Low complexity services	11.3	6.6	18.0	13.7	8.4	22.0
Distribution of the labour force by employment status:						
Salaried employees	51.5	62.8	51.5	44.5	48.3	37.3
Owner	2.8	5.1	2.8	2.4	3.4	1.5
Self-employed	37.9	24.8	37.9	33.3	30.6	41.3
Unpaid	7.7	7.2	7.7	19.8	17.8	19.9
Distribution of the labour force by education level:						
No Education	12.4	12.4	12.4	16.3	16.6	16.1
Primary	56.5	59.0	53.0	44.9	46.5	43.4
Secondary	17.8	17.1	18.8	30.1	28.8	31.3
Tertiary	13.3	11.5	15.8	8.7	8.2	9.1
Average years of schooling of the labour force	7.6	7.4	7.8	5.9	5.7	6.1

Source: Authors' calculations based on the data described in Section 3.

Table 2: Gender wage gap

	El Salvador	Nicaragua
All	34.2	27.2
Salaried employees only	13.4	28.1
Adults (25–64 years)	37.4	28.7
Young (15–24 years)	24.6	21.4
Urban	32.9	36.1
Urban salaried adults	16.1	26.4

Note: The table shows the average percentage difference in the hourly wages of men and women, after controlling for education and potential experience.

Source: Authors' calculations based on the data described in Section 3.

Table 3: Marginal effects on the probability of entering an advantageous state, comparison by gender

	Salaried formal sector		Advantageous non-agricultural SE		Advantageous agricultural SE	
	Men	Women	Men	Women	Men	Women
Number of obs	20726	28160	20726	28160	20726	26563
Pseudo R2	0.122	0.208	0.207	0.193	0.147	0.192
Log likelihood	-3166	-2007	-2826	-3527	-2968	-589.3
Age	0.0037***	0.0007***	0.0033***	0.0030***	0.0031***	0.0002***
Age squared	-0.000049***	-0.00001***	-0.00003***	-0.00005***	-0.00003***	-0.000002***
Complete primary schooling	0.0153***	0.0057***	0.0066**	0.0071***	-0.0019	0.0003
Secondary schooling (incomplete)	0.0291***	0.0083***	0.0110***	0.0078***	-0.0062**	0.0001
Secondary schooling (complete)	0.0680***	0.0304***	0.0235***	0.0114***	-0.0051	0.0008
Some tertiary schooling	0.0881***	0.0443***	0.0230***	0.0178***	-0.0102***	dropped
Household head	0.0025	-0.0004	0.0153***	0.0161***	0.0245***	0.0015
Spouse	0.0108	-0.0017**	0.0115*	0.0112***	0.0114	0.0002
Got married/found a companion	0.0100	0.0012	0.0066	0.0098	0.0004	0.0004
Got divorced/separated	0.0008	0.0046	0.0208**	0.0150**	-0.0079	0.0047*
High population density area	0.0176***	0.0065***	0.0023	0.0025	-0.0191***	-0.0010***
Manufacture/construction	0.0070**	0.0099***	0.0467***	0.0532***	-0.0199***	-0.0010***
Commerce	0.0152***	0.0023**	0.0727***	0.0869***	-0.0223***	-0.0010***
High complexity services	0.0493***	0.0136***	0.0373***	0.0125***	-0.0175***	-0.0010***
Low complexity services	0.0047***	0.0025***	0.0060***	0.0050***	-0.0065***	-0.0009
Young children (0–6 years old)	0.0015	-0.0001	0.0001	0.0005	0.0007	-0.0001
School age children (7–18 years old)	-0.0002	-0.0004*	-0.0016***	-0.0010**	0.0001	-0.0001
Working age members (19-65 years old)	0.0017**	0.0004*	-0.0002	-0.0010*	0.0009	-0.0001
Older members (older than 65 years)	-0.0015	-0.0011*	-0.0057***	-0.0009	0.0012	-0.0002
Tubed water inside the dwelling	0.0121***	0.0008	0.0073***	0.0028	-0.0062*	-0.0007
Tubed water outside the dwelling	0.0042*	0.0016**	0.0045***	0.0011	-0.0051**	0.0000

Electricity network	0.0011	0.0003	0.0125***	0.0115***	0.0011	-0.0018***
Total amount of monthly remittances	-0.2190**	0.0019	0.0122	0.0271	0.3120***	0.0115
dummy Nicaragua	0.0166***	0.0081***	0.0391***	0.0774***	0.0066	0.0053**
dummy 2010	0.0003	0.0001	0.0031	0.0017	0.0044*	0.0012*
dummy 2011	-0.0028	0.0005	0.0033	0.0078***	0.0031	0.0002
dummy 2010*Nicaragua	-0.0038	-0.0029***	-0.0045	-0.0062***	-0.0013	-0.0004
dummy 2011*Nicaragua	0.0002	-0.0026***	-0.0102***	-0.0094***	0.0010	0.0009

Note: ***significant at 1%, **significant at 5%, *significant at 10%.

Source: Authors' calculations based on the data described in Section 3.

Table 4: Marginal effects on the probability of leaving an advantageous state, comparison by gender

	Salaried formal sector		Advantageous non-agricultural SE		Advantageous agricultural SE	
	Men	Women	Men	Women	Men	Women
Number of obs	4580	2741	1794	1903	1569	123
Pseudo R2	0.0805	0.0874	0.056	0.0448	0.0242	0.356
Log likelihood	-1873	-1041	-1155	-1260	-1060	-51.3
Age	-0.017 ***	-0.0246 ***	-0.0290 ***	-0.0221 ***	-0.0121 **	-0.0389
Age squared	0.0002050 ***	0.000273 ***	0.0003160 ***	0.0002070 ***	0.0001140 **	0.0003010
Complete primary schooling	0.014	0.0248	-0.0190	-0.0320	-0.1020 **	-0.2700
Secondary schooling (incomplete)	-0.037 **	-0.0437 *	-0.0286	-0.0790 **	-0.1010 **	dropped
Secondary schooling (complete)	-0.077 ***	-0.0467 *	-0.0739 *	-0.0692	-0.1620 **	dropped
Some tertiary schooling	-0.089 ***	-0.0747 ***	-0.1840 ***	-0.1090 **	-0.1690 *	dropped
Household head	-0.119 ***	0.023	-0.1490 ***	-0.1290 ***	-0.1850 ***	0.1020
Spouse	-0.033	0.0281	-0.1510 **	-0.0557	-0.0988	0.2980 *
Got married/found a companion	-0.021	0.0106	-0.0738	0.0181	-0.0877	-0.0041
Got divorced/separated	0.060	0.0628	0.0404	-0.0826	-0.0049	-0.5710
High population density area	-0.014	-0.0245 *	0.0337	-0.0006	0.0829	-0.0367
Manufacture/construction	-0.053 **	-0.0955 ***	-0.0303	-0.1780 ***	dropped	dropped
Commerce	-0.033	-0.0566 *	-0.1420 **	-0.2400 ***	dropped	dropped
High complexity services	-0.059 ***	-0.062 **	-0.0565	-0.1090	dropped	dropped
Low complexity services	-0.025 ***	-0.0351 ***	-0.0288 *	-0.0532 **	dropped	dropped
Young children (0–6 years old)	-0.004	0.0023	-0.0588 ***	-0.0036	-0.0162	0.0427
School age children (7–18 years old)	0.006	0.00701	-0.0013	0.0031	0.0093	-0.0976 **
Working age members (19–65 years old)	-0.008 *	-0.00178	0.0245 **	0.0154	0.0010	0.1390 ***
Older members (older than 65 years)	0.002	0.0248 *	-0.0310	-0.0038	0.0042	0.2570 *
Tubed water inside the dwelling	-0.065 *	-0.0365	-0.0577	-0.0582	-0.0666	-0.1240
Tubed water outside the dwelling	-0.012	-0.0145	-0.0775 **	-0.0544	-0.0002	-0.1980
Electricity network	-0.025	-0.0253	-0.1380 ***	-0.1310 ***	-0.0155	0.1270
Total amount of monthly remittances	1.238	0.0152	-0.2860	-0.5590	-0.3910	-1.2070

dummy nicaragua	-0.077 ***	-0.0518	-0.0957	-0.2130 ***	-0.1010 *	-0.8830 ***
dummy 2010	-0.010	-0.0338 **	0.0188	0.0454	0.0030	-0.2940
dummy 2011	-0.029 **	-0.0155	0.0565 *	0.0643 *	-0.0372	-0.6300 ***
dummy 2010*nicaragua	0.045	0.0419	-0.0075	-0.0094	-0.0168	0.2940
dummy 2011*nicaragua	0.103 **	0.0341	-0.0158	-0.0339	0.0240	0.4200 ***

Note: dropped/Dropped because of collinearity or because it predicts success(failure) perfectly. ***significant at 1%, **significant at 5%, *significant at 10%.

Source: Authors' calculations based on the data described in Section 3.

Appendix

Table A1: Probabilities of transitions matrix for women, Nicaragua (sum of transitions for the period 2009–12)

	1	2	3	4	5	6	7	8	9	10	Total in t
	365	36	11	6	0	0	3	12	0	25	458
1. Formal salaried employees	79.69	7.86	2.40	1.31	0.00	0.00	0.66	2.62	0.00	5.46	100.0
	73.74	5.00	1.29	1.32	0.00	0.00	0.39	12.63	0.00	0.99	6.22
	51	314	51	28	8	3	33	13	27	126	654
2. Informal salaried employees	7.80	48.01	7.80	4.28	1.22	0.46	5.05	1.99	4.13	19.27	100.0
	10.30	43.61	5.99	6.15	6.72	2.40	4.27	13.68	2.25	4.97	8.88
	12	62	468	89	13	1	51	9	10	132	847
3. Advantageous non-agricultural self-employed	1.42	7.32	55.25	10.51	1.53	0.12	6.02	1.06	1.18	15.58	100.0
	2.42	8.61	54.99	19.56	10.92	0.80	6.60	9.47	0.83	5.21	11.50
	7	26	82	169	2	11	23	3	7	113	443
4. Unfavourable non-agricultural self-employed	1.58	5.87	18.51	38.15	0.45	2.48	5.19	0.68	1.58	25.51	100.0
	1.41	3.61	9.64	37.14	1.68	8.80	2.98	3.16	0.58	4.46	6.01
	0	3	14	3	32	5	7	0	1	19	84
5. Advantageous agricultural self-employed	0.00	3.57	16.67	3.57	38.10	5.95	8.33	0.00	1.19	22.62	100.0
	0.00	0.42	1.65	0.66	26.89	4.00	0.91	0.00	0.08	0.75	1.14
	0	5	3	11	7	23	12	1	0	42	104
6. Unfavourable agricultural self-employed	0.00	4.81	2.88	10.58	6.73	22.12	11.54	0.96	0.00	40.38	100.0
	0.00	0.69	0.35	2.42	5.88	18.40	1.55	1.05	0.00	1.66	1.41

7. Unpaid family workers	3	46	35	22	14	10	281	3	99	153	666
	0.45	6.91	5.26	3.30	2.10	1.50	42.19	0.45	14.86	22.97	100.0
	0.61	6.39	4.11	4.84	11.76	8.00	36.35	3.16	8.26	6.04	9.04
8. Unemployed	13	19	11	7	0	0	6	12	6	37	111
	11.71	17.12	9.91	6.31	0.00	0.00	5.41	10.81	5.41	33.33	100.0
	2.63	2.64	1.29	1.54	0.00	0.00	0.78	12.63	0.50	1.46	1.51
9. Not in the labour force – student	11	57	13	13	4	0	161	15	965	131	1370
	0.80	4.16	0.95	0.95	0.29	0.00	11.75	1.09	70.44	9.56	100.0
	2.22	7.92	1.53	2.86	3.36	0.00	20.83	15.79	80.55	5.17	18.60
10. Not in the labour force – other	33	152	163	107	39	72	196	27	83	1757	2629
	1.26	5.78	6.20	4.07	1.48	2.74	7.46	1.03	3.16	66.83	100.0
	6.67	21.11	19.15	23.52	32.77	57.60	25.36	28.42	6.93	69.31	35.69
Total in t+1	495	720	851	455	119	125	773	95	1198	2535	7366
	6.72	9.77	11.55	6.18	1.62	1.70	10.49	1.29	16.26	34.41	100.0
	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Note: For each state, the first row shows the number of observations in each transition, the second row shows the probabilities of finding an individual in status j at time t+k conditional on being in status z at time t, the third row shows the probabilities that an individual in status j at time t+k was in status z at time t.

Source: Authors' calculations based on the data described in Section 3.

Table A2: Probabilities of transitions matrix for men, Nicaragua (sum of transitions for the period 2009–12)

	1	2	3	4	5	6	7	8	9	10	Total in t
1. Formal salaried employees	484	95	14	2	7	7	4	13	1	17	644
	75.16	14.75	2.17	0.31	1.09	1.09	0.62	2.02	0.16	2.64	100.0
	68.17	5.06	2.79	0.87	1.32	0.94	0.37	8.02	0.13	3.46	9.07
2. Informal salaried employees	126	1036	72	41	61	94	119	60	35	81	1725
	7.30	60.06	4.17	2.38	3.54	5.45	6.90	3.48	2.03	4.70	100.0
	17.75	55.14	14.34	17.83	11.51	12.58	11.02	37.04	4.53	16.50	24.28
3. Advantageous non-agricultural self-employed	20	81	249	69	17	3	9	16	6	26	496
	4.03	16.33	50.20	13.91	3.43	0.60	1.81	3.23	1.21	5.24	100.0
	2.82	4.31	49.60	30.00	3.21	0.40	0.83	9.88	0.78	5.30	6.98
4. Unfavourable non-agricultural self-employed	8	49	84	63	3	6	10	4	4	11	242
	3.31	20.25	34.71	26.03	1.24	2.48	4.13	1.65	1.65	4.55	100.0
	1.13	2.61	16.73	27.39	0.57	0.80	0.93	2.47	0.52	2.24	3.41
5. Advantageous agricultural self-employed	5	64	13	3	245	134	24	4	2	18	512
	0.98	12.50	2.54	0.59	47.85	26.17	4.69	0.78	0.39	3.52	100.0
	0.70	3.41	2.59	1.30	46.23	17.94	2.22	2.47	0.26	3.67	7.21
6. Unfavourable agricultural self-employed	7	124	9	14	150	442	31	3	1	21	802
	0.87	15.46	1.12	1.75	18.70	55.11	3.87	0.37	0.12	2.62	100.0
	0.99	6.60	1.79	6.09	28.30	59.17	2.87	1.85	0.13	4.28	11.29
7. Unpaid family workers	12	189	20	9	25	47	680	5	94	32	1113
	1.08	16.98	1.80	0.81	2.25	4.22	61.10	0.45	8.45	2.88	100.0
	1.69	10.06	3.98	3.91	4.72	6.29	62.96	3.09	12.16	6.52	15.67

	24	69	21	13	5	6	3	25	5	18	189
8. Unemployed	12.70	36.51	11.11	6.88	2.65	3.17	1.59	13.23	2.65	9.52	100.0
	3.38	3.67	4.18	5.65	0.94	0.80	0.28	15.43	0.65	3.67	2.66
	7	88	4	5	2	0	175	13	608	34	936
9. Not in the labour force – student	0.75	9.40	0.43	0.53	0.21	0.00	18.70	1.39	64.96	3.63	100.0
	0.99	4.68	0.80	2.17	0.38	0.00	16.20	8.02	78.65	6.92	13.18
	17	84	16	11	15	8	25	19	17	233	445
10. Not in the labour force – unpaid domestic work/any other state	3.82	18.88	3.60	2.47	3.37	1.80	5.62	4.27	3.82	52.36	100.0
	2.39	4.47	3.19	4.78	2.83	1.07	2.31	11.73	2.20	47.45	6.26
	710	1879	502	230	530	747	1080	162	773	491	7104
Total in t+1	9.99	26.45	7.07	3.24	7.46	10.52	15.20	2.28	10.88	6.91	100.0
	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Note: For each state, the first row shows the number of observations in each transition, the second row shows the probabilities of finding an individual in status j at time t+k conditional on being in status z at time t, the third row shows the probabilities that an individual in status j at time t+k was in status z at time t.

Source: Authors' calculations based on the data described in Section 3.

Table A3: Probabilities of transitions matrix for women, El Salvador (sum of transitions for the period 2008–12 using the definition of advantageous based on the minimum wage)

	1	2	3	4	5	6	7	8	9	10	11	Total in t
1. Formal salaried employees	1976	112	18	39	0	0	12	34	11	93	18	2313
	85.43	4.84	0.78	1.69	0.00	0.00	0.52	1.47	0.48	4.02	1	100.0
	83.06	4.57	1.52	1.04	0.00	0.00	1.35	6.25	0.71	0.88	0.94	9.04
2. Informal salaried employees	166	1192	49	243	2	10	40	75	40	434	41	2292
	7.24	52.01	2.14	10.60	0.09	0.44	1.75	3.27	1.75	18.94	1.79	100.0
	6.98	48.61	4.13	6.47	3.92	3.85	4.49	13.79	2.57	4.10	2.14	8.96
3. Advantageous non-agricultural self-employed	14	52	507	383	1	2	46	7	3	69	14	1098
	1.28	4.74	46.17	34.88	0.09	0.18	4.19	0.64	0.27	6.28	1.28	100.0
	0.59	2.12	42.71	10.21	1.96	0.77	5.17	1.29	0.19	0.65	0.73	4.29
4. Unfavourable non-agricultural self-employed	28	264	449	1913	2	25	76	23	15	826	89	3710
	0.75	7.12	12.10	51.56	0.05	0.67	2.05	0.62	0.40	22.26	2.40	100.0
	1.18	10.77	37.83	50.97	3.92	9.62	8.54	4.23	0.97	7.80	4.65	14.51
5. Advantageous agricultural self-employed	0	1	4	9	11	12	2	0	0	28	3	70
	0.00	1.43	5.71	12.86	15.71	17.14	2.86	0.00	0.00	40.00	4.29	100.0
	0.00	0.04	0.34	0.24	21.57	4.62	0.22	0.00	0.00	0.26	0.16	0.27
6. Unfavourable agricultural self-employed	0	10	2	26	9	68	6	5	1	110	12	249
	0.00	4.02	0.80	10.44	3.61	27.31	2.41	2.01	0.40	44.18	4.82	100.0
	0.00	0.41	0.17	0.69	17.65	26.15	0.67	0.92	0.06	1.04	0.63	0.97
7. Unpaid family workers	10	58	48	85	3	3	322	14	78	253	17	891
	1.12	6.51	5.39	9.54	0.34	0.34	36.14	1.57	8.75	28.40	1.91	100.0
	0.42	2.37	4.04	2.26	5.88	1.15	36.18	2.57	5.02	2.39	0.89	3.48

	1	2	3	4	5	6	7	8	9	10	11	Total
8. Unemployed	54	90	9	35	1	2	20	76	29	151	10	477
	11.32	18.87	1.89	7.34	0.21	0.42	4.19	15.93	6.08	31.66	2.10	100.0
	2.27	3.67	0.76	0.93	1.96	0.77	2.25	13.97	1.87	1.43	0.52	1.86
9. Not in the labour force – student	47	124	4	35	0	3	92	107	1263	236	33	1944
	2.42	6.38	0.21	1.80	0.00	0.15	4.73	5.50	64.97	12.14	1.70	100.0
	1.98	5.06	0.34	0.93	0.00	1.15	10.34	19.67	81.27	2.23	1.72	7.60
10. Not in the labour force – unpaid domestic work	75	503	89	913	20	124	259	191	95	7847	607	10723
	0.70	4.69	0.83	8.51	0.19	1.16	2.42	1.78	0.89	73.18	5.66	100.0
	3.15	20.51	7.50	24.33	39.22	47.69	29.10	35.11	6.11	74.09	31.68	41.92
11. Not in the labour force – other reasons	9	46	8	72	2	11	15	12	19	544	1072	1810
	0.50	2.54	0.44	3.98	0.11	0.61	0.83	0.66	1.05	30.06	59.23	100.0
	0.38	1.88	0.67	1.92	3.92	4.23	1.69	2.21	1.22	5.14	55.95	7.08
Total in t+1	2379	2452	1187	3753	51	260	890	544	1554	10591	1916	25577
	9.30	9.59	4.64	14.67	0.20	1.02	3.48	2.13	6.08	41.41	7.49	100.0
	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Note: For each state, the first row shows the number of observations in each transition, the second row shows the probabilities of finding an individual in status j at time t+k conditional on being in status z at time t, the third row shows the probabilities that an individual in status j at time t+k was in status z at time t.

Source: Authors' calculations based on the data described in Section 3.

Table A4: Probabilities of transitions matrix for men, El Salvador (sum of transitions for the period 2008–12 using the definition of advantageous based on the minimum wage)

	1	2	3	4	5	6	7	8	9	10	11	Total in t
1. Formal salaried employees	3349	327	63	38	12	37	20	123	16	5	41	4031
	83.08	8.11	1.56	0.94	0.30	0.92	0.50	3.05	0.40	0.12	1	100.0
	82.20	5.83	4.21	3.19	1.08	1.70	1.76	8.75	1.25	3.73	1.94	18.55
2. Informal salaried employees	379	3340	213	213	126	406	202	406	68	24	142	5519
	6.87	60.52	3.86	3.86	2.28	7.36	3.66	7.36	1.23	0.43	2.57	100.0
	9.30	59.54	14.22	17.87	11.30	18.65	17.77	28.88	5.33	17.91	6.73	25.40
3. Advantageous non-agricultural self-employed	51	172	782	242	33	38	23	33	2	8	36	1420
	3.59	12.11	55.07	17.04	2.32	2.68	1.62	2.32	0.14	0.56	2.54	100.0
	1.25	3.07	52.20	20.30	2.96	1.75	2.02	2.35	0.16	5.97	1.71	6.54
4. Unfavourable non-agricultural self-employed	33	197	250	431	16	61	32	53	8	11	76	1168
	2.83	16.87	21.40	36.90	1.37	5.22	2.74	4.54	0.68	0.94	6.51	100.0
	0.81	3.51	16.69	36.16	1.43	2.80	2.81	3.77	0.63	8.21	3.60	5.38
5. Advantageous agricultural self-employed	9	140	23	26	502	294	21	48	1	2	41	1107
	0.81	12.65	2.08	2.35	45.35	26.56	1.90	4.34	0.09	0.18	3.70	100.0
	0.22	2.50	1.54	2.18	45.02	13.50	1.85	3.41	0.08	1.49	1.94	5.10
6. Unfavourable agricultural self-employed	21	413	36	51	325	1009	52	95	5	5	146	2158
	0.97	19.14	1.67	2.36	15.06	46.76	2.41	4.40	0.23	0.23	6.77	100.0
	0.52	7.36	2.40	4.28	29.15	46.35	4.57	6.76	0.39	3.73	6.92	9.93
7. Unpaid family workers	24	250	33	19	27	63	531	58	111	10	43	1169
	2.05	21.39	2.82	1.63	2.31	5.39	45.42	4.96	9.50	0.86	3.68	100.0
	0.59	4.46	2.20	1.59	2.42	2.89	46.70	4.13	8.71	7.46	2.04	5.38

	C1	C2	C3	C4	C5	C6	C7	C8	C9	C10	C11	Total
8. Unemployed	109	429	46	74	32	124	66	347	31	24	113	1395
	7.81	30.75	3.30	5.30	2.29	8.89	4.73	24.87	2.22	1.72	8.10	100.0
	2.68	7.65	3.07	6.21	2.87	5.70	5.80	24.68	2.43	17.91	5.36	6.42
9. Not in the labour force – student	51	165	7	20	3	14	141	116	1006	10	58	1591
	3.21	10.37	0.44	1.26	0.19	0.88	8.86	7.29	63.23	0.63	3.65	100.0
	1.25	2.94	0.47	1.68	0.27	0.64	12.40	8.25	78.90	7.46	2.75	7.32
10. Not in the labour force – unpaid domestic work	6	29	8	9	3	7	15	30	4	8	38	157
	3.82	18.47	5.10	5.73	1.91	4.46	9.55	19.11	2.55	5.10	24.20	100.0
	0.15	0.52	0.53	0.76	0.27	0.32	1.32	2.13	0.31	5.97	1.80	0.72
11. Not in the labour force – other reasons	42	148	37	69	36	124	34	97	23	27	1375	2012
	2.09	7.36	1.84	3.43	1.79	6.16	1.69	4.82	1.14	1.34	68.34	100.0
	1.03	2.64	2.47	5.79	3.23	5.70	2.99	6.90	1.80	20.15	65.20	9.26
Total in t+1	4074	5610	1498	1192	1115	2177	1137	1406	1275	134	2109	21727
	18.75	25.82	6.89	5.49	5.13	10.02	5.23	6.47	5.87	0.62	9.71	100.0
	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Note: For each state, the first row shows the number of observations in each transition, the second row shows the probabilities of finding an individual in status j at time t+k conditional on being in status z at time t, the third row shows the probabilities that an individual in status j at time t+k was in status z at time t.

Source: Authors' calculations based on the data described in Section 3.

Table A5: Probabilities of transitions matrix for women, El Salvador (sum of transitions for the period 2008–12 using the definition of advantageous based on the poverty line)

	1	2	3	4	5	6	7	8	9	10	11	Total in t
1. Formal salaried employees	1976	112	49	8	0	0	12	34	11	93	18	2313
	85.43	4.84	2.12	0.35	0.00	0.00	0.52	1.47	0.48	4.02	1	100.0
	83.06	4.57	4.13	0.21	0.00	0.00	1.35	6.25	0.71	0.88	0.94	9.04
2. Informal salaried employees	166	1192	49	243	2	10	40	75	40	434	41	2292
	7.24	52.01	2.14	10.60	0.09	0.44	1.75	3.27	1.75	18.94	1.79	100.0
	6.98	48.61	4.13	6.47	3.92	3.85	4.49	13.79	2.57	4.10	2.14	8.96
3. Advantageous non-agricultural self-employed	38	261	2710	213	12	14	105	25	11	662	73	4124
	0.92	6.33	65.71	5.16	0.29	0.34	2.55	0.61	0.27	16.05	1.77	100.0
	1.60	10.64	228.31	5.68	23.53	5.38	11.80	4.60	0.71	6.25	3.81	16.12
4. Unfavourable non-agricultural self-employed	4	55	214	115	2	2	17	5	7	233	30	684
	0.58	8.04	31.29	16.81	0.29	0.29	2.49	0.73	1.02	34.06	4.39	100.0
	0.17	2.24	18.03	3.06	3.92	0.77	1.91	0.92	0.45	2.20	1.57	2.67
5. Advantageous agricultural self-employed	0	4	19	6	48	15	5	2	0	65	6	170
	0.00	2.35	11.18	3.53	28.24	8.82	2.94	1.18	0.00	38.24	3.53	100.0
	0.00	0.16	1.60	0.16	94.12	5.77	0.56	0.37	0.00	0.61	0.31	0.66
6. Unfavourable agricultural self-employed	0	7	15	1	15	22	3	3	1	73	9	149
	0.00	4.70	10.07	0.67	10.07	14.77	2.01	2.01	0.67	48.99	6.04	100.0
	0.00	0.29	1.26	0.03	29.41	8.46	0.34	0.55	0.06	0.69	0.47	0.58
7. Unpaid family workers	10	58	48	85	3	3	322	14	78	253	17	891
	1.12	6.51	5.39	9.54	0.34	0.34	36.14	1.57	8.75	28.40	1.91	100.0
	0.42	2.37	4.04	2.26	5.88	1.15	36.18	2.57	5.02	2.39	0.89	3.48

8. Unemployed	54	90	9	35	1	2	20	76	29	151	10	477
	11.32	18.87	1.89	7.34	0.21	0.42	4.19	15.93	6.08	31.66	2.10	100.0
	2.27	3.67	0.76	0.93	1.96	0.77	2.25	13.97	1.87	1.43	0.52	1.86
9. Not in the labour force – student	47	124	4	35	0	3	92	107	1263	236	33	1944
	2.42	6.38	0.21	1.80	0.00	0.15	4.73	5.50	64.97	12.14	1.70	100.0
	1.98	5.06	0.34	0.93	0.00	1.15	10.34	19.67	81.27	2.23	1.72	7.60
10. Not in the labour force – unpaid domestic work	75	503	89	913	20	124	259	191	95	7847	607	10723
	0.70	4.69	0.83	8.51	0.19	1.16	2.42	1.78	0.89	73.18	5.66	100.0
	3.15	20.51	7.50	24.33	39.22	47.69	29.10	35.11	6.11	74.09	31.68	41.92
11. Not in the labour force – other reasons	9	46	8	72	2	11	15	12	19	544	1072	1810
	0.50	2.54	0.44	3.98	0.11	0.61	0.83	0.66	1.05	30.06	59.23	100.0
	0.38	1.88	0.67	1.92	3.92	4.23	1.69	2.21	1.22	5.14	55.95	7.08
Total in t+1	2379	2452	1187	3753	51	260	890	544	1554	10591	1916	25577
	9.30	9.59	4.64	14.67	0.20	1.02	3.48	2.13	6.08	41.41	7.49	100.0
	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Note: For each state, the first row shows the number of observations in each transition, the second row shows the probabilities of finding an individual in status j at time t+k conditional on being in status z at time t, the third row shows the probabilities that an individual in status j at time t+k was in status z at time t.

Source: Authors' calculations based on the data described in Section 3.

Table A6: Probabilities of transitions matrix for men, El Salvador (sum of transitions for the period 2008–12 using the definition of advantageous based on the poverty line)

	1	2	3	4	5	6	7	8	9	10	11	Total in t
1. Formal salaried employees	3349	327	96	5	24	25	20	123	16	5	41	4031
	83.08	8.11	2.38	0.12	0.60	0.62	0.50	3.05	0.40	0.12	1	100.0
	82.20	5.83	6.41	0.42	2.15	1.15	1.76	8.75	1.25	3.73	1.94	18.55
2. Informal salaried employees	379	3340	415	11	334	198	202	406	68	24	142	5519
	6.87	60.52	7.52	0.20	6.05	3.59	3.66	7.36	1.23	0.43	2.57	100.0
	9.30	59.54	27.70	0.92	29.96	9.10	17.77	28.88	5.33	17.91	6.73	25.40
3. Advantageous non-agricultural self-employed	80	356	1640	28	89	54	50	81	8	18	97	2501
	3.20	14.23	65.57	1.12	3.56	2.16	2.00	3.24	0.32	0.72	3.88	100.0
	1.96	6.35	109.48	2.35	7.98	2.48	4.40	5.76	0.63	13.43	4.60	11.51
4. Unfavourable non-agricultural self-employed	4	13	28	9	1	4	5	5	2	1	15	87
	4.60	14.94	32.18	10.34	1.15	4.60	5.75	5.75	2.30	1.15	17.24	100.0
	0.10	0.23	1.87	0.76	0.09	0.18	0.44	0.36	0.16	0.75	0.71	0.40
5. Advantageous agricultural self-employed	18	325	83	2	1289	273	41	99	3	5	107	2245
	0.80	14.48	3.70	0.09	57.42	12.16	1.83	4.41	0.13	0.22	4.77	100.0
	0.44	5.79	5.54	0.17	115.61	12.54	3.61	7.04	0.24	3.73	5.07	10.33
6. Unfavourable agricultural self-employed	12	228	49	2	292	276	32	44	3	2	80	1020
	1.18	22.35	4.80	0.20	28.63	27.06	3.14	4.31	0.29	0.20	7.84	100.0
	0.29	4.06	3.27	0.17	26.19	12.68	2.81	3.13	0.24	1.49	3.79	4.69
7. Unpaid family workers	24	250	51	1	57	33	531	58	111	10	43	1169
	2.05	21.39	4.36	0.09	4.88	2.82	45.42	4.96	9.50	0.86	3.68	100.0
	0.59	4.46	3.40	0.08	5.11	1.52	46.70	4.13	8.71	7.46	2.04	5.38

	1	2	3	4	5	6	7	8	9	10	11	Total
8. Unemployed	109	429	114	6	90	66	66	347	31	24	113	1395
	7.81	30.75	8.17	0.43	6.45	4.73	4.73	24.87	2.22	1.72	8.10	100.0
	2.68	7.65	7.61	0.50	8.07	3.03	5.80	24.68	2.43	17.91	5.36	6.42
9. Not in the labour force – student	51	165	20	7	5	12	141	116	1006	10	58	1591
	3.21	10.37	1.26	0.44	0.31	0.75	8.86	7.29	63.23	0.63	3.65	100.0
	1.25	2.94	1.34	0.59	0.45	0.55	12.40	8.25	78.90	7.46	2.75	7.32
10. Not in the labour force unpaid domestic work	6	29	16	1	5	5	15	30	4	8	38	157
	3.82	18.47	10.19	0.64	3.18	3.18	9.55	19.11	2.55	5.10	24.20	100.0
	0.15	0.52	1.07	0.08	0.45	0.23	1.32	2.13	0.31	5.97	1.80	0.72
11. Not in the labour force – other reasons	42	148	90	16	78	82	34	97	23	27	1375	2012
	2.09	7.36	4.47	0.80	3.88	4.08	1.69	4.82	1.14	1.34	68.34	100.0
	1.03	2.64	6.01	1.34	7.00	3.77	2.99	6.90	1.80	20.15	65.20	9.26
Total in t+1	4074	5610	1498	1192	1115	2177	1137	1406	1275	134	2109	21727
	18.75	25.82	6.89	5.49	5.13	10.02	5.23	6.47	5.87	0.62	9.71	100.0
	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Note: For each state, the first row shows the number of observations in each transition, the second row shows the probabilities of finding an individual in status j at time t+k conditional on being in status z at time t, the third row shows the probabilities that an individual in status j at time t+k was in status z at time t.

Source: Authors' calculations based on the data described in Section 3.