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ABSTRACT

The labor-market assimilation hypothesis predicts poorer initial labor-market outcomes among immigrants followed by convergence towards the outcomes of the native-born working-age population with time lived in the receiving country. We investigate the applicability of this hypothesis to migrant women's labor force participation in Europe. We compare labor force participation rate (LFPR) gaps between migrant and native-born women in nine European countries, and examine how these LFPR gaps change with migrant women's additional years in the receiving country. Consistent with the assimilation hypothesis, the LFPRs of migrant women in the "old" migrant-receiving countries of Western Europe begin much lower than for otherwise-comparable native-born women and converge, though not always completely, towards the LFPRs of native-born women with additional years lived in the country. In the "new" migrant-receiving countries of Southern Europe, however, the LFPRs of migrant women at all durations of residence are similar to those of native-born women. Additional descriptive evidence suggests that differences in migrant admission and integration contexts are more plausible explanations for these contrasting Southern and Western European patterns than are explanations based on immigrant women's assumed greater family-role orientations.

INTRODUCTION

Migrants may face multiple barriers to their integration into receiving-country labor markets. These barriers may be related to the migrant's language and cultural skills, to difficulties for prospective employers to verify qualifications and work experience gained in the country of origin, to weaker employment-related social networks, and to individual and institutional discrimination in the receiving-country labor market. Most of these barriers, however, are expected to diminish with time in the receiving country. Language and cultural skills specific to the receiving country, together with qualifications and work histories that are more easily verifiable in the receiving country, may be gained in the early years after migrating. Similarly, both institutional and individual discrimination may diminish with time in the receiving country, as the migrant obtains authorization to work legally in a greater range of occupations and employment sectors, and as the migrant's increasing language and cultural skills potentially reduce individual employer discrimination that is related little to their job-performance abilities. In all these ways, more time in the country should allow both migrant men and women to realize more fully the value of their human capital in the labor market of the receiving country.

Accordingly, the immigrant "labor-market assimilation" hypothesis predicts unfavorable labor-market outcomes in the early years in the receiving country, followed by convergence towards the outcomes of the native-born population with more years in the receiving country (Chiswick 1978).

When applied to male immigrants, widespread empirical support across a range of countries and labor-market outcomes has been found (Chiswick, Cohen, and Zach 1997; Grant 1999; Duleep and Dowhan 2002), even while a number of studies have found less

than complete convergence of immigrant men's labor-market outcomes to those of native-born men of working age (Bell 1997; Jones 1998).

When the labor-market assimilation hypothesis has been applied to migrant women, however, the results have been mixed not only in the degree of convergence found, but also in whether any convergence occurs. Migrant women's family-role orientations and family labor-market strategies have been proposed as alternative theories to explain migrant and native-born women's non-converging and even diverging labor-market trajectories. We address this debate in the present study with evidence on labor force participation rate (LFPR) gaps between migrant and native-born women in nine European countries, focusing on how these gaps change with migrant women's time in the country. The first aim of the study is to understand how universal is the applicability of the labor-market assimilation hypothesis to the labor force participation of migrant women in developed countries. Where the convergence in LFPRs predicted by the labor-market assimilation hypothesis is found, moreover, we investigate whether this convergence is complete or partial. The second aim is to begin to understand the factors that underlie differences in paths of migrant-native convergence, especially those factors related to theories alternately based on migrant women's family-role behavior and on receiving-country institutional context.

Theoretical and empirical background

A number of studies have explored whether migrant women's labor-market outcomes converge towards those of native-born women with time in the receiving country. Some studies have supported the convergence hypothesis, while others have found contrary

evidence, leading to alternative theories grounded in migrant women's family roles. Supporting evidence includes Schoeni's (1998) finding of convergence of immigrant women's LFPRs towards those of native-born women with increased time in the U.S. His findings are from a cohort analysis that combines 1970, 1980, and 1990 Census data. Blau et al (2003), using 1980 and 1990 U.S. Census data, find supporting evidence in trajectories of immigrant women's hours and earnings that converge with time in the U.S. toward the hours and earnings of native-born women. Long (1980), however, used 1970 Census data to analyze trajectories of immigrant women's earnings relative to native-born women by time in the U.S., and found them to be either constant (among unmarried women) or declining (among married women). Both these trajectories are contrary to the predictions of the labor-market assimilation hypothesis.

Using data for the 1970s and 1980s in Canada, Beach and Worswick (1993) and Baker and Benjamin (1997) also produced findings that are contrary to the assimilation hypothesis. Both studies found non-converging earnings, while Baker and Benjamin's study additionally found that immigrant women's hours declined relative to those of native-born women with additional years in the country. The authors of the one U.S. and two Canadian studies whose findings are contrary to the labor-market assimilation hypothesis interpret their results as being consistent with a "family investment" model of immigrant women's labor supply (Duleep 1998). According to this model, a married migrant woman initially supplies more labor to support her husband's acquisition of human capital specific to the receiving country, and subsequently reduces her labor supply to allow more of her time to be allocated to family roles.

The contrasting findings between the U.S. studies in earlier and later time periods, and the inconsistencies in findings between Canada and the U.S., indicate a need to understand more fully the factors that may produce different paths of migrant women's labor-market outcomes relative to native-born women's in the receiving country. Blau et al (2003, p.446) conclude that "...the extent that the family investment model prevails for immigrants is likely to vary with the composition of the immigrant group and the economic and legal circumstances in the receiving country." The more general question here is whether the main explanation for these discrepant results is to be found in the immigrant women's behavior or in the receiving country's treatment of immigrant women. This question has been addressed by studies of gaps between migrant and native-born women's *levels* of a given labor-market outcome, but very little attention has been given to the sources of different *trajectories* of these migrant-native gaps. That is, little is known about which migrant women's behaviors or receiving-country contexts determine how these migrant-native differences in labor-market outcomes change with migrant women's time in the receiving country. Most studies that have modeled the effects of immigrant country of origin or destination on labor-market outcomes have either assumed no difference in trajectory across origin and destination countries or have ignored trajectories altogether.

Immigrant women's prioritization of family roles over labor-market roles has been proposed by a number of researchers to account for immigrant-native gaps. Reimers (1985) invokes "cultural differences" to account for lower levels of labor force participation of Hispanic immigrant women in the U.S. She describes culture as being relevant to labor-market outcomes through its impacts on views "...about male and

female roles in the family and about wives and mothers working outside the home, as well as by the values placed on children, family size, household composition, and the education of women” (p.251). Similarly, Antecol (2000; 2001) invokes “cultural factors, such as tastes regarding family structure and women’s role in market versus home work” to explain differences in immigrant women’s in labor-force participation and earnings between country-of-origin groups in the U.S. Cobb-Clark and Connolly (2001) find that significantly lower labor-force participation of immigrant women in Australia remains after controlling for human capital, family status, and immigrant-admission route. They leave open the question of whether the explanation is to be found in the immigrant women’s behavior or in the receiving country’s treatment of immigrant women, however, concluding that the remaining LFPR gap between immigrant women and Australian-born women may be due to either “...labor market discrimination or cultural attitudes toward work...” (p.808). Rebhun (2007) finds increasing employment rates with time in the country for immigrants to Israel, but attributes differences in this process by country of origin in part to “...cultural background and social values of the country of birth...” (p.87).

Until recently, most studies of migrant-native women’s gaps in labor-market outcomes have been for the historically immigrant-receiving English-speaking countries of the New World. Europe’s increasing role as a migrant-receiving region combined with its wide range of immigrant countries of origin and immigrant admission and integration policies, however, make it a fertile additional testing ground for alternative theories to explain gaps in migrant-native labor-market outcomes. Data collections that are coordinated across European Union countries, moreover, are extremely helpful for the

feasibility of cross-European analyses. Adsera and Chiswick (2006) use European Community Housing Panel (ECHP) data pooled across the 15 European Union countries of the late 1990s (the “EU15”) to analyze earnings gaps between women from different country-regions of origin. They find that the earnings of women born in other EU countries and in high-income countries outside the EU differ relatively little from the earnings of native-born women. Among women born in lower-income countries outside the EU, however, the authors find larger migrant-native gaps. The largest earnings gaps are found for women from Latin America and Asia, and the smallest for women from Africa. By receiving country, the smallest migrant-native earnings gaps are found mostly among the “old” migration countries of Western Europe (Austria, the Netherlands, and Germany), and the largest in Sweden and Ireland. While these findings are valuable in illustrating the large variety of outcomes across Europe and across immigrant origins, the authors make little attempt to uncover the sources of these origin-country and destination-country differences in earnings levels.

Especially relevant to the present study, Adsera and Chiswick analyze migrant women’s convergence with years in the country to the earnings levels of native-born women. Consistent with the labor-market assimilation hypothesis, they find lower initial earnings and subsequent full convergence to the earnings levels of native-born women. This is an important finding for a new group of countries, adding to Blau et al’s finding for the earnings of more recent cohorts of migrant women in the U.S. It is noteworthy, however, that the Adsera and Chiswick sample consists of only the 48% of migrant women reporting any earnings, allowing for the possibility that their results are biased towards a finding of labor-market assimilation due to their sample selectively including

those immigrant women who are more “work-oriented” and successful in the labor market. Further, the authors estimate a single trajectory path to apply across all immigrant-origin groups and destination countries, leaving no scope to address questions about the reasons for differences in assimilation trajectories between migrant groups or receiving countries.

Two recent studies have used EU Labor Force Survey (LFS) data to estimate the effects country of origin or country of destination on labor-market activity using theoretically-informed variables constructed to represent immigrant women’s characteristics and receiving-country characteristics relevant to migrants’ labor-market outcomes. Van Tubergen, Maas, and Flap (2004) study the sources of labor-force participation and employment differences between migrants by countries of origin and by countries of destination. They pool 18 countries, 15 of which are in Europe, plus the U.S., Canada, and Australia. Their findings on both labor force participation and employment among migrant women support the labor-market assimilation hypothesis. They do not, however, interact “years of residence” with variables for receiving country or immigrant-origin characteristics. The implicit assumption is therefore again of a single assimilation trajectory that applies equally across all receiving countries and immigrant-origin groups.

By definition, the difference between the labor force participation and employment outcomes of van Tubergen et al’s study is unemployment. In this sense, Kogan’s (2006) cross-national analysis of migrant men and migrant women’s unemployment across the European Union is highly complementary to the van Tubergen et al study. Kogan also uses EU LFS data, including both immigrant-origin and

receiving-country context variables. She finds generally weaker effects for women than for men, and suggests this is likely to be due in part to a lack of “...important variables pertaining to the women’s family situation and child status (due to their unavailability in the dataset)” (p.711). Van Tubergen et al, using the same data for most of their countries, similarly omit variables for numbers of children or presence of young children when modeling women’s labor market activity. As we note in our Data and Method section below, variables for children in the household can only be coded for a restricted set of EU LFS countries. Kogan, however, further omits “years of residence” in her models of women and men’s immigrant unemployment.

The only other studies we are aware of that address the labor-market assimilation hypothesis for labor-market outcomes of migrant women across Europe are a series of working papers from the OECD (Dumont and Isoppo 2005; Lemaitre 2007; Liebig 2007). As with the studies of van Tubergen et al and Kogan, they use data largely or solely drawn from the EU Labor Force Survey (LFS). Uniquely, however, the OECD studies take the approach of analyzing differences in labor-market outcomes by years lived in the country on a country-by-country basis, thereby allowing for differences in labor-market assimilation trajectories across countries. DuMont and Isoppo (2005) compare foreign-nationality women with citizens across a broad range of Western European, OECD countries. They find a majority pattern of increasing labor force participation with time in the country in those countries with longer histories of receiving immigrants (the “old” migrant-receiving countries of Europe), with exceptions in Belgium, Luxembourg, and the U.K. None of the “new” migrant-receiving countries analyzed (Greece, Portugal, Spain, and Ireland), however, exhibits a pattern of increasing labor force participation

with time in the country. These are findings from bivariate analyses only, before controlling for differences in other labor-market-relevant variables, and are for foreign nationals only (excluding naturalized foreign-born women from their “migrants”). The findings are nevertheless important for suggesting the presence of patterns of female migrant labor force participation that are inconsistent with the labor-market assimilation hypothesis in a substantial number of European countries.

Liebig (2007), also in a bivariate analysis, compares the employment rates of foreign-born and native-born women in Northern and Western (but not Southern) European countries by years of residence. He uses the same categorization of years of residence into 0-5, 6-10, and >10 year groups as DuMont and Isoppo and van Tubergen et al, and similarly finds exceptions to the LFPR convergence of migrant to native-born women predicted by the labor market assimilation hypothesis. For both the U.K. and Belgium, he finds no convergence between the first five years and second five years of residence in the country. He also finds no convergence between the first five years and second five years of residence for Denmark’s migrant women from OECD countries towards the employment ratios of native-born women, but convergence for Denmark’s migrant women from non-OECD countries. Even in countries where the direction of LFPRs is convergent, deficits of 10 or more percentage points in the employment rates of migrant relative to native-born women remain after more than 10 years of residence in several countries.

Lemaitre (2007) goes a step further in controlling for age, education, and marital status, but not for presence of children, in his analysis of the effects of years of residence on the gap between foreign-born and native-born women’s employment rates in four EU

countries. He finds a convergent direction over the first 10 years after arrival in Germany, the Netherlands, and Sweden, but again not in the U.K. Even after more than 10 years of residence, moreover, the employment rates for foreign-born women in three of the four countries studied are substantially lower than for otherwise similar native-born women. This implies incomplete labor market assimilation at best in those particular Northern and Western European countries. The lack of controls for children, however, is notable in this analysis. When DuMont and Isoppo included a variable for presence of young children in their multivariate analyses of LFPR differences, ignoring migrant duration, they found strong negative effects of young children on labor force participation.

Another problem with these OECD studies is their lumping together all foreign-born or foreign-nationality women. EU-born migrants face a very different immigration regime (free movement within the EU) from that of third-country migrants. EU-born migrants may also differ less from native-born women in their family-role orientations than do third-country migrants. Combining all foreign-born women may therefore be a problem from the perspective of testing the applicability of both the labor-market assimilation hypothesis and of the family-investment hypotheses.

A further problem with combining EU-born and third-country migrants is methodological. Analysis of the effects of duration on labor-market outcomes by comparing migrants observed at shorter and longer durations in the receiving country may be invalid when large proportions of migrants leave again after short periods in the country (Duleep and Dowhan 2002). This is because selection effects are likely to influence the composition of characteristics and labor-market outcomes of those who stay

longer. Short-term migrants are expected to be much more prevalent among those women born in other EU countries due to ease of mobility within the EU. Rendall and Ball (2004) estimate that half of all migrants to the U.K. from continental EU countries emigrate again within five years, compared with only 15% of immigrants from the Indian subcontinent. Labor-economic models predict that selection into staying in a country longer is unlikely to be neutral with respect to labor-market outcomes (Borjas and Bratsberg 1996; Dustmann 2003). If those EU migrants who stay a shorter time are positively selected by labor-market outcome in the receiving country, for example as transnational corporate migrants on short-term assignments, then comparing them to migrants who have been in the country more than five years will bias estimates against a finding of labor market assimilation. This kind of positive selectivity of emigrants may be responsible for the exceptional findings of the OECD studies cited above for migrants in Belgium, Luxembourg, and the U.K. Belgium and Luxembourg, in particular, have large proportions of EU-born migrants associated with the location of the European Commission and other multinational and international organizations, while the U.K. has relatively large proportions of both EU-born migrants and migrants from high-income English-speaking countries. Consistent with this, Bell (1997) found that white male immigrants to the U.K. enjoyed an initial wage advantage compared to U.K.-born white men, but that this was followed by wage-rate *decline* of immigrants relative to those born in the UK. This result is consistent with a model of positive emigrant selection.

DATA AND METHOD

Overview

The target population of our study consists of working-age migrant women who were born outside the European Union. By limiting the study to these “third-country” migrants, we avoid as much as possible the distorting effects of selective emigration on estimates of immigrant labor-market adaptation. We would ideally exclude also third-country migrants from other high-income countries. As we describe below, however, the data that we use do not allow for identification of foreign-born individuals beyond the EU/non-EU distinction.

We compare the labor force participation of migrant and native-born women in nine European Union (EU) countries, all drawn from the 15 countries that formed the EU before the mid-2000s expansions (the “EU15”). They consist of the six in Western Europe (Austria, Belgium, France, Luxembourg, the Netherlands, and the United Kingdom) and the three in Southern European (Greece, Portugal, and Spain) for which we were able to both identify third-country migrants and code the presence of children in migrant women’s households. The labor-force participation analyses of the study are limited to women who are either household reference person or spouse/partner of reference person also in order that children variables can be coded. The six countries of the “EU15” that are omitted from our analysis are: Ireland, Italy, and Germany, for which it was not possible to identify third country migrants; Denmark and Sweden, for which it was not possible to identify children in the household; and Finland, for which data were unavailable to us due to their being considered unreliable.

In the main analyses, we first compare characteristics of migrant and native-born women relevant to their labor-force participation, and then model the influence of migrant status and years lived in the receiving country on the labor-force participation

rate gap between migrant and native-born women after controlling for those characteristics. In addition, we consider a range of quantitative and qualitative indicators of immigrant origins and receiving-country contexts to cast light on possible reasons for the variety of trajectories of migrant-native convergence that we find across receiving countries. These additional indicators include measures of employment disadvantage of migrant women compared to native-born women ---- unemployment, underemployment, and temporary-contract employment. They also include comparisons between migrant and native-born women on behavior and attitudes related to family and work orientations, migrant women's country-of-origin composition, and receiving-country immigrant admission and integration policies.

Data

The data for our main analyses are from the 2005 European Union Labor Force Surveys (EU LFS). The EU LFS is compiled annually by Eurostat from the quarterly LFSs of the EU member countries and of additional participating countries in the European Economic Area (Charlier and Franco 2005). The files are provided to researchers in microdata versions with limits placed on the detail of variable coding to prevent disclosure (Eurostat 2006). The main way these limits affect our study is that country of birth is classified into three categories only: native-born; born inside the EU; and born outside the EU. Also relevant is that while "years of residence" is coded in one-year increments up to 10 years in the country, thereafter only a single "greater than 10 years" category is available.

In our main analyses of labor force participation rates (LFPRs), and in our supplementary analyses of the employment disadvantage of migrant women, we pool observations over the four 2005 quarters. As for similar surveys internationally, including the U.S. Current Population Survey, the LFS employs a rotation-group structure in which sampled units remain in the survey for typically 4 quarters. The rotation-group structure means that new units are added each quarter, resulting in substantially larger numbers of migrant women in the pooled-quarters (“annual”) sample than in the sample for any given quarter. This means that in a given calendar year a woman may be surveyed between one and four times, although the distribution of number of quarters will vary with the exact form of each country’s rotation-group scheme. Since labor force participation can change from quarter to quarter, moreover, some information is added through multiple observations of the same woman in a year. In both these ways, pooling observations across quarters increases efficiency of LFS estimates compared to estimation from a single quarter. This is reflected in Eurostat’s minimum thresholds for statistical reliability that are lower for analyses that average over the four quarters (“annual” estimates) than they are for quarterly estimates. Clearly, however, the observed labor force participation outcome for a given woman will be correlated across quarters. Unfortunately the EU LFS anonymized files do not include identifiers linking individuals or households across quarters, and so we are not able to include estimates of this correlation in our formal statistical tests. Given this lack of information, we conduct statistical tests of significance assuming an effective sample size that is 1.6 times that of the sample of a single quarter. This is the number of new sample units that enter the LFS in a given year under a rotation group scheme in which entries are uniformly distributed

across quarters. These statistical tests are conservative because they allow for no gains in statistical efficiency through repeat observation of a unit across quarters. We conducted statistical tests under alternate assumptions of completely independent observations across quarters and of complete dependence of observations across quarters, and found few changes in the results.¹

In addition to the regular LFS files, the 2005 EU LFS included data from a special Ad Hoc Module on Work and Family Reconciliation (Eurostat 2007). This module questioned respondents in one quarter only, in most cases the Spring quarter. The higher “quarterly” thresholds from Eurostat apply to our supplementary analyses of the module on Work and Family Reconciliation.

An important concern about using the EU LFS is the varying quality of the individual country LFSs in capturing immigrants. The aim of harmonized data across all countries (Charlier and Franco 2005) is still some time away from being realized for migrants. Kogan (2006), for example, discarded 1990s data for Italy because they were “unreliable.” While van Tubergen et al (2004) includes Italy, in a subsequent study (van Tubergen 2005) the same author excludes Italy. All studies that have compared the LFS immigrants to other data sources find some degree of undercoverage of immigrants in the LFS, but vary in their conclusions on the severity of the problem. Münz and Fassman (2004) offer a positive assessment of the LFS overall, but note some deficiencies in both coverage and for specific variables related to migration including country of birth and years of residence. Rendall, Tomassini, and Elliot (2003) provide a positive assessment of the LFS for collecting data on recent third-country migrants in one country (the UK), but note that third-country migrants are less well captured by the LFS than are either

returning British citizens or nationals of other EU countries in their year of arrival. Martí and Ródenas (2007) conclude that LFS undercoverage problems are severe for the identification of migrants in their year of arrival throughout Europe, but they are more positive about the LFS's coverage of migrant stocks.

Our main concern is that deficiencies of the EU LFS in finding recently-arrived migrants could bias comparisons of labor force participation by years of residence. In analyses not reported here, we evaluated the “years of residence” variable by investigating patterns of migrant cohort size over the years 1999 to 2004. We subtracted years of residence from survey year to obtain year of arrival, thereby identifying the same migrant cohort across successive years' surveys. In reality, a single-year migrant cohort (e.g., those women who arrived in 1999) may become smaller in successive years as some women emigrate again (e.g., temporary labor migrants or students returning after completion of studies) or die. There are no real processes, however, that lead to growth in the size of a cohort of migrants defined by a common year of arrival. It is a concern, therefore, that we found for several countries that the observed migrant cohort in the LFS data did grow substantially across successive surveys. Some of this artificial growth is likely to be due to omission of migrants in the LFS in one or more years following their arrival, together with better capture of migrants in the LFS as they become more settled in the receiving country. In some cases also ---- notably in Austria, France, and Spain --- - the patterns of “growth” of the migrant cohort appear to be due to better identification of migrants of all durations in more recent survey years of the LFS. Improvements over time have also occurred in some countries where the “years of residence” variable was

previously either undefined or missing for many foreign-born individuals (Münz and Fassman 2004).

Because of these inconsistencies and improvements over time in the capturing of migrants and in identifying their year of arrival, we do not combine 2005 with earlier years' LFS data. One consequence for our analysis of using only the 2005 data is that it limits the number of, and classification detail in, the predictor variables that we can include in our analysis. This turns out not to be a major disadvantage, however, as the anonymized EU LFS is anyway restricted in its variables and variable values, most notably with respect to the three-category country-of-birth variable (native-born, other-EU, non-EU). A second consequence is that we are constrained to employ a period rather than cohort approach to the study of the effects of years of residence on labor-force participation. While a real-cohort approach would provide some analytical advantages (see, in particular, Schoeni 1998), the data limitations of the LFS offset these advantages. Additionally, a major advantage of the period approach is that we are thereby able to take maximum advantage of the most recent labor-force behavior and conditions in our estimates (as discussed immediately below).

Labor-force participation modeling: Analytical approach

Our analytical approach is addressed towards the goal of explaining differences in labor-force participation rates between migrant and native-born women. These overall differences will be due to a combination of differences in observable characteristics and differences in labor-force participation rates between women (migrant and native-born) with the same observable characteristics. Two types of method have been used to

distinguish their separate contributions to the overall inter-group differences in outcomes: “regression-decomposition estimators” and “matching estimators.” While previous migration studies have used regression decomposition, for a number of reasons that are explained immediately below, we use a matching estimator here.

The (‘Blinder-Oaxaca’) regression decomposition method is used by, among others, DuMont and Isoppo (2005) to consider respectively labor-force participation rates of foreign nationals in a range of European countries, and Reimers (1985) for the labor-force participation rates of migrant versus native-born women and men in the United States. There are several advantages to a matching method over the regression decomposition method, three of which are especially relevant to the present study. First, compared to the implicit matching of units in regression analysis, with matching estimators the nature of the matching of units is explicit and more open to evaluation (Morgan and Harding 2006). The implicit matching of units in a regression can mask the small numbers or total lack of cases with comparable combinations of explanatory variables in some regions of the domain of either the target or comparison group. Our target group of recently-arrived migrant women, for example, is overwhelmingly concentrated in the younger working ages. A matching method weights differentials between migrant and native-born women outside these ages proportionately to their (low) prevalence, while regression estimation on these data is more likely to be unduly influenced by low-prevalence observations.

Second, the regression-decomposition method focuses on the *mean* counterfactual, whereas matching methods expresses the *distributional* counterfactual (Barsky et al 2002). The mean counterfactual is unsuitable when different magnitudes of

effects of a regressor occur in different parts of the distribution, and in the case that the regressor variables are categorical in their nature. In the present study, the grouped structure of the data in the anonymized EU LFS files, together with the intrinsically non-continuous nature of the underlying variables such as family status and level of educational qualification obtained, make a distributional counter-factual more appropriate.

Third, the matching method is stronger theoretically in its insistence on the use of the target population's distribution of the predictor variables when conducting the decomposition, as we now describe. While many possible matching methods are available, because our explanatory (matching) variables are relatively few and are categorical, we use a reweighting approach. Barsky et al (2002) use a similar method to compare differences in wealth between blacks and whites in the U.S. The reweighting approach provides a computationally simple and transparent method suitable for matching on a relatively small number of variables, most of them being categorical in their essence. Barsky et al note that the reweighting method is akin to demographic standardization. Demographic standardization, however, is a theoretically neutral technique that gives little guidance on which of the two populations to use as the common distribution (the "standard population"). Even the technically more sophisticated standardization methods recommend only a simple averaging over the distributions (DasGupta 1991). The matching literature, in contrast, provides strong theoretical guidance based on a treatment/control framework (Imbens 2004; Morgan and Harding 2006). Under this framework, the distribution of the group that experiences the "treatment" is applied to the "control" group. The interpretation is then an estimate of an

average treatment effect *on the treated* (“ATT”). Conceptually, we consider “immigrant status” as a treatment variable whose strength potentially varies by how recently the immigration event occurred. Estimating the ATT for a given migrant duration is achieved by calculating a reweighted native-born women’s LFPR, with the weights given by the distribution of migrant women of a given duration (MD) over the predictor variables, $P_{MD}(X)$. This will typically result in the largest weights being applied to native-born women (N) at young ages, as these are the ages that predominate among recent immigrants. The reweighted native-born women’s LFPR is then

$\sum_X P_{MD}(X) \cdot LFPR_N(X)$. The ATT is then simply this weighted LFPR subtracted from

the LFPR of migrant women of a given duration:

$$ATT_{MD} = LFPR_{MD} - \sum_X P_{MD}(X) \cdot LFPR_N(X)$$

We follow prior regression treatments that have used the EU LFS (van Tubergen et al 2004; Dumont and Isoppo 2005; Liebig 2007) by dividing migrant women into three different durations of residence: 0-5 years; 6-10 years; and greater than 10 years in the receiving country. As in those regression studies, we apply a “period” (or “synthetic cohort”) approach in which migrant women in different duration groups are compared as if they are longitudinal extensions of each other. Our goal is not to analyze whether labor-force participation increases in absolute terms with additional years lived in the country, however, but instead to analyze convergence with additional years lived in the country to the labor-force participation of native-born women with the same observed characteristics. By comparing the LFPRs of migrant and native-born women with the

same observed characteristics, changes across cohorts in migrant (and native-born women's) characteristics such as educational levels are adjusted for. By observing women at different durations but in the same year, we eliminate the effects of period labor market conditions at different durations. This is an important advantage of period over cohort analysis, as previous work has shown that migrants are more vulnerable than are native-born workers to fluctuations in macro-economic conditions (Jones 1998).

The observed characteristics that enter our matching estimator are education, marital status, age, and family status (age of youngest child). These variables are coded as follows. Education is grouped into qualification levels ---- low, medium, and high ---- based on the International Standard Classification of Education (ISCED) groups provided in the anonymized EU LFS. "Low" education includes qualifications up to lower secondary (ISCED categories 1 and 2); "Medium" education includes to upper secondary and post-secondary, non-tertiary qualifications (ISCED categories 3 and 4); and "high" education covers tertiary qualifications (ISCED 5 and 6). Marital status is grouped into never-married, married, and previously married. Ages of children (as for adults) are available in five-year age groups in the anonymized EU LFS. We use these to distinguish having a youngest child of pre-school age (here operationalized as under 5 years old), and school age (5 to 14 years old). We regroup ages of women into 10 and 15 year categories as follows: 15-24; 25-34; 35-49; and 50-64 years old.

RESULTS

The main results consist of comparisons of migrant and native-born women's labor-force participation rates. We first compare socio-demographic characteristics relevant to labor

force participation between migrant and native-born women. “Migrants” consist, as throughout, of women born outside the EU (“third-country migrants” in EU terminology). We not only compare migrant women to native-born women, but also differentiate between migrant women who arrived in the last five years, between 6 and 10 years earlier, and more than 10 years earlier (see Table 1). We also compare the patterns between the three Southern European and six Western European countries of our study. All results in Table 1 are for women of working age (15 to 64 years old) who are the household reference person (the resident owner or renter of the housing unit) or spouse/partner of the household reference person.

We present in the first panel the distributions of migrant women by years of residence. Spain has by far the “newest” migrants, with 58% having arrived within the last five years and only 10% having arrived more than 10 years ago. Between 25 and 30% of migrant women in Luxembourg, Portugal, and the U.K. arrived in within the last five years, and approximately one fifth in Austria, Belgium, and Greece. Among migrant women in France and in the Netherlands, three quarters arrived more than 10 years ago, as did 70% of migrant women in Austria. A larger proportion of migrant women having arrived 0-5 years ago than 6-10 years ago is seen for all countries except Greece and the Netherlands, with the ratio 2:1 or more in Austria, Portugal, Spain, and the U.K. This is consistent with larger waves of migrants since 2000 as compared to the mid-late-1990s (OECD 2006; 2007). More intervening years available to emigrate for migrants who arrived between mid-late-1990s arrivals and the survey year 2005 will also play some role, however, as will the six-year versus five-year interval difference between the 0-5 and 6-10 years categories. Offsetting these factors is the expectation of poorer capture of

migrants in the LFS in the earlier survey years. In the latter context, the much larger proportions of migrant women in the 6-10 than 0-5 year categories in the Netherlands and, especially, Greece is cause for concern. Further, compared to the Western European countries in our study, Greece and the other Southern European countries had lower ratios of foreign-born populations in their LFSs to in their census or population register counts around 2000 (Martí and Ródenas 2007, p.107): Greece's LFS with only 44% of the estimate from its population source, Spain with 58%, and Portugal with 70%. We return to this as a possible source of bias later in the paper when discussing the results.

[TABLE 1 ABOUT HERE]

Migrant women are seen to be much younger than native-born women in all countries except France.² This follows from the young ages at which most migration occurs, combined with substantial increases in migration over recent decades across the EU countries of our study. Accordingly, the countries with the highest proportions of migrant women under 35 years old largely coincide with those countries with the highest proportions recently arrived, Spain stands out with 52% aged under 35, contrasted with only 21% of working-age native-born women under 35 in that country. The proportions of migrant women aged under 35 are much more similar across countries when grouped by years of residence. Across the nine countries, between 60 and 70% of migrant women in their first five years of residence are aged under 35, compared with between 45 and 60% of migrant women in their second five years of residence, and between 15 and 25%

only of migrant women who have been in their present country of residence more than 10 years.

Associated with their younger ages, migrant women are also much more likely than are native-born women to have at least one pre-school-age child in the household. Overall, a third of migrant women have a child under 5 in the household compared with a quarter of native-born women. In all nine countries, migrant women are more likely than native-born women to have a young child in their households. This is especially the case in the first ten years after arrival. In eight of the nine countries (Greece being the exception), having a child under 5 in the household is most common among migrant women who have lived in the country between 6 and 10 years. Having a child under 5 in the household is also very common for migrant women in their first five years in the country. In Greece this is the peak period. Having a young child is generally more common among migrants in the Western than the Southern European countries of our study, but the differences are not great, especially not relative to the much larger differences between migrant and native-born women.

Overall slightly more migrant than native-born women are married (70% versus 67%). Spain provides a notable exception, with 68% of migrant women married compared to 81% of native-born women. High proportions of both migrant and native-born women are married, however, in the other two Southern European countries.

When comparing the education levels of migrant and native-born women, we focus on the proportion with less than an upper secondary school education (“low” education). The differences in the proportions of migrant women with a low education are relatively small across EU countries, at between 40 and 50% except for in

Luxembourg and the U.K. where only a quarter of migrant women have a low education. Large differences in education levels, however, are seen between native-born women in Southern versus Western European countries. The three Southern European countries have the highest proportions of native-born women with a low education level, from 44% in Greece through to 77% in Portugal. In contrast, less than a third of native-born women in all six Western European countries have a low education. In five of the six Western European countries (Luxembourg being the exception), migrant women are more likely than native-born women to have a low education level. In all three Southern European countries, however, fewer migrant than native-born women have a low education, with large differences seen in both Spain (42% of migrants versus 57% of native-born women with a low education) and Portugal (52% versus 77%).

To understand the extent to which the above differences in socio-demographic characteristics between migrant and native-born women's education can explain differences in migrant women's labor-force participation rates (LFPRs) relative to native-born women in the Southern and Western European countries of our study, we next compare the LFPRs of migrant and native-born women in each country controlling for these socio-demographic differences (see Table 2). We first compare labor-force participation rates between all migrant women and native-born women, and then go on to analyze how the comparison changes when taking into account migrant women's years of residence. In both comparisons, we reweight the distribution of native-born women to have the appropriate migrant comparison group's distribution of the characteristics of Table 1.

[TABLE 2 ABOUT HERE]

A striking difference in LPPR gaps between migrant and native-born women is seen comparing the Southern European and Western European countries (first and third rows of the top panel of Table 2). In all three Southern European countries, migrant women's LFPRs exceed native-born women's, by between 8 and 14 percentage points. In five of the six Western European countries, migrant women's LFPRs are substantially below those of native-born women, ranging from a 7 percentage-point gap in Austria to a 20 percentage-point gap in Belgium. Only in Luxembourg, among the Western European countries, is there near parity between the LFPRs of migrant and native-born women.

These differences between Southern and Western Europe are partly due to the unfavorable labor-market-related characteristics of Southern Europe's native-born women, such as their lower education levels. When native-born women are matched on the "all migrant women" distribution of socio-economic characteristics in the country (see second row of Table 2), the native-born LFPR increases substantially in all three Southern European countries. As a result, and no substantial difference remains between the LFPRs of migrant and native-born women. The large contrast between the Southern and Western European countries, however, remains. For the Western European countries, matching to migrant women's socio-demographic distributions has the effect of raising native-born Luxembourg women's LFPR well above that of the migrant LFPR, while having little effect in the other five countries. This leaves a substantial, and statistically significant, LFPR deficit of migrant women compared to native-born women in all six Western European countries. Following our analytical framework described in

the Methods section, we interpret the LFPR gaps after matching as a “migrant status” effect. Under this interpretation, “migrant status” reduces labor force participation in the Western European countries, from as much as 22 percentage points in Belgium down to 6 percentage points overall in Austria. We interpret our findings of near parity between matched native-born and migrant women’s LFPRs in Southern Europe as evidence that migrant status has no substantial effect overall on labor force participation in those countries.

Under the “labor market assimilation” hypothesis, we might expect this contrast -- ---- between the negative “migrant status” effect in Western Europe and the lack of any “migrant status” effect in Southern Europe ---- to be even greater once the more recent arrival of migrant women in the Southern European countries were accounted for. If instead the “family investment” hypothesis applies, however, we might expect the “years of residence” composition difference to be part of the explanation for why the LFPRs of migrant women in Southern Europe are as high as they are. Recall that under the family investment hypothesis, migrant women’s labor force participation is initially high to finance the husband’s investment in country-specific human capital, but then declines relative to native-born women as their husbands’ advancement in the receiving-country labor market occurs. We examine these alternate views, and their ability to account for the contrasts between Southern and Western Europe by comparing migrant women’s labor force participation at the three different duration (“years of residence”) groups: 0 to 5 years, 6 to 10 years, and greater than 10 years in the country. The results are largely consistent with the predicted direction of the “labor market assimilation” hypothesis in the Western European countries, but not in the Southern European countries.

In all six Western European countries, the recently-arrived (0-5 years) migrant women's LFPR deficit is greatest in comparison to the LFPR of native-born with matched socio-demographic characteristics. These deficits are extremely large, ranging from 18 percentage points in the U.K. to 43 percentage points in the Netherlands (38% LFPR for migrant women compared to 81% LFPR for otherwise similar native-born women). The deficits at 0-5 years exceed 30 percentage points also in Belgium, France, and Luxembourg. Consistent with the "labor market assimilation" hypothesis, these migrant-native LFPR deficits diminish substantially across all five Western European countries with additional years in the country. The deficit reduces to close to zero in both Austria and Luxembourg, from initial deficits respectively of 26 and 32 percentage points. In Belgium, France, and the Netherlands, the initial deficit is reduced by more than 10 percentage points by 6-10 years in the country, and still further for women in the country for more than 10 years. The LFPR deficit remains above 10 percentage points even for migrant women in the country for more than 10 years, however, for three of the six Western European countries: Belgium, the Netherlands, and the U.K.

Among the Southern European countries, no strong pattern of change in the gap in immigrant versus native-born LFPRs is seen. Only in Greece is there a slight suggestion of an increase in LFPR with more years of residence in the country. The "family investment" hypothesis remains a plausible alternative explanation for the high initial labor force participation of migrant women in the Southern European countries of our study. It is noteworthy, however, that there is no pattern of decline in LFPRs, as would be predicted by the strongest version of the family investment hypothesis. More detailed analysis by marital status, and analysis of the interaction between married

women's labor force participation with that of their husbands, would be needed to explore the applicability of this hypothesis further.

Explaining the different labor force participation trajectories between immigrant women in Western and Southern Europe

What might explain the differences in trajectories between the six “old” migrant-receiving countries of Western Europe and the three “new” migrant-receiving countries of Southern Europe? The literature on the effects of country context points towards migrant admission routes and towards the state, social, and labor-market institutions affecting migrant reception in the labor market and towards differences in reception or labor-market behavior varying by migrants' countries of origin (van Tubergen et al 2004; Kogan 2006; Sainsbury 2006; and Adsera and Chiswick 2006). We consider now descriptive evidence for the nine countries of our study on migrants country origins, on the main types of entry (refugee, family, and work-related), on indicators of disadvantageous employment status of migrant compared to native-born women who are in the labor force, and on behavior and attitudes expressed by migrant and native-born women on resolving the problem of reconciling labor-market and family roles (see Table 3).

Concerning first migrants' countries of origin, van Tubergen et al find that being from a non-Christian country is associated with lower migrant women's labor force participation and employment. Kogan finds no significant effects of country origin on migrant women's unemployment, while Adsera and Chiswick find that Latin American migrant women have lower earnings than African and Asian migrant women. DuMont

and Isoppo (2005) find that women from the EU's neighboring Muslim countries have the lowest labor force participation rates. A problem with all these analyses, however, as noted by Adsera and Chiswick, is insufficient empirical variation across categories.

Latin American women are predominantly in Spain, for example, where their employment is concentrated in low-paying domestic service occupations (Peterson 2007). The OECD compiles the most common nationalities of the foreign-national population in EU countries (male and female together, OECD 2006; 2007). When these are tabulated for our study's countries (see Panel A of Table 3), there are three countries (Belgium, Netherlands, and France) where the top two migrant nationalities are from among the EU's neighboring Muslim countries (North African and Turkey). Austria, Luxembourg, and Greece also have their main foreign nationality from a country group also including substantial numbers of migrants the EU's neighboring from Muslim countries (respectively Bosnia and Albania). Migrants to the U.K., however, are from geographically-distant ex-colonies marked by diverse income, religion, and ethnic characteristics. Spain and Portugal's migrants also have diverse geographic origins, including again distant ex-colonies in Latin America and (for Portugal) sub-Saharan Africa.

In tabulations from 2001 Spanish Census microdata (Minnesota Population Center 2006), we found that the LFPR of Latin American migrant women was 64%, well above both Moroccan women's 45% and the Spanish-born woman's LFPR of 48%. In contrast, however, Dumont and Isoppo (2005, p.13) report very large LFPR differences from native-born women among North African and Turkish women in Western European countries, with an extreme case of an LFPR of only 17% in the labor force among North

African migrant women in Belgium. Results such as these suggest a greater explanatory role for the combination of migrant admission routes and institutional characteristics than for migrant country origins.

We tabulate main migrant admission types also as compiled by the OECD (see again Panel A of Table 3). While migrant admission channels have been opening up in recent years, most European countries still have very few avenues open for “third-country” labor migration outside of family unification and asylum (see, e.g., Kogan 2006). In the case of asylum, women may either follow or accompany the primary asylum applicant as a spousal migrant (Kofman and Sales 1998). Both refugee and tied-migrant status are typically associated with poorer initial labor-market outcomes (Boyle et al 2001; Cortes 2004). The opportunities for labor migration, however, have become much greater recently especially in the U.K. and the “new” migrant-receiving countries of Southern Europe and Ireland (OECD 2006; 2007). Informal and formal work-related admissions have become very common in Southern Europe through “regularization” programs in Greece, Italy, Portugal, and Spain. These may be described as forms of migrant “amnesty” programs, giving legal work and residence permission to undocumented immigrants already living and working in the country. Under these programs, regularization is made contingent on the migrant’s having a job (e.g., Spain) or showing evidence of having paid into employment-based social security or social welfare funds (e.g., Portugal). The countries of Southern Europe make especially interesting case studies, as the labor force participation rates (LFPRs) of immigrant women exceed those of native-born women in these countries, whereas in almost every other OECD country

(including in Western and Northern Europe), the LFPRs of immigrant women are below those of native-born women (OECD 2007).

Related also to migrant-admissions “regimes” are migrant reception contexts. Sainsbury (2006) adapts the welfare regime model classification of Esping-Andersen (1990) to a “migration regime” classification. She classifies both the Social Democratic and Liberal welfare regimes as “immigrant inclusive” and the Conservative Western European welfare regimes as “immigrant exclusive.” For example, non-citizen status may be a greater institutional barrier to migrants in the labor market in “immigrant exclusive” regimes. Meurs, Pailhé, and Simon (2006) describe how immigrants in France have less access to public-sector jobs due to a combination of citizen-only restrictions and age maximums for taking public-sector employment exams. These kinds of exclusions may be especially disadvantageous to female migrants, due to gender-segregated occupations such as in the health professions being predominantly in the public sector, and due to the greater potential for women to reconcile work and family roles in public-sector than private-sector employment. A country’s family-policy context is also likely to influence family formation and labor-market trajectories. Migrant women in a Conservative country may engage in more rapid family formation upon arrival in the country partly because of that country’s “exclusive” immigration policies that limit migrant women’s work permission in the initial years, and partly also because of its Conservative family policies. The latter are also based on the “male breadwinner” model, in which women are expected not to combine employment with raising young children. It may be significant therefore in explaining Western versus Southern European differences that five of the six Western European countries are classified by

Sainsbury as Conservative, “immigrant exclusive” regimes, and that Kofman and Sales (1998) contrast these practices in the “old” migrant-receiving countries with those in the less restrictive labor-migration regimes for women in the “new” migrant-receiving countries of Southern Europe.

We also explore the relationship between employment and family roles for migrant women in the countries of our study. We do so by introducing data from both the 2005 quarterly EU LFS and from the 2005 EU LFS Topical Module on Work and Family Reconciliation (see Panel B of Table 3). These data indicate first that migrant women in Portugal and Spain are equally likely as native-born women in those countries to combine family with remaining in labor-force active. In all other countries, including Greece, migrant women are much less likely than native-born women to be in the labor force when having a child under 5. Additional descriptive evidence from the LFS Topical Module, however, argues against a cultural explanation for these differences between native-born and migrant women being based on family-role orientations of migrant women. First, the patterns of formal daycare use among migrants generally follow those of native-born women in the same country. Among employed women with at least one child under 5, both migrant and native-born in Portugal and Belgium have the highest rates of use of formal childcare among the nine countries in our study for which data are available. This is especially noteworthy because Belgium is at the lower extreme while Portugal is at the higher extreme of migrant women’s labor force participation. Second, migrant women with at least one child under 14 were approximately three times as likely to report wanting to work more (and reduce caring time) as were native-born women with at least one child under 14.

Additional evidence against the argument that migrant women's lower labor-force participation is due to culturally-based orientations away from work and towards family is seen in outcome indicators of migrant versus native-born women's frustrated efforts to enter the labor market as full participants. We consider unemployment, underemployment, and temporary contract employment (see Panel C of Table 3). One reason that migrant women may remain out of the labor force is the perception that they will be unsuccessful in finding a job. This may be due to their already having been unsuccessful, or it may be due to their having observed the difficulties of other migrant women in their country of residence. The much greater unemployment rates of migrant women than of native-born women in all six "old" migrant-receiving countries' labor forces provides some support for a "discouraged labor-force participant" interpretation of low migrant labor-force participation in these countries. Migrant women's unemployment rates are approximately three times as high as native-born women's unemployment rates in Belgium, Luxembourg, and Austria, and in France the migrant unemployment rate of 20.5% is exceeded only by migrant women in Belgium (26.9%). Also reinforcing the argument that higher unemployment of migrant women than native-born may explain some of the LFPR deficit of migrant women compared to native-born women is that in the three Southern European countries, migrant women's unemployment rates are of the same approximate magnitudes as for native-born women.

Unemployment, however, is not the only factor likely to either discourage migrant women from entering the labor force or result in their leaving the labor force. We present in Panel C of Table 3 two additional indicators of disadvantaged employment statuses of migrant women compared to native-born women. These are involuntary part-time work,

meaning that the woman who is working part time gives “unable to find a full-time job” as her reason for working part time and temporary-contract employment. We express “involuntary part-time” as a percentage of all women in the labor force so that we may then treat it conceptually as an “under-employment” rate to be combined with unemployment in a “unemployed or under-employed” category. This results in a third of the female migrant labor forces of Belgium and France being classified as either “unemployed or under-employed,” and a quarter of Greece and Spain’s female migrant labor forces being similarly classified. Adding the “under-employed” also enlarges the gap between migrant and native-born women’s employment statuses, and makes this gap a common one across the nine countries.

Having temporary-contract employment, like part-time employment, may make it more difficult for a woman to remain in the labor force if she has a child, as maternity leave and subsidized childcare may not be available to her to allow her to easily re-enter employment following the birth and the first months of caring for the baby at home. We see, however, that temporary-contract employment is most prevalent among migrant women in the three Southern European countries, consistent with the high rates of temporary-contract employment also among native-born women in those countries. Temporary-contract employment accounts for a quarter of all migrant women workers in Greece and Portugal, and over half (55.0%) of all migrant women workers in Spain.

Finally, the relatively poor quality of the LFS data on migrants needs to be considered as a possible factor in our finding of a lack of a labor market assimilation trajectory in the three Southern European countries. As we noted in the Data and Methods section, these three countries are among those that had the poorest

representation of migrants in the LFS compared with the country's best population source (census or population register) around the year 2000. The lower rate of representation of migrants in the LFS in these countries is both a concern but also is expected given its very high proportions of recently-arrived migrants. It is a concern if the new migrants that are not captured by the LFS are disproportionately those that are out of the labor force. This could account for some of why no differentially-low labor force participation is seen among newly-arrived migrants. It is reassuring here that our finding of higher migrant than native-born women's LFPR in Spain's 2005 LFS is replicated in our supplementary analysis of Spain's 2001 Census. We also note that Portugal, with its higher proportion of longer-term migrants, has a better match of the LFS to population estimates of migrants, but nevertheless has a similar trajectory in migrant-native gaps in labor-force participation rate to those of Greece and Spain. This consistency of findings across the three Southern European countries, and the likelihood that new migrants also in Western European countries of our studies are subject to some of the same biases in their LFSs, reduce the plausibility of this data-bias explanation for the Western Europe-Southern Europe contrast.

DISCUSSION

We explored variation across nine European Union (EU) countries in the applicability of the "labor-market assimilation" hypothesis to explaining labor force participation rate differences between migrant and native-born women in nine European countries, focusing on how these gaps change with time in the country. Overall, migrant-native gaps decrease substantially with time in the receiving country. Pooling across all nine

countries, and after controlling for differences in education, marital status, and ages of children, we find that the overall gap in labor-force participation reduces from 15 percentage points for women in their first five years in the country to 5 percentage points for migrant women with more than 10 years in the country.

These pooled results, however, mask large and systematic variation across EU countries. The geographic dimension of this variation is seen in contrasting Western European and Southern European countries. Labor force participation trajectories are largely consistent with the “labor market assimilation” hypothesis in the Western European countries, but not in the Southern European countries. This variation labor force participation trajectories between Western and Southern EU countries coincides with variation in their immigration policy, and we suggest a likely causal role especially for immigrant-admission policy differences. In the Conservative countries of Continental Western Europe (Austria, Belgium, France, Luxembourg, and the Netherlands), asylum and family-unification are the main admission types in what have been described as “exclusive” migrant regimes (Sainsbury 2006). Very low labor force participation rates in the first five years after arrival are seen for migrant women in these countries. In the Southern European countries with more open labor-migration regimes, however, no initial LFPR gaps and no substantial change in labor-force participation with time in the country were seen. The United Kingdom, as a country with the greatest mix of migrant entry types, falls in between on migrant-native LFPR gaps. This suggests that migrant-entry type may be a powerful determinant of labor force participation trajectory with the migrant woman’s years in the country. While other studies have also found cross-country variation, and have been able to attribute some of this variation to quantitative

and qualitative indicators of country context for migrant admission and integration into the country's labor market, ours is the first to do so in a way that incorporates the major labor-market-related variables of migrant women in combination with their length of time in the country.

The omission of variables for family status, especially presence of young children, in previous studies (e.g., van Tubergen et al 2004) is important given the predominance of family-role orientations, assumed to be imported from the more conservative gender-role cultures of the country of origin, among alternative explanations for low labor force participation among migrant women. After including family status variables (both marital status and presence of children under 5), however, we find these alternative explanations to be less persuasive than those based on immigration-admission regime and labor-market openness. Labor-market disadvantages, especially the much higher unemployment of migrant than native-born women in the Western European countries of our study, appear to be especially good candidates to explain the lower labor-force attachment of migrant women forming families. We find that among women with pre-school-age children, the LFPRs of migrant women are much lower than for otherwise similar native-born women in Western Europe. These migrant-native differences in combining childrearing and labor-force activity are unlikely to be due primarily to family-role preferences of migrant women. Migrant women with children are much more likely than are native-born women with children to express that they wish to work more (and spend less time in family-care roles). Further, employed migrant women use formal childcare in patterns across countries that are similar to those for native-born women. Migrant women's poorer labor-market outcomes may instead

interact with family-policy regimes in raising further barriers to migrant women's labor force participation. Because migrant women are over-represented among the unemployed, in temporary employment, and in involuntary part-time employment, their access to programs such as maternity leave and subsidized child-care designed to aid the integration of employment and childbearing will be less than for native-born women. Migrant women's consequentially greater problems in reconciling employment and childrearing may be more likely to deter those with young children from attempting to enter, or remain in, the workforce.

Finally, the patterns of labor force participation in the Western European countries studied are contrary to the predictions of the "family investment" hypothesis (Duleep 1998), in which migrant women initially supply more labor to aid their husband's acquisition of country-specific human capital. While the family investment hypothesis remains a plausible explanation for the high initial labor force participation of migrant women in the Southern European countries of our study, we see none of the declines in migrant women's labor force participation with time in the country that are predicted in the strongest version of this hypothesis. More detailed analysis by marital status, and analysis of the interaction between married women's labor force participation, are needed to explore this hypothesis further for Southern Europe's migrant women.

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FOOTNOTES

¹ For a complementary view on the overemphasis of precise statistical tests in the evaluation of the substantive importance of intergroup differences, see Hoem (2008). Note that we also rely on the broad guidelines for statistical reliability provided by the Eurostat thresholds for publication. The LFS files are provided to researchers on the condition that results are not published below the appropriate (“quarterly” or “annual”) threshold specific to each country. All the EU LFS results presented in this paper exceed the applicable minimum threshold.

² Some of the French anomaly will be due to the mass return of French-origin families from Algeria after that country’s independence in 1960. To account for this having a biasing effect, we alternately conducted the analyses capping age at 54 years old. No substantial changes occurred to the results.

Table 1 Socio-demographic characteristics of migrants born outside the EU, 2005, by years of residence (percentages)

	Belgium	Nether-lands	France	Luxem-bourg	UK	Austria	Greece	Spain	Portugal	All 9 countries
Years of residence (migrant women only)										
0-5 years residence	21.4	8.9	14.1	29.1	28.5	19.9	21.3	58.4	27.2	28.5
6-10 years residence	15.3	15.6	9.2	20.1	14.7	10.4	36.4	31.3	10.2	16.9
11+ years residence	63.3	75.6	76.7	50.8	56.8	69.8	42.4	10.3	62.7	54.6
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Proportion aged < 35										
<i>Migrant women</i>										
0-5 years residence	69.9	70.6	64.0	64.3	65.9	60.9	63.9	58.3	63.4	62.4
6-10 years residence	53.9	57.6	60.1	50.0	55.6	53.3	45.9	51.5	50.4	54.1
11+ years residence	24.5	25.7	15.0	22.6	15.2	24.7	25.3	20.1	24.9	18.3
<i>all years of residence</i>	38.7	34.6	26.0	40.2	35.6	34.9	41.0	52.2	38.0	35.9
<i>Native-born women</i>	23.1	26.5	28.9	20.7	28.3	23.4	21.7	21.0	22.1	25.9
Proportion with child < 5										
<i>Migrant women</i>										
0-5 years residence	38.5	44.5	50.6	39.1	37.4	34.6	39.2	39.2	32.3	40.5
6-10 years residence	47.7	47.9	56.1	47.8	47.0	43.6	34.8	44.5	36.3	46.6
11+ years residence	23.6	30.1	26.9	21.1	24.0	21.9	21.3	36.2	24.7	25.7
<i>all years of residence</i>	30.4	34.1	33.0	31.7	31.2	26.7	30.0	40.6	27.9	33.4
<i>Native-born women</i>	14.5	25.6	27.8	16.5	25.7	15.2	19.5	27.5	18.4	25.2

Proportion married	Belgium	Nether-lands	France	Luxem-bourg	UK	Austria	Greece	Spain	Portugal	All 9 countries
<i>Migrant women</i>										
0-5 years residence	80.0	66.7	73.2	86.1	66.0	87.2	88.6	69.8	86.5	71.4
6-10 years residence	78.9	66.5	69.5	78.1	69.2	81.3	85.8	64.8	79.0	69.7
11+ years residence	73.2	61.5	68.2	74.1	66.3	79.5	84.9	65.9	82.1	68.6
<i>all years of residence</i>	75.5	62.8	69.0	78.4	66.7	81.2	86.0	67.8	83.0	69.6
<i>Native-born women</i>	68.7	62.7	58.9	68.4	58.8	62.4	82.7	80.5	86.8	66.5
Proportion with low education**										
<i>Migrant women</i>										
0-5 years residence	43.3	34.0	47.5	17.5	17.9	41.7	48.9	39.0	47.4	35.4
6-10 years residence	46.3	37.7	48.2	24.8	22.7	42.2	41.7	42.8	57.2	39.1
11+ years residence	48.1	38.3	52.1	29.2	24.3	53.2	33.2	51.2	53.7	42.8
<i>all years of residence</i>	46.8	37.8	51.1	24.9	22.3	49.8	39.6	41.5	52.3	40.2
<i>Native-born women</i>	31.7	30.5	31.9	26.3	15.2	21.2	43.8	56.9	76.5	34.8
Sample sizes										
<i>Migrant women</i>										
0-5 years residence	156	337	471	180	1,454	360	522	1,953	454	5,887
6-10 years residence	150	717	395	172	709	308	1,055	1,062	152	4,720
11+ years residence	599	4,670	3,935	476	3,345	2,609	1,422	346	1,157	18,559
<i>all years of residence</i>	905	5,724	4,801	828	5,508	3,277	2,999	3,361	1,763	29,166
<i>Native-born women</i>	12,431	99,071	57,089	8,160	77,452	32,249	38,162	73,930	29,142	427,686

Notes: numbers in bold indicate that migrant women differ significantly from native-born women at the $p < .05$ level

Source: Authors' tabulation from the 2005 EU LFS, average of four quarters (unless otherwise indicated). Sample restricted either to women who are the household reference person or spouse/partner of reference person.

**Table 2 Differences in labour-force participation rates between third-country migrants and matched native-born women, by years of residence, 2005
(percentages and percentage-point differences)**

	Belgium	Nether-lands	France	Luxem-bourg	UK	Austria	Greece	Spain	Portugal	All 9 countries
A. Native-born versus migrant women's labour-force participation rates, all years of residence										
native-born women LFPR	69.6	72.0	72.1	60.6	76.7	69.0	54.1	56.8	72.7	69.2
matched native-born LFPR	71.8	73.8	69.2	70.7	75.0	67.7	60.0	68.6	81.9	70.3
third-country migrant LFPR	49.5	56.6	57.4	58.5	60.9	62.2	61.8	70.9	85.2	61.7
migrant LFPR deficit (migrant LFPR - matched native-born LFPR)	-22.3	-17.2	-11.8	-12.3	-14.1	-5.5	1.7	2.4	3.3	-8.5
B. Native-born women's labour-force participation rates, by years of residence										
matched native-born (on third-country migrant women with year of residence less than 5)	77.0	80.7	72.5	77.8	75.5	73.5	58.0	69.2	84.9	74.0
matched native-born (on third-country migrant women with year of residence 6 to 10)	74.5	77.9	71.4	72.2	72.0	72.6	60.6	68.8	83.8	72.2
matched native-born (on third-country migrant women with year of residence 10 or more)	69.3	72.2	68.4	66.1	75.5	65.4	60.6	64.3	80.3	68.0
C. Third-country migrant women's labour-force participation rates, by years of residence										
third-country migrant women with year of residence less than 5	41.7	38.0	41.0	45.4	57.4	47.2	51.3	70.3	87.9	59.2
third-country migrant women with year of residence 6 to 10	56.2	47.1	51.9	65.0	55.0	58.6	61.5	74.1	80.8	61.5
third-country migrant women with year of residence 10 or more	50.5	60.7	61.1	63.3	64.2	67.0	67.3	64.5	84.8	63.0

D. differences (migrant LFPR - matched native-born LFPR), by years of residence	Belgium	Netherlands	France	Luxembourg	UK	Austria	Greece	Spain	Portugal	All 9 countries
third-country migrant women with year of residence less than 5, versus matched native-born women	-35.3	-42.8	-31.5	-32.4	-18.2	-26.3	-6.7	1.1	3.0	-14.8
third-country migrant women with year of residence 6 to 10, versus matched native-born women	-18.3	-30.9	-19.4	-7.2	-16.9	-14.0	0.8	5.3	-3.1	-10.7
third-country migrant women with year of residence 10 or more, versus matched native-born women	-18.8	-11.4	-7.3	-2.7	-11.3	1.6	6.7	0.2	4.5	-5.0

Notes: numbers in bold indicate that number is significantly different from zero at the $p < .05$ level

Source: Authors' calculations from the LFS

Table 3 Contextual variables: migrant origins, routes, reception context, and labor-market outcome indicators for migrant women, 2005

	Belgium	Nether-lands	France	Luxem-bourg	UK	Austria	Greece	Spain	Portugal
A. Migrant country origins and admission routes									
<i>Nationalities of third-country foreign workers[^]</i>									
most common	North Africa	Turkey	North Africa	ex-Yugoslavia	South Asia	ex-Yugoslavia	Albania	Latin America	Africa
second most common	Turkey	Morocco	Turkey	Other	U.S./Oceania	Turkey	ex-USSR	Morocco	Brazil
<i>Main Migrant Entry Routes^{^^}</i>		family unification and asylum				work permit, family, asylum	family unification	regularization of undocumented workers	
B. Family and employment reconciliation differences: migrants versus native-born									
<i>Proportion with a child < 5 who are in the labor force[#]</i>									
Migrant women	38.3	49.2	49.9	48.7	46.3	50.9	43.8	61.0	88.6
Native-born women	70.2	74.7	66.6	70.1	63.5	63.4	53.0	62.2	85.2
<i>Proportion with a child < 5 and working who use formal childcare^{**}</i>									
Migrant women	35.1	14.0	n.a.	n.a.	16.1	9.4	n.a.	18.4	49.9
Native-born women	51.6	14.5	n.a.	n.a.	22.2	10.2	n.a.	24.5	41.6
<i>Women with a child under 14: proportion to wish to work more (and reduce caring time)^{**}</i>									
Migrant women	8.4	21.9	n.a.	n.a.	11.1	6.9	6.3	10.9	n.a.
Native-born women	2.1	6.6	n.a.	n.a.	4.5	2.1	2.1	4.2	n.a.
C. Labor-market context: outcomes of migrants versus native-born women in the labor force									
<i>Unemployed as proportion of labor force[*]</i>									
Migrant women	26.9	11.5	20.5	13.5	7.5	11.9	15.3	14.3	9.7
Native-born women	8.4	4.5	9.2	4.5	4.1	4.6	15.4	11.9	9.1
<i>Involuntary part-time employment (as proportion of labor force)[~]</i>									
Migrant women	7.9	3.4	10.9	8.1	3.9	7.6	9.0	12.0	7.7
Native-born women	5.3	2.3	7.5	2.2	2.4	3.5	3.2	6.0	3.9
<i>Temporary contract employed (as proportion of all employed)[*]</i>									
Migrant women	17.8	21.7	17.9	8.2	11.1	7.8	25.0	55.0	28.8
Native-born women	10.9	16.4	13.7	5.8	5.6	9.1	13.1	32.8	19.5
<i>Migrant % of female labor force</i>	5.0	8.4	7.3	7.2	6.4	11.9	7.8	10.2	6.2

Notes:

^ Stock of foreign labor by nationality, OECD (2007, Table B.2.2)

^^ OECD (2007, Part IV, Recent changes in migration movements and policies)

2005 quarterly EU LFS, native-born women matched to migrant women, definitions as in Tables 1 and 2

* 2005 quarterly EU LFS, all women aged 15 to 64 (migrants from non-EU countries)

~ 2005 quarterly EU LFS, all women aged 15-64 "part-time because unable to find a full-time job" (migrants from non-EU countries)

** 2005 EU LFS Work and Family Reconciliation Topical Module, all women of working age with a child under 14 (migrants from non-EU countries).

'n.a.': does not meet Eurostat statistical reliability minimum threshold