Immigrant Niches and the Intrametropolitan Spatial Division of Labour

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Immigrants often bunch together in particular lines of work, which many scholars call employment niching. They also may cluster geographically; these districts can be neighbourhoods where workers reside or places of work (industrial quarters where labour is performed). The intrametropolitan spatial division of labour is perhaps best conceived as the relationships among employment concentrations in industrial niches and places of work shaped in large measure by the geographies of residence. The analysis of six immigrant groups reported in this paper models the effect of residential concentration on the chances that an immigrant holds a job in a particular line of work, labours in a particular work place, or does both—works in a particular job and work place. The study, which uses Greater Los Angeles' census tracts for the analysis, reveals that residential patterns help to govern the extent of this industrial segmentation and employment geography but that this relationship is not consistent across immigrant groups. The investigation adds to the literature on labour market segmentation by ethnicity, gender, nativity and home–work relations and offers new perspectives on the relationship between spaces of production and social reproduction in metropolitan places.

Keywords: Spatial Division of Labour; Scale; Immigrant Niche; Neighbourhood; Ethnicity; Gender

Introducing a special issue of *JEMS* on the gendering of immigrant employment niches, Schrover *et al.* (2007: 532) identified seven areas where theories of niche

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formation and the immigrant division of labour overlapped: social networks, personal preferences, discrimination, turnover, wages, occupational typing, and the broad processes of racialisation or feminisation. Their timely and succinct review hardly mentions geography. Rather than this being a major omission, however, their article accurately depicts the roles of the main actors in the literature on immigrant niching. In most explanations, social and economic forces determine employment outcomes; space plays but a bit-part.

Schrover *et al.* (2007) do mention home–work separation (as being more of an issue for immigrant women than men) but this relation lies on the margins of their review. In contrast, our paper places that relation at the centre of a new conversation about immigrant employment niching, infusing intra-urban geography into understandings of the immigrant division of labour. We do this from the simple starting observation that 'cities contain clusters of people and jobs' (Glasmeier and Farrigan 2007). In the context of immigration and the division of labour, we imagine these as concentrations of newcomers in particular lines of work (hereafter called employment niches), as well as groupings of immigrant men and women in particular places. Following convention, these districts can be neighbourhoods where workers reside (much spatial assimilation and immigrant residential-attainment research, for example, treats them this way) or places of work (industrial quarters where labour is performed).

We are not the first to consider these pools in the context of immigration and niching (Yancey *et al.* 1976). A few recent studies find that residential segregation partly explains employment niching and that this relationship is stronger for women than men (Logan *et al.* 2002; Parks 2004, 2005; Wang 2006). Other research shows that the relationship between segregation by place of residence and by place of work is deeply intertwined (Ellis *et al.* 2004; see also Li 1998). The analysis reported here, however, is different; it tests the effect of residential concentration on the chances that an immigrant occupies a particular line of work *in* a particular place of work. Immigrant residential concentrations engender and enhance social networks that act as conduits for information about jobs. Simultaneously drawing connections among these three different forms of labour pooling allows us to dig deeper into the ways in which immigrants get matched to jobs in place. How, for example, are spatial clusters of immigrant employment related to the location of immigrant residential concentrations? Does this relationship depend on whether this spatially clustered employment is in a niched line of work or not? To what extent does living in an ethnic residential enclave elevate the chances of working in a co-ethnic line of work *and* place of work? How does this vary by gender and by immigrant group? These sorts of question, in turn, shed some new light on relationships between geographies of home and work and the relationship between immigrant residential patterns and the immigrant division of labour and, ultimately, how the spatial structure of metropolitan areas comes to be.

Foregrounding geography in a research project may involve more than incorporating relative location and place. This paper reports the results of an analysis of

immigrant employment niching undertaken at a new spatial *scale*. Schrover *et al.*'s (2007) review paper bypassed the geographies of niching partly because almost all studies of immigrant employment concentrations by line of work conceive of the niche as a metropolitan-scale phenomenon. Employment niches are associated with, indeed calculated as, an overrepresentation in an occupation or industry; scholars thus benchmark a group's employment concentration in a particular job relative to the group's share of the total labour force. They often identify a niche when the percentage of workers from a particular immigrant group in an industry is greater than 1.5 times the percentage of that group in the total labour force (Hudson 2002; Waldinger 1996; Wang and Pandit 2007). The total labour force is seen as the labour force of the place (usually a metropolitan area) being studied.

Niches are thus taken to be niches no matter where they occur within the space of the metropolitan labour market of interest. Ellis *et al.* (2007) question whether niches are metropolitan-wide phenomena; they find that an immigrant group's niching propensity varies inversely with industry proximity to the group's residential neighbourhood. Their analysis also reveals that proximity to competing immigrant groups for the same employment niche attenuates this spatial advantage. The investigation summarised in this paper thus connects to that research by also hypothesising that geography matters when it comes to immigrant employment niching. Using Greater Los Angeles as a backdrop, we examine how the ethnic and gender divisions of labour in the metropolitan area are expressed geographically. Immigrant workers concentrate in employment niches *and* in work places. We ask to what extent these locations in economic and physical space overlap. That is, how is the immigrant division of labour part and parcel of the spatial division of labour? And do these employment patterns correlate with the degree of residential concentration? The study of the immigrant division of labour addresses the crucial question of how new arrivals join and modify other divisions of labour. This issue, for example, is foundational to the interwoven concerns of immigrant–native job competition (e.g. Borjas 1999) and replacement/displacement inter-regional and inter-metropolitan migration (e.g. Ley 2007; Lichter and Johnson 2006; Wright *et al.* 1997). In this paper, the analytical approach shifts to consider explicitly the importance of the local geography of home and work in the labour market segmentation process.

Given the breadth of our agenda, we isolate the main research questions in two ways. Rich social networks help to bind immigrant residential concentrations together; they also fashion information flows about what jobs are available and where those jobs are located. Accordingly, we first supplement previous research on the connections between immigrant residential clustering and immigrant divisions of labour by asking the following question: Does the degree of *residential* concentration explain *employment* concentrations in lines of work (employment niches) *and* in places of work? Second, by taking a leaf out of the research on how gender and ethnicity structure labour market outcomes (information flows tend to follow discrete systems often mediated by gender or kith and kin), we also try to broaden the

research on the ethnic and gender division of labour among immigrants by questioning how employment niching and work-place clustering covary by nativity and gender. For instance, workers from some groups may congregate in geographically dispersed employment niches, whereas workers from other groups may concentrate geographically but not by industry. Another possibility is that co-ethnics may occupy employment niches *and* bunch together in work places, which suggests that the immigrant division of labour is interwoven with the intra-urban spatial division of labour. Such a linkage makes generalisations about metropolitan-scale immigrant employment niching problematic; it also raises questions about the circumstances under which it occurs. This study explores the strength of the linkage for men and women of various immigrant groups in Los Angeles and asks how much it depends on their residential geographies. In so doing it speaks to the consequences of segregated housing markets for the urban geography of immigrant employment niching. The research thus takes on some crucial issues in labour market formation; it drives at the fundamental issue of how immigrants find work *in particular places*.

Spatial Divisions of Labour and Geographic Scale

Although the geography of immigrant niching clearly connects with the literatures on immigrant networks, employment and incorporation, it also overlaps with the broader field of research on spatial divisions of labour. The idea of a spatial division of labour maintains that firms in particular industries locate in certain places where they can more easily draw on specific pools of labour. Changes in production or transportation technologies or, more generally, shifts in regimes of accumulation, bring about new spatial divisions of employment as firms seek out and exploit different labour pools at different locations in accordance with the competition logics of their industrial sector. Influential studies of the spatial division of labour tend to comprehend these landscapes of production at international or regional scales (Fröbel *et al.* 1980; Hymer 1972; Massey 1984; Peck 1996; Piore and Sabel 1986). The spatial division of labour is also associated, of course, with the specialisations of particular metropolitan areas (Scott 2006). This paper asks how we understand immigrant spatial divisions of labour *within* a metropolitan area.

Questions about the spatial structure of a metropolitan labour market roughly divide between approaches that put the accent on residential patterns and those that privilege patterns of employment and production (Glasmeier and Farrigan 2007; Scott 1988). When we think about urban segregation, attention usually falls on residential separation and residential concentration. The majority of studies start from assessments concerning the place of residence because neighbourhoods are obvious markers of difference in urban structure. Race and class, and the interaction of the two, generally sort people into different residential neighbourhoods, which in turn shape life chances because of variation in school quality, exposure to crime, and the development of personal wealth (e.g. Fong and Shibuya 2000; Massey and Denton 1993; Massey and Eggers 1990; Squires and Kurbin 2006).

An alternative view maintains that metropolitan regions can be seen as assemblages of places of work just as easily as they can be seen as constellations of residential neighbourhoods. In questioning the urban ecological approach to analysis, Scott (1988, 2006) asserts that the location of production shapes residential spatial structure, not *vice versa* (see also Zecker 2004: 428). The distribution of employment within metropolitan areas is highly uneven and industries clump together in specific places. The geographies of employment and the local labour markets that develop around those nodes provide clues to understanding urban morphology. The organisation of local production complexes speaks to the larger issues of urban form, society and politics under capitalism (Scott 1988). Associated research agendas revolve around the analysis of industrial agglomeration—concentrated employment activities and the forces that help anchor those places of work in particular locations (e.g. Forstall and Greene 1997; Leslie and O hUallachain 2006; Shearmur *et al.* 2007).

Although these two research traditions often operate on parallel tracks, they do merge in certain situations. Robert Park and his Chicago School colleagues were deeply interested in spatial separation as an important social marker, and subsequently researchers spent considerable time examining the journey to work and commuting (e.g. Schnore 1954). Ira Katznelson (1981) theorised that the separation of work places from residential community produced urban political coalitions organised around ethnic rather than class interests. More recent research, primarily directed toward analysing minority access to employment opportunities or the gendered forms of local markets, also foregrounds home–work separation (e.g. England 1993; Hanson and Pratt 1995; Kain 1968; Preston *et al.* 1998) and spatial accessibility (Spain 2002).

Although a full elucidation of the spatial division of labour lies well beyond the scope of one paper, shifts in the basic logic of production motivate most explanations of regional and international spatial divisions of labour. Such alterations also configure industrial production complexes and spatial divisions of labour inside metropolitan areas. Indeed, the literature on urban structure tends to foreground geographical access and relative location or transportation-system innovations. Shifting spatial scales, however, involves altering analytical perspectives. At a geographic resolution at or greater than the metropolitan, work and residence become superimposed on one another. At the intrametropolitan (neighbourhood) scale of analysis, in contrast, the spotlight tends to fall on the districts where work is performed in relation to the neighbourhoods where workers reside. The arguments concerning the immigrant division of labour in this paper lean on this local way of thinking.

Placing Immigrant Niches

The dominant narrative explaining the immigrant division of labour holds that network ties largely govern the labour market concentrations of different groups (e.g. Schrover *et al.* 2007; Waldinger 1996; Wilson 2003; Wright and Ellis 1997).

Immigrants often find work based on information exclusively shared by fellow travellers or from recruiters seeking workers for particular jobs. So-called family reunification policies may bolster these forces of employment concentration as immigrant entrepreneurs meet their goal of self-employment and fill the jobs they create with co-ethnic friends and family members (e.g. Rangaswamy 2007). Niches can and do fill quickly in this way and can produce relatively rapid shifts in employment concentration patterns in a region or metropolitan area. Niches are also often segregated by gender; immigrant women from one origin taking on work that may be quite different from immigrant men from the same source society. Women may tap different social networks than men and access different information about work. On the demand side, work is often sex-typed and discrimination channels women into particular lines of work (e.g. Schrover *et al.* 2007; Wright and Ellis 2000). This can occur within a work place, as women may take on one type of labour while men take on another (e.g. Light *et al.* 1999).

This research reconciles network approaches to niching that theorise how newcomers connect to certain types of employment, and perspectives on metropolitan labour-market operations that foreground spatial separation and commute time between place of residence and place of work. This way of thinking posits that metropolitan labour markets are constituted by three interconnected forms of labour pooling in places of residence, places of work and types of work. Like network-driven approaches to niching, immigrant employment concentrations in particular lines of work are shaped by neighbourhood residential patterns. Immigrant residential enclaves become a pivotal junction in the network linking co-nationals to jobs for two main reasons. First, they are often, but not always, in relatively close spatial proximity to places that offer work to immigrants. For example, Allen Scott documents how industrial work seeds proximate residential development in several different industries in Los Angeles. Second, social ties link people in residential neighbourhoods to work places in industrial quarters and other places of work. Residential concentrations should not only be thought of as pools of labour and of information, mediated by class, gender, age and co-ethnicity. Recent immigrants depend especially on this embedded social capital (Parks 2004: 590; Scott 1988: 224). Job information, however, is not just networked. The Pew Hispanic Center reports that, although networks were the primary means by which newcomers found work, job-site visits were the second most common (Kochhar 2005).

Information and space thus intertwine, such that spatial proximity shapes the spaces of information and *vice versa*. This last point is best illustrated when considering the gendered division of labour. Women generally work closer to home than men because they usually take on greater domestic responsibility than their male counterparts. These responsibilities constrain the ability of women to be far from home for long periods of time. Consequently, the area in which women search for work will probably be smaller than that of men and thus women's information space will not correspond to men's. In their aspatial analysis of the division of labour in Los Angeles, Wright and Ellis (2000) found different employment niching patterns

among immigrant men and women. The current line of argument strongly suggests that space (commuting patterns, segregated information space, and residential location) helped shape these employment divisions (see also Schrover *et al.* 2007).

The idea of integrating different types of segregation analysis to produce new understandings of the divisions of social life and the spatial order of cities is intriguing and has recently begun to capture the attention of scholars. Elvin Wyly (1999), for example, found that men's and women's employment concentrates in different parts of a metropolitan area because of the distinctive geographies of jobs— the gendered spatial division of labour—typed as male or female. In a similar vein, Virginia Parks connected the degree of immigrant residential segregation to measurements of ethnic industrial segmentation (Parks 2004, 2005). She found that residence in an immigrant neighbourhood partly explained niche employment and that this relationship was gendered; immigrant women who lived in enclave neighbourhoods had a higher rate of niche employment than immigrant men.

The research reported in this paper goes one step further by adding another geography to a Parks-style analysis. We seek to explain how residential concentrations affect immigrant niche employment *and* the geography of immigrant work places. Our analytical frame allows us to measure the effect of residential patterns on either employment niching or work-place concentration separately. Our approach also allows for the possibility that these forms of employment concentration occur jointly, which—if they occur—would suggest that concentrations in industrial niches are interrelated with the spatial division of labour. Such a finding implies that employment niching is not just a function of social networking processes unfettered by geography. Rather, this result would reveal that the spatial distribution of production and its associated spatial division of labour are built from social *and* spatial processes that link workers to specific sites of employment within the metropolitan area. We now turn to a description of these empirics.

Methods

Our concern with both spatial and aspatial forms of labour pooling does not sit exclusively in just one domain of immigrant incorporation (employment in which industry or occupation, residence in which place, etc) but in three. Accordingly, the study hinges on being able to identify the lines of work occupied by individual immigrants and to locate their place of work and neighbourhood of residence; we do this at the census tract scale. So although 'work places' are variously theorised and constructed (e.g. Peck 1996), we adopt a narrow view and define places of work purely as the census tract of employment. We acknowledge that tracts of work provide but one means to conceptualise 'work places' and that such a definition is far from perfect. Thinking of work places in this way, however, offers one special advantage; they match units of analysis frequently used to understand residential neighbourhood geographies.

The US Census Bureau does not publish geographically detailed information about work places. We can study work places as neighbourhoods where work is performed only because the US Census Bureau has made available, under controlled circumstances, detailed individual-level information from a special version of the 1990 US Census of Population and Housing. This dataset provides a one-in-six sample of individuals that permits us to simultaneously study residential and sectoral segregation, and the spatial division of labour. This version of the US census includes information on work, and on place of residence and of work by census tract. Simply stated, with a large volume of data recording tracts of residence and work for individual workers, we can now theorise the process of sectoral specialisation for different groups of people in wholly new ways.

The analysis revolves around the estimation of a suite of multinomial logit models based on data drawn from the five-county greater metropolitan area of Los Angeles. We test the effects of immigrant personal characteristics, residential concentration and commute time on the joint probability of employment in a work-place tract concentration and industry niche. The observations are individuals. Although sample sizes vary by group, the one-in-six sample provides an adequate basis for analysis as all samples are relatively large. Each of the models, estimated separately for men and women and the seven immigrant groups under consideration, thus uses the same four-tier dependent variable, the levels of which are as follows:

- not employed in a work-tract concentration/not employed in a niche; in other words, 'not concentrated';
- not employed in a work-tract concentration/employed in a niche—'dispersed niche';
- employed in a work-tract concentration/not employed in a niche—'un-niched agglomerations';
- employed in both a work-tract concentration and a niche—'super-concentrations'.

The dependent variable is built from two quotients.[1] The first quotient we use—the immigrant employment niche quotient—measures a group's concentration in a particular line of work. To distinguish the other measures of concentration that follow, we call this the niche quotient (NQ) and define it as follows:

$$NQ_k = (E_{ik}/E_k)/(E_{im}/E_m) \qquad (1)$$

NQ_k is the quotient for industry k; E_{ik} is count of group i in industry k; E_k total employment in industry k; E_{im} is the count of group i in metropolitan area m; E_m is the total employment in metropolitan area m. This ratio equals 1 when the proportion of group i working in industry k is the same as the proportion of group i working in the metropolitan area. The niche industry threshold for group $j > = 1.5$. Scholars investigating employment concentrations commonly deploy this benchmark (e.g. Waldinger 1996). NQs are specific to each group by sex across all 3-digit civilian industries (n = 238).

The second measure of concentration gauges a group's employment concentration within a particular place of work. We call this the work location quotient (WLQ) and define it as:

$$WLQ_j = (E_{ij}/E_j)/(E_{im}/E_m) \qquad (2)$$

where WLQ_j is the location quotient for work in census tract j; E_{ij} is count of group i working in tract j; E_j total workforce of tract j; E_{im} is the workforce of group i in metropolitan area m; E_m is the total working population of metropolitan area m. This ratio is unity when the proportion of group i working in tract j is the same as the proportion of group i working in the metropolitan area. Following the conventions in the literature on employment niching, we set the place of work niche threshold at the same level: $WLQ_j > 1.5$.

The analysis includes, of course, a third measure: a group's concentration by place of residence. We define this residential location quotient (RLQ) in much the same way as the preceding measures:

$$RLQ_j = (P_{ij}/P_j)/(P_{im}/P_m) \qquad (3)$$

RLQ_j is the location quotient for residence in census tract j; P_{ij} is population of group i living in tract j; P_j total population of tract j; P_{im} is the population of group i in metropolitan area m; P_m is the total population of metropolitan area m. This ratio is unity when the proportion of group i residing in tract j is the same as the proportion of group i living in the metropolitan area.

RLQ constitutes one of the independent variables in the multinomial logit model that is the centrepiece of this analysis. Continuously measured controls include years of education, age and commute time (in minutes). Dummy controls include English language ability (yes = 1, no = 0), marital status (yes = 1, no = 0), cohort of arrival (arrived before 1980 = 1, otherwise = 0), and whether or not a worker occupies a job in manufacturing (work in manufacturing = 1, otherwise = 0). We coded RLQ as a dummy variable divided into three categories: 0 to 1.49 (no residential concentration); 1.5 to 4.99 (moderate residential concentration); and greater than or equal to 5 (high residential concentration). We could have isolated several other sectors (such as retailing or personal services), but we selected manufacturing for special attention because it represents an important locus of employment for several immigrant groups (Ellis and Wright 1999; Scott 1996). Because of the central place that residential concentration occupies in the analysis and the connections between place and type of work, this variable is also interacted with commute time and employment in manufacturing. We estimated these multinomial logit models separately for the seven largest immigrant groups; Mexicans, Chinese, South Koreans, Guatemalans, Salvadorans, Filipino/as, Vietnamese by sex (the separate estimations help account for networks shaped by nativity, ethnicity and gender.) Mexicans dominate flows to Los Angeles with about 1 million foreign-born members of the workforce. The other groups are closer in total size (fewer than 100,000). While immigrants from Mexico and Central America tend to arrive with low levels of human capital, newcomers from South Korea and the Philippines often arrive with college degrees. The migrant flows

from Mexico sometimes build on deep roots that go back generations, while the other streams are of a much more recent vintage. There are more female than male immigrants from the Philippines in the LA workforce—this is the only group where women workers outnumber their male counterparts.

Before turning to our discussion of the model estimates, we acknowledge the potential for endogeneity in our specification. Employment focused in industries and work places could, as Scott (1988) suggests, help drive the formation of ethnic neighbourhoods. Instrumental variable estimates of residential segregation would mitigate this condition but it is difficult to find statistically significant predictors of residential location that do not correlate with some form of employment concentration. Because of this problem we prefer to keep a direct measure of residential grouping in our model and note that the model results are better interpreted as estimates of statistical association than of causation.

Analysis

Our primary analytic purpose is to reveal the extent to which the spatial division of labour is bound up with the immigrant division of labour. Thus, a central observation of interest is the joint probability of an immigrant's employment in a niche job and in a work-place tract concentration. The modelling procedures involved separate estimates of this probability for men and women across seven nationalities in a four-category multinomial logit model. Estimating these models required that one of the four categories ('not concentrated'; 'dispersed niches'; 'un-niched agglomerations'; 'super-concentrations') act as base or excluded category; we used 'not concentrated' as this referent. This produced three sets of coefficients for the remaining categories relative to workers who are neither niched nor employed in a work-tract concentration and yields ($2 \times 7 \times 3$) 42 sets of parameter estimates. We used a robust estimation procedure to account for the clustering of individuals in tracts.

Tables 1 and 2 summarise the logit modelling results. For all the models, Wald Chi-squared statistics (not shown) are uniformly statistically significant at $p > .0001$. Bolded parameter estimates in the tables are statistically significant at $p > .05$. Space precludes a discussion of every coefficient; thus, we do not engage in a lengthy discussion of the behaviour of all the tract- and individual-level variables in the models for both men and women from the seven immigrant groups. That said, these tables reveal some clear patterns of immigrant niching behaviour. First, and perhaps foremost, residential concentration is a strong and consistent correlate of working in an agglomeration. Residential concentration significantly elevates the chances of being in an un-niched agglomeration and a super concentration relative to 'not concentrated' for both men and women. Residential concentration is less important in explaining dispersed-niche work patterns relative to 'not concentrated' work patterns.

English language ability, generally, has the opposite effect to residential concentration. As we would expect, the greater an individual's English-language proficiency, the less likely she or he is to work in places that are 'un-niched agglomerations' and 'super-concentrated' relative to 'not concentrated'. In contrast, the effect of working in the manufacturing sector varies by nativity and gender. For some groups, manufacturing really matters to patterns of employment; for others, it matters little. Take Mexican and Vietnamese men and women, for example—working in manufacturing elevates the probability of employment in niches, especially when these niches are also in work-tract concentrations of co-nationals. In contrast, Filipina employment in manufacturing in Los Angeles has the opposite effect, lowering the probability of employment niching both in and outside their work-tract agglomerations (cf. Wright and Ellis 2000). These group differences, however, attenuate or—in some instances—disappear in manufacturing's interactions with residential concentration. Manufacturing's effect thus depends on the type of residential neighbourhood.

When statistically significant, the *main* effect of commute time tends to be positive; in particular, the odds of employment in spatial concentrations increase with travel time. Interactions with residential patterns, however, reveal another story. For those women and men who are agglomerated or super-concentrated (i.e. those who work in work-tract concentrations and may or may not also work at the same time in employment niches) these interactions—when statistically significant—are often negative, outweighing in most instances commuting's positive main effect. In other words, as one would expect, the probability that immigrants work in spatial concentrations, whether employed in niches or not, tends to decline with travel time from ethnic neighbourhoods. Thus, spatial clusters of immigrants at work and in employment niches are often located close to where these workers congregate residentially.

Rather than attempt to describe all the findings, given the complexity of the modelling and the volume of the results, we now report on some of the main axes of difference in immigrant work patterns using simulations derived from the estimated coefficients. Figures 1 and 2 illustrate the patterns of spatial and aspatial work concentration for the seven immigrant groups studied. These simulations stem from setting the model's statistically significant ($p > .05$) explanatory variables at their means. We can imagine these charts as the calculated average patterns of employment concentration for women (Figure 1) and men (Figure 2). The entries in the figures are rank ordered: the group with the highest proportion of workers in the super-concentrated category lie to the left; the group with the lowest proportion of workers in the super-concentrated category is on the right. As indicated, the lower pair of stacked bars represents the total probability of working outside an employment niche regardless of geography; the upper pair of stacked bars signifies the patterns of niche employment (either in a dispersed niche or super-concentration).

Figure 1, depicting the employment patterns of female immigrants, has several readings. Perhaps most obviously, the association between employment niches and

Table 1. Multinomial logit parameter estimates of immigrant women's employment niching/concentration in Los Angeles, 1990

	Mexicans	Salvadorans	Guatemalans	Filipinas	Chinese	Vietnamese	S. Koreans
Dispersed/niched v not concentrated							
Years of education	**−0.080**	**−0.093**	**−0.079**	**0.121**	0.008	**−0.038**	**−0.052**
Age	**0.017**	**0.018**	0.007	0.003	−0.006	0.011	**0.018**
Good English	**−0.720**	**−0.506**	**−0.608**	0.370	0.047	**−0.360**	**−0.386**
Married	**−0.107**	−0.074	**−0.256**	**0.322**	0.175	**0.433**	**0.340**
Work in manufacturing	**1.850**	**−0.664**	**−0.872**	**−2.171**	−0.193	**0.755**	**−1.177**
Moderate residential clustering (MRC)	**−0.380**	−0.238	−0.270	**0.262**	0.124	0.015	−0.017
High residential clustering (HRC)	**−0.719**	0.300	−0.122	0.139	0.146	−0.173	0.283
Manuf*MRC	**0.408**	0.426	**0.824**	−0.119	0.234	0.038	0.241
Manuf*HRC	−0.158	**1.005**	0.726	−0.139	0.457	−0.488	0.692
Arrived before 1980	**−0.612**	**−0.613**	**−0.677**	0.124	**−0.469**	**−0.247**	**−0.359**
Commute time	−0.002	0.005	0.004	0.004	−0.001	-0.007	0.001
Commute*MRC	**0.008**	0.004	0.003	**−0.008**	0.002	0.000	0.003
Commute*HRC	**0.017**	−0.003	0.002	**−0.011**	0.005	**0.017**	−0.008
Constant	**0.271**	**0.871**	**1.160**	**−2.564**	**−0.537**	−0.022	**0.702**
Agglomerated/not niched v not concentrated							
Years of education	−0.007	0.011	−0.007	0.021	**−0.031**	0.019	0.026
Age	**0.011**	0.006	−0.010	**0.007**	0.004	0.010	0.005
Good English	**−0.299**	0.022	−0.112	−0.152	**−0.406**	−0.214	−0.076
Married	−0.044	−0.085	−0.048	−0.059	0.025	0.176	0.158
Work in manufacturing	**0.305**	**−0.392**	−0.300	−0.253	**−0.748**	−0.087	−0.507
Moderate residential clustering (MRC)	**1.747**	**1.582**	**1.241**	**1.007**	**0.997**	**0.834**	**0.667**
High residential clustering (HRC)	**1.942**	**2.497**	**1.925**	**1.764**	**2.472**	**2.353**	**2.258**
Manuf*MRC	**−0.249**	−0.022	0.004	−0.410	0.107	0.160	0.085
Manuf*HRC	**−1.671**	0.014	−0.656	0.292	0.063	0.133	0.095
Arrived before 1980	0.058	−0.150	0.122	**−0.211**	**−0.513**	0.099	−0.229
Commute time	**0.008**	**0.012**	**0.012**	**0.013**	**0.010**	−0.004	**0.013**
Commute*MRC	**−0.028**	**−0.017**	−0.009	**−0.016**	−0.012	−0.012	−0.001
Commute*HRC	**−0.058**	**−0.027**	**−0.019**	**−0.033**	**−0.042**	**−0.046**	**−0.047**
Constant	**−1.741**	**−0.990**	−0.364	**−1.509**	−0.285	**−0.923**	**−1.561**
Super-concentrated v not concentrated							
Years of education	**−0.081**	**−0.084**	**−0.075**	**0.147**	**−0.029**	−0.004	**−0.055**

Table 1 (*Continued*)

	Mexicans	Salvadorans	Guatemalans	Filipinas	Chinese	Vietnamese	S. Koreans
Age	**0.021**	**0.022**	**0.020**	0.005	−0.006	0.009	**0.025**
Good English	**−0.794**	**−0.521**	**−0.748**	0.033	**−0.286**	**−0.444**	**−0.660**
Married	**−0.091**	−0.113	**−0.249**	**0.325**	0.009	**0.303**	**0.477**
Work in manufacturing	**2.751**	**−0.470**	**−0.893**	**−3.936**	−0.449	**1.033**	**−1.079**
Moderate residential clustering (MRC)	**1.479**	**0.569**	−0.048	**1.212**	**1.362**	**1.093**	**0.577**
High residential clustering (HRC)	**1.488**	**1.784**	**0.999**	**1.945**	**2.890**	**2.249**	**1.594**
Manuf*MRC	0.068	**0.913**	**1.124**	−0.413	**0.484**	0.453	0.108
Manuf*HRC	**−1.179**	**1.109**	**1.041**	**1.476**	**0.960**	0.422	**0.878**
Arrived before 1980	**−0.427**	**−0.473**	−0.646	**0.283**	**−0.525**	−0.194	**−0.533**
Commute time	**0.008**	0.004	0.006	**0.016**	**0.021**	−0.001	0.008
Commute*MRC	**−0.018**	0.004	0.012	**−0.022**	**−0.022**	**−0.017**	0.001
Commute*HRC	**−0.026**	−0.004	0.000	**−0.040**	**−0.048**	**−0.039**	**−0.027**
Constant	**−1.978**	0.380	**0.788**	**−3.437**	−0.607	**−1.012**	−0.107
N	268,262	52,165	25,389	72,379	33,724	26,189	34,057
Pseudo R^2	0.167	0.091	0.085	0.078	0.069	0.083	0.052

Note: $p \leq 0.05$ for bolded estimates.

Table 2. Multinomial logit parameter estimates of immigrant men's employment niching/concentration in Los Angeles, 1990

	Mexicans	Salvadorans	Guatemalans	Filipinos	Chinese	Vietnamese	S. Koreans
Dispersed/niched v not concentrated							
Years of education	−0.079	−0.078	−0.072	0.031	0.001	0.031	−0.017
Age	−0.008	−0.011	−0.021	0.015	−0.013	−0.014	0.023
Good English	−0.451	−0.428	−0.465	−0.343	−0.465	−0.128	−0.010
Married	0.045	0.017	0.026	−0.032	0.326	0.311	−0.139
Work in manufacturing	0.400	0.027	0.255	0.212	0.389	2.864	−1.546
Moderate residential clustering (MRC)	−0.131	0.237	−0.038	−0.104	−0.016	−0.276	0.258
High residential clustering (HRC)	−0.023	0.386	0.421	−0.014	−0.028	−0.356	0.018
Manuf*MRC	0.161	−0.207	0.459	−0.388	−0.153	0.009	0.425
Manuf*HRC	−0.843	−0.063	0.536	−0.360	−0.379	−0.113	0.903
Arrived before 1980	−0.509	−0.312	−0.231	−0.224	−0.070	−0.068	−0.417
Commute time	0.002	0.007	−0.005	−0.003	−0.004	−0.012	−0.007
Commute*MRC	0.002	−0.006	0.010	0.005	0.000	0.008	−0.005
Commute*HRC	0.024	−0.007	0.005	0.007	0.005	0.017	0.003
Constant	2.135	1.744	1.964	−1.325	0.417	−1.068	−0.422
Agglomerated/not niched v not concentrated							
Years of education	−0.007	−0.016	−0.030	0.018	−0.011	0.023	0.014
Age	0.004	0.000	−0.006	0.004	0.005	0.009	0.007
Good English	−0.082	0.014	−0.131	−0.359	−0.136	−0.105	−0.330
Married	0.003	−0.100	0.161	0.104	−0.066	0.203	0.088
Work in manufacturing	0.211	−0.343	−1.265	−0.492	−0.731	−0.316	−0.823
Moderate residential clustering (MRC)	1.498	1.613	1.188	0.896	1.470	1.022	0.890
High residential clustering (HRC)	2.273	2.312	1.813	1.486	2.774	2.461	1.684
Manuf*MRC	−0.328	0.023	1.120	−0.148	0.390	−0.037	−0.087
Manuf*HRC	−0.134	−0.093	0.880	0.059	0.502	0.391	0.006
Arrived before 1980	0.002	−0.022	0.083	0.094	−0.200	−0.041	−0.058
Commute time	0.005	0.013	0.015	0.007	0.012	−0.003	0.007
Commute*MRC	−0.024	−0.020	−0.016	−0.012	−0.027	−0.021	−0.011
Commute*HRC	−0.082	−0.031	−0.025	−0.026	−0.055	−0.046	−0.030
Constant	−1.501	−0.575	−0.213	−1.338	−0.881	−1.133	−1.052
Super-concentrated v not concentrated							
Years of education	−0.071	−0.072	−0.089	0.041	−0.016	0.044	−0.001

Table 2 (*Continued*)

	Mexicans	Salvadorans	Guatemalans	Filipinos	Chinese	Vietnamese	S. Koreans
Age	−0.002	−0.009	**−0.022**	**0.010**	**−0.013**	−0.004	**0.020**
Good English	−0.582	**−0.476**	**−0.474**	−0.155	**−0.593**	−0.090	**−0.297**
Married	**0.100**	−0.029	0.031	0.111	0.068	**0.269**	0.150
Work in manufacturing	**1.198**	0.112	0.338	**−0.650**	−0.290	**3.075**	**−0.738**
Moderate residential clustering (MRC)	**1.235**	**1.885**	**1.128**	**1.087**	**0.881**	**1.189**	**0.765**
High residential clustering (HRC)	**1.495**	**2.685**	**1.990**	**1.414**	**2.063**	**2.732**	**1.266**
Manuf*MRC	−0.008	−0.233	0.435	−0.293	−0.464	−0.435	−0.354
Manuf*HRC	**−1.429**	−0.096	**0.661**	0.291	−0.466	−0.212	0.506
Arrived before 1980	**−0.339**	−0.166	**−0.312**	−0.079	**−0.291**	−0.082	**−0.372**
Commute time	**0.006**	**0.016**	0.008	**0.012**	0.006	−0.007	0.005
Commute*MRC	**−0.018**	**−0.020**	−0.006	**−0.021**	−0.011	−0.006	−0.009
Commute*HRC	−0.009	**−0.027**	**−0.015**	**−0.022**	**−0.039**	**−0.039**	**−0.020**
Constant	**0.189**	**0.682**	**1.439**	**−2.510**	0.273	**−2.519**	**−1.077**
N	599,317	71,837	39,985	60,325	46,113	38,454	43,573
Pseudo R^2	0.059	0.056	0.063	0.021	0.054	0.195	0.032

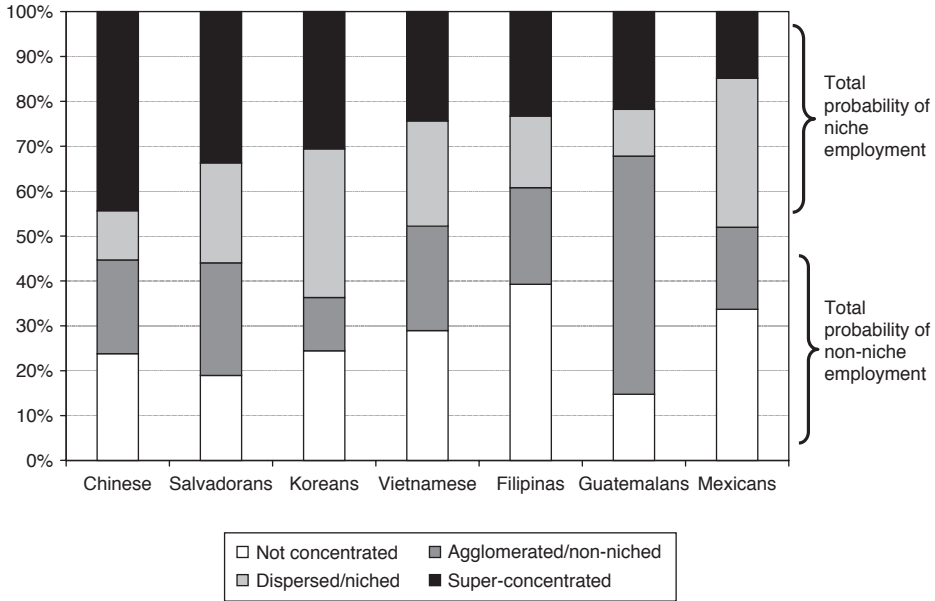*Note*: $p \leq 0.05$ for bolded estimates.

Figure 1. Predicted average patterns of employment concentration for women

employment concentrations are complex and vary by nativity. For example, few Mexican women are super-concentrated—concentrated spatially and by type of employment—at work, but almost 30 per cent labour in what we are calling dispersed
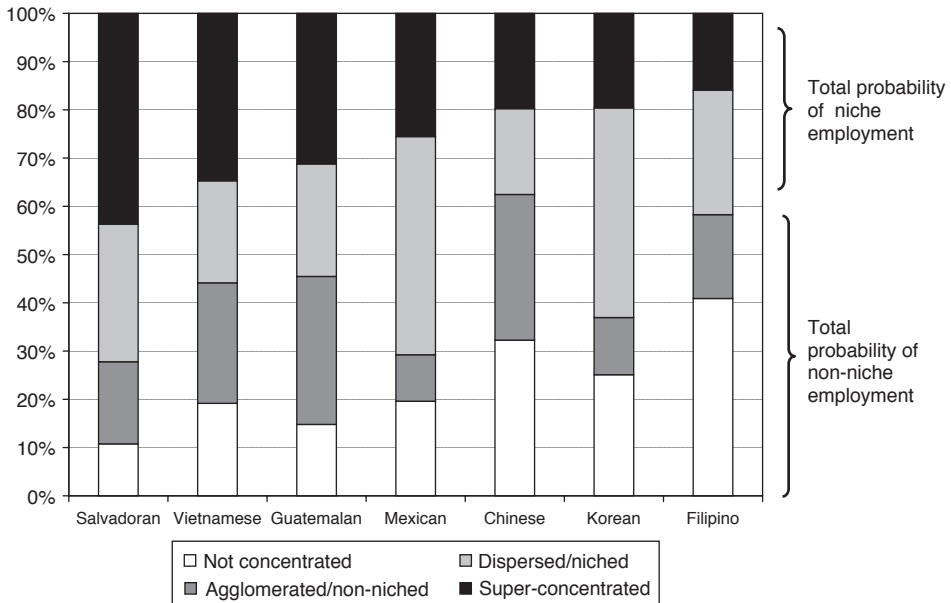

Figure 2. Predicted average patterns of employment concentration for men

niches. These dispersed niches would include work in retailing and certain services, and work such as manufacturing operatives (cf. Simon and DeLey 1984). South Korean women have the same chance to be employed in either dispersed niches or super-concentrations. Dispersed niches for this group correspond, in part, with their high propensity for retail employment (Ellis and Wright 1999).

Chinese women are the most likely to work in a super-concentration. They niche notably in apparel and wholesale trades (geographically concentrated industries in and of themselves). Mexican and Guatemalan women are the least likely, on average, to work in a super-concentration. Scant support exists, however, for a pan-Asian/ pan-Latina divide. For example, we find a close correspondence between the average patterns of employment concentration for Salvadoran and Vietnamese women and Mexican and Korean women. Immigrant women from Mexico and South Korea both niche in apparel and several different types of services and retailing, the latter generally exhibiting a dispersed pattern of employment. Moreover, the similarity between Mexican and Guatemalan women in the probability of working in a super-concentration is not replicated in un-niched agglomerations. In fact, the finding that almost half of all Guatemalan women will, on average, work in un-niched spatial agglomerations renders them distinct from all other groups of immigrant women (Menjívar 2006).

The broad patterns of employment summarised by the models for immigrant men offer a slightly different texture (Figure 2). The three immigrant groups the most likely, on average, to work in a super-concentration are Salvadoran, Vietnamese and Guatemalan men. Vietnamese men, for example, work intensively in computer and electrical machinery production, both of which tend to be spatially agglomerated activities. In contrast, the three immigrant groups the most likely to work in a niche (the combination of the upper two stacked bars) are Salvadoran, Mexican and Korean. About 70 per cent of male workers in each of these three groups are niched but in different geographical patterns; the majority of niche jobs for Mexican and Korean men are dispersed (services and retailing) but most Salvadoran men niche in spatial agglomerations (super-concentrations) associated with manufacturing. The simulations suggest that 35 per cent of Vietnamese men work in super-concentrations with the rest evenly split among the remaining three categories of work. Filipinos are the least likely to work in a super concentration and the most likely to work outside niches and spatial agglomerations. Forty per cent of the time, Mexican and South Korean men are likely to be found working in what we are calling 'dispersed niches'. This pattern is distinctive for these groups and is replicated by their female counterparts. The concentration patterns for Mexican men and women are the most similar, followed by Salvadorans. Immigrant workers from Vietnam and China exhibit the most dissimilar employment patterns between men and women.

Moving on from these general observations, we next isolate two principal variables for deeper analysis to illustrate the effects each has on employment concentration. Specifically, we engage in another set of simulations to calculate the probabilities of concentration by varying two conditions: employment in manufacturing and

residence in an ethnic neighbourhood. We begin with the effect of manufacturing employment. Previous research on the gendering of immigrant niches informs us that Mexican women are disproportionately represented in manufacturing but that women from El Salvador are not. Does manufacturing employment differentially affect the geographies of employment concentration for these two groups? About half of Mexican women work in niches, the majority dispersed (Figure 3a). Absent manufacturing, however, patterns change significantly, with the proportion in non-niched employment rising to 71 per cent and almost half of all Mexican women employed in unconcentrated environments. Although niche probabilities fall without manufacturing, the distribution of those niche jobs between dispersed and super-concentrated work places is quite stable. Simulations for women workers from El Salvador remain virtually unchanged by the effect of manufacturing (not shown). Removing manufacturing from the models for Mexican and Salvadoran men produces roughly the same result (also not shown)—a shift in employment concentrations for Mexicans and hardly any alteration in the patterns for Salvadoran men.

Because of zoning and other processes, we expect manufacturing to be more spatially concentrated than other kinds of work, so this may facilitate greater probabilities of super-concentration among those groups that disproportionately niche in this sector. Figure 3b documents the shifts in employment probabilities across niche typology when manufacturing is set to zero for Vietnamese men. The chances that Vietnamese men work in any of the four types of employment categories are roughly the same, *ceteris paribus*. Removing manufacturing reduces the chances of working in any sort of niche from 56 to 21 per cent through a slight increase in the
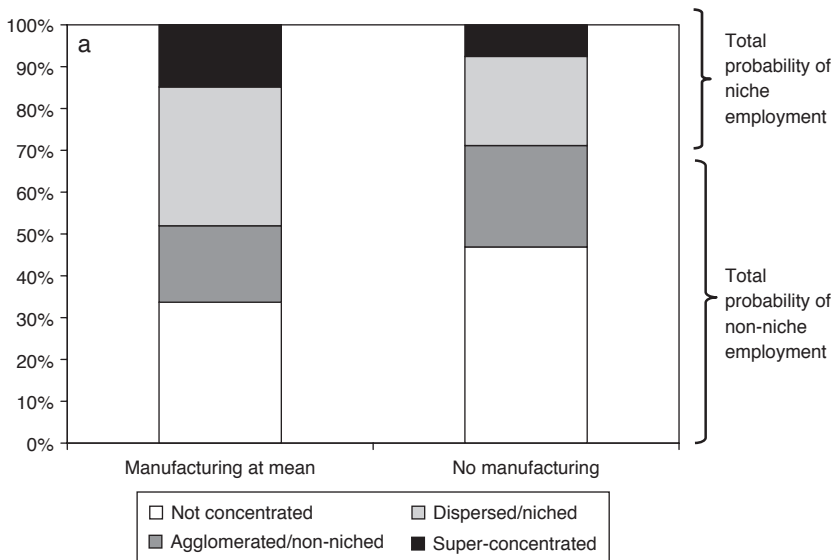

Figure 3a. Predicted probabilities of employment for Mexican women
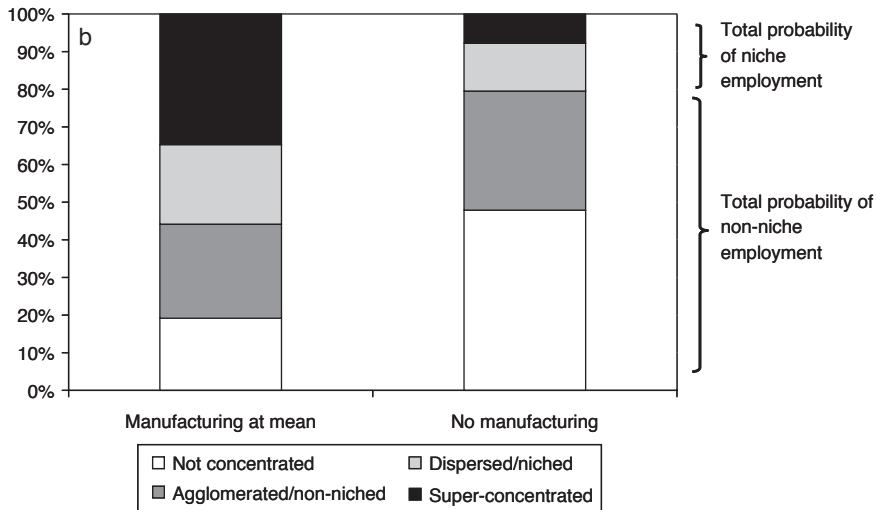
Figure 3b. Predicted probabilities of employment for Vietnamese men

proportion in un-niched agglomerations and a steep decline in the proportion in super-concentrations (from 35 to 8 per cent). Absent manufacturing, the proportion of Vietnamese men working in unconcentrated employment settings rises from just under 20 per cent to 48 per cent.

Patterns of residential congregation positively affect employment concentrations for most immigrant groups when that concentration has a spatial dimension. The final set of simulations feature this effect by holding most variables constant but altering levels of residential concentration. To illustrate, consider the case of Chinese women workers (Figure 4a), which typifies the findings for most, but not all, immigrant groups studied. When statistically significant variables are set to their mean values (the right-hand column) Chinese women are the most likely to work in super-concentrations and the least likely to work in dispersed niches. Residence outside an ethnic neighbourhood (the left-hand column in which both residential concentration variables are set to 0) increases the probability that a Chinese woman works outside any concentration and in a dispersed niche. Figure 4a also shows that residence outside an ethnic neighbourhood elevates the chances that a Chinese woman would work outside any kind of niche (see also Parks 2004: 623); the total probability of niche employment is 55 per cent with the residential clustering variables at their means and 46 per cent when those same variables are set at zero. Similar trends occur for Chinese men (Figure 4b)—living in a Chinese residential concentration increases the odds of working in both types of spatial cluster. However, the chance that a Chinese man works in a niche job is unrelated to whether or not he lives in an ethnic neighbourhood ($\sim$38 per cent). In this case, Chinese residential geography dictates the extent to which one labours in a tract with other co-nationals but not whether the jobs there are in niche sectors.
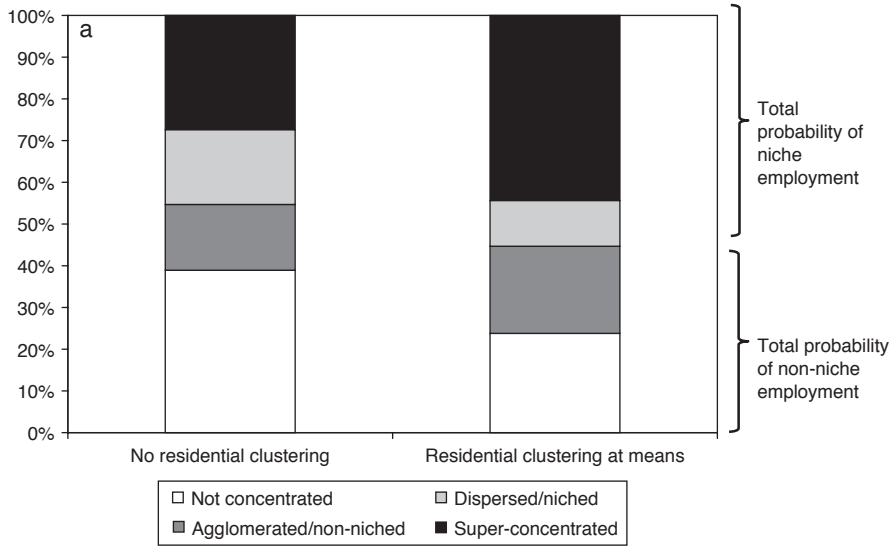
Figure 4a. Predicted employment patterns for Chinese women with two different patterns of residential clustering

Figure 4c shows what happens when we repeat this exercise for women born in Guatemala. The employment profile of these women is unusual; at mean levels of residential clustering, half work in un-niched agglomerations. Shifts in residential concentration have no effect on the chances of employment in a super-concentration. The probability of employment in an un-niched agglomeration declines substantially when we set residential concentration to zero. While lowered residential concentration goes hand-in-hand with lowered chances of employment in a work-tract
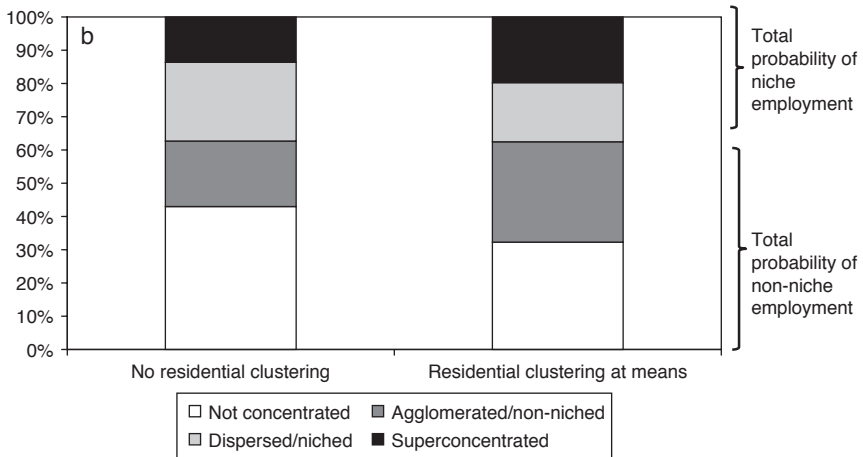

Figure 4b. Predicted employment patterns for Chinese men with two different patterns of residential clustering
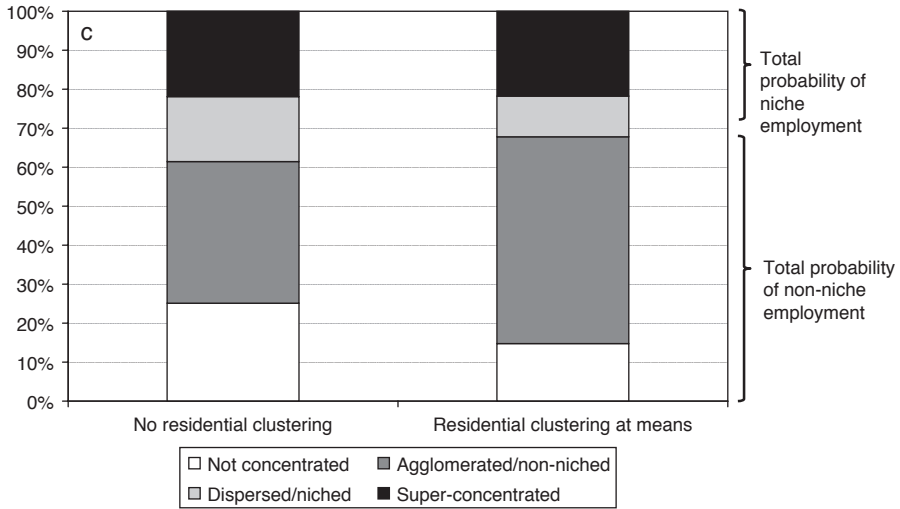
Figure 4c. Predicted employment patterns for Guatemalan women with two different patterns of residential clustering

concentration, residence outside an ethnic neighbourhood *increases* the chances that Guatemalan women will be employed in an ethnic niche. Deepening residential concentration thus intensifies the spatial division of labour but has the opposite effect on employment concentration. Among Mexican men (Figure 4d), in contrast, residence among co-ethnics has little effect on overall employment niching (the upper pair of bars); the probability of niche employment remains the same no matter the degree of ethnic residential concentration. As with the other examples in this
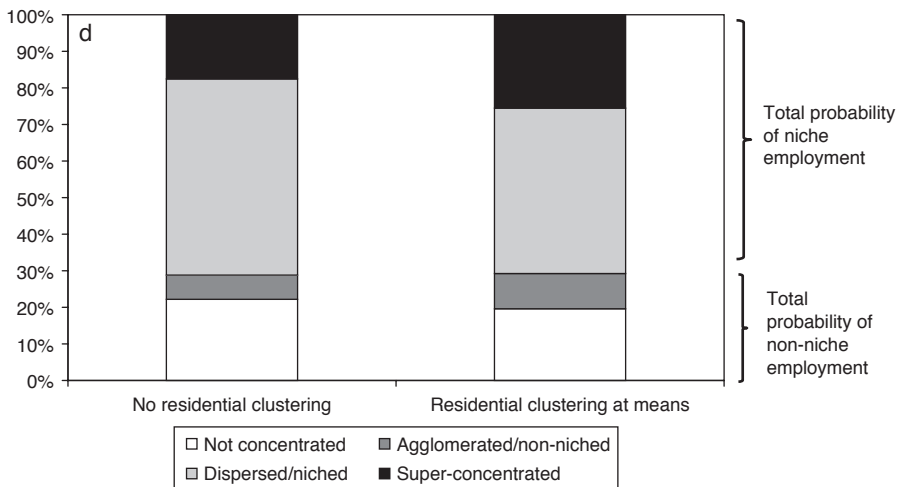

Figure 4d. Predicted employment patterns for Mexican men with two different patterns of residential clustering

exercise, residential concentration is associated more directly with the spatial division of labour; reduced residential concentration lowers the probabilities that immigrants will work in spatial agglomerations (super-concentrations or un-niched agglomerations).

Discussion and Conclusions

The study of immigrant employment niching—the concentration of workers in particular activities—spills into several pools of scholarship: for example, studies of the gender division of labour and the analysis of networked firms in regional employment complexes that some see as driving the world economy (Scott 2001). We infuse two geographies into an analysis of these economic spaces—the neighbourhoods where workers reside and the places where they work, both delimited at the census-tract scale. Our intention was to illustrate connections between the division of labour and local geographies of home and work for immigrants in Los Angeles.

The majority of research on divisions of labour in general, and on immigrant employment niching in particular, pays little heed to the intra-urban geography of employment clustering and its link to home–work spatial relations. The research often implicitly assumes that the immigrant division of labour is invariant within the space of a metropolitan area labour market, unaffected by segregated housing markets and immune to the constraints of commute time and information flows about job opportunities. The results in this paper expose the fragility of this supposition. Many immigrant niche jobs are in work tracts in which co-national labourers agglomerate, and the odds of working in one of these super-concentrations increases with proximity—measured by commute time—to segregated immigrant neighbourhoods. In other words, spatial clusters of workers who labour in employment niches are geographically close to where these workers congregate residentially. Previous research has shown an increased probability of niching for most immigrant groups who live in ethnic neighbourhoods. Our findings replicate this result and show that residential clustering also affects the spatial form that niching takes; it is more super-concentrated and less dispersed for those who live side-by-side with co-nationals. Spatial divisions of labour intersect with the immigrant division of labour and this relation is linked to the residential concentration of ethnic groups in neighbourhoods.

This paper thus represents a next step in coming to terms with linkage between patterns of neighbourhood settlement and the location of workers in types of employment and place of work. The insertion of geography into the equation, so to speak, produces new understandings beyond just assessing the effects of commute time. In fact, we've made a special effort to pan out from a focus on the journey to work (and a spatial-mismatch type of approach) to try to conceive of metropolitan labour and housing markets as constituted by complex and interacting concentrations of residential neighbourhoods and places of work. This viewpoint has the advantage of affording insight into not one but a set of pressing questions facing researchers.

For example, our understanding of immigrant gender divisions of labour becomes more nuanced with the addition of a spatial dimension. Wright and Ellis (2000) found that immigrant women in Los Angeles were less concentrated in immigrant employment niches than immigrant men. The results here reveal an important spatial dimension; immigrant women are not only less concentrated in immigrant niches (with the exception of Korean and Mexican women), they are also less likely than men to work in what we are calling dispersed niches. Our results, in one sense, contrast with those of Parks (2005); she found women to be more highly niched than their male counterparts. Her study, though, used a much higher niching threshold (cf. Wang and Pandit 2007); accordingly, men may be more likely to niche but into jobs with lower levels of concentration. Women may niche in fewer industries but, when they do, they are very highly concentrated into these sectors.

Our choice of niching threshold may partially explain the unexpected finding for Guatemalan women—living in an ethnic neighbourhood reduces the odds of niching. Niching-level choice, however, may have little to do with this interesting result; it may boil down to which residential locations offer Guatemalan women the best access to their niche jobs. In this regard, the work of Parks (2004: 613) using a different niching threshold offers a key insight. She found that Guatemalan women are unlike other immigrant women in that those who live outside residential enclaves have *better* access to niche jobs than those residing inside. Twenty per cent of Guatemalan women niche in domestic services (as cleaners and child-care providers). Given this division of labour and the fact that domestic service work takes place in many neighbourhoods which are far-removed from Guatemalan residential clusters, it is not surprising that Guatemalan women who live outside their ethnic neighbourhoods have better job access. But whatever the particular explanation, this example throws into relief our central research question: To what extent do the degrees of residential congregation, employment concentration at work, and employment concentration by line of work move in step? For some immigrant groups in Los Angeles, these forms of clustering are positively correlated; thus the geographies of home and work actively shape actual employment outcomes. In the case that they are not positively correlated (e.g. Guatemalan women), we may tentatively conclude that social networks, regardless of their spatiality, trump geographical access and proximity in getting jobs (cf. Zelinsky and Lee 1998).

For several decades, Southern California has developed a large and diverse manufacturing base. This sector now accounts for a significant portion of the economy as a whole and has become the workplace for newcomers and their descendents. In particular, the number and proportion of Latinos working in manufacturing has mushroomed since 1970 (Scott 1996). So while simple job counts tell one story, this research shows that other narratives play out at the subme-tropolitan scale in complex and interwoven configurations. It does so by joining a long-running conversation about urban morphology. The varied residential and employment clusters of workers in urban areas represent the social fabric of a place: how they come to occupy the employment and locational arrangements they

do—and how these arrangements change—drives at some fundamental questions about how urban networks operate and about dependencies between the socio-spatial structure of cities and capitalist labour markets. Uncovering the relations between the geographies of immigrant residence and work in Los Angeles exposes some of these dependencies but also raises questions about how these geographies change as, on the one hand, immigrant communities integrate with established US populations over generations and, on the other hand, industries restructure and labour markets transform. Embedding investigations of immigrant integration in their evolving and interlinked geographies of residence and work is a vital project for the future.

Finally, our emphasis on geography should not be taken as a suggestion that spatial relations should supersede networks in explanations of how local labour markets segment along gender, national origin and ethnic lines. Networks matter and it would be unwise to argue otherwise. A large body of scholarship demonstrates how information on employment opportunities channels through networks delimited by social categories. The problem, at least from our perspective, is that purely network-oriented explanations of immigrant employment implicitly treat the space of metropolitan areas as flat, displacing consideration of intra-metropolitan geographies in the formation and maintenance of the immigrant division of labour. Yet it seems obvious that the necessities of social reproduction place limits on the daily time–space geographies of immigrant workers, just as they do for residents. Our contribution has been to sketch how these limits affect the location and type of work immigrants do in Los Angeles, and to show that this effect depends on national origin, gender and residential neighbourhood.

Acknowledgements

Note

[1]   As Wang and Pandit (2007) note, the literature offers little consensus on the best way to measure immigrant niching, and the quotient approach has a long history in regional

economic analysis. Such quotients range in value from zero to infinity and have the advantage of ease of interpretation over other measures. In their evaluation of the strengths and weaknesses of three measures of employment concentration, Wang and Pandit (2007: 1232) also point out that, when the share of a particular group in an employment sector is less than 50 per cent (as is the case with the data we use in this analysis), the difference between the indices studied is 'negligible'.

References

Borjas, G. (1999) *Heaven's Door: Immigration policy and the American Economy*. Princeton NJ: Princeton University Press.

Ellis, M. and Wright, R. (1999) 'The industrial division of labor among immigrants and internal migrants to the Los Angeles economy', *International Migration Review*, 33(1): 26–54.

Ellis, M., Wright, R. and Parks, V. (2004) 'Work together, live apart? Geographies of racial and ethnic segregation at home and work', *Annals of the Association of American Geographers*, 94(3): 620–37.

Ellis, M., Wright, R. and Parks, V. (2007) 'Geography and the immigrant division of labour', *Economic Geography*, 83(3): 255–82.

England, K.V.L. (1993) 'Suburban pink-collar ghettos: the spatial entrapment of women', *Annals of the Association of American Geographers*, 83(2): 225–42.

Glasmeier, A.K. and Farrigan, T.L. (2007) 'Landscapes of inequality: spatial segregation, economic isolation, and contingent residential locations', *Economic Geography*, 83(3): 221–30.

Fong, E. and Shibuya, K. (2000) 'The spatial separation of the poor in Canadian cities', *Demography*, 37(4): 449–59.

Forstall, R.L. and Greene, R.P. (1997) 'Defining job concentrations: the Los Angeles case', *Urban Geography*, 18(8): 705–39.

Fröbel, F., Heinrichs, J. and Kreye, O. (1980) *The New International Division of Labour*. Cambridge: Cambridge University Press.

Hanson, S. and Pratt, G. (1995) *Gender, Work, and Space*. London and New York: Routledge.

Hudson, M. (2002) 'Modelling the probability of niche employment: exploring workforce segmentation in metropolitan Atlanta', *Urban Geography*, 23(6): 528–59.

Hymer, S.H. (1972) 'The multinational corporation and the law of uneven development', in Bhagwati, J.N. (ed.) *Economics and World Order*. London: Macmillan, 113–40.

Kain, J. (1968) 'Housing segregation, negro employment, and metropolitan decentralization', *Quarterly Journal of Economics*, 82(2): 175–97.

Katznelson, I. (1981) *City Trenches: Urban Politics and the Patterning of Class in the United States*. Chicago: University of Chicago Press.

Kochhar, R. (2005) *Survey of Mexican Migrants: The Economic Transition to America*. Washington DC: Pew Hispanic Center, Report Part 3.

Leslie, T.F. and O hUallachain, B. (2006) 'Polycentric Phoenix', *Economic Geography*, 82(2): 167–92.

Ley, D. (2007) 'Countervailing immigration and domestic migration in gateway cities: Australian and Canadian variations on an American theme', *Economic Geography*, 83(3): 231–54.

Li, W. (1998) 'Los Angeles's Chinese ethnoburb: from ethnic service sector to global economy outpost', *Urban Geography*, 19(6): 502–17.

Light, I., Bernard, R. and Kim, R. (1999) 'The immigrant economy in the garment industry of Los Angeles', *International Migration Review*, 33(1): 5–25.

Lichter, D.T. and Johnson, K.M. (2006) 'Emerging rural settlement patterns and the geographic redistribution of America's new immigrants', *Rural Sociology*, 71(1): 109–31.

Logan, J.R., Alba, R.D. and Zhang, W.Q. (2002) 'Immigrant enclaves and ethnic communities in New York and Los Angeles', *American Sociological Review*, 67(2): 299–322.

Massey, Doreen (1984) *Spatial Divisions of Labour: Social Structures and the Geography of Production*. New York: Methuen.

Massey, Douglas S. and Denton, N. (1993) *American Apartheid*. Cambridge: Harvard University Press.

Massey, Douglas S. and Eggers, M.L. (1990) 'The ecology of inequality; minorities and the concentration of poverty, 1970–1980', *American Journal of Sociology*, 95(5): 1153–88.

Menjívar, C. (2006) 'Global processes and local lives: Guatemalan women's work and gender relations at home and abroad', *International Labour and Working-Class History*, 70(1): 86–105.

Parks, V.A. (2004) 'The gendered connection between ethnic residential and labour market segregation in Los Angeles', *Urban Geography*, 25(7): 589–630.

Parks, V.A. (2005) *The Geography of Immigrant Labour Markets: Space, Networks, and Gender*. New York: LFB Scholarly Press.

Peck, J. (1996) *Work-Place: The Social Regulation of Labour Markets*. New York: Guilford Press.

Piore, M.J. and Sabel, C.F. (1986) *The Second Industrial Divide: Possibilities for Prosperity*. New York: Basic Books.

Preston, V., McLafferty, S. and Liu, X.F. (1998) 'Geographical barriers to employment for American-born and immigrant workers', *Urban Studies*, 35(3): 529–45.

Rangaswamy, P. (2007) 'South Asians in Dunkin' Donuts: niche development in the franchise industry', *Journal of Ethnic and Migration Studies*, 33(4): 671–86.

Schrover, M., van der Leun, J. and Quispel, C. (2007) 'Niches, labour market segregation, ethnicity and gender', *Journal of Ethnic and Migration Studies*, 33(4): 529–40.

Scott, A.J. (1988) *Metropolis: From the Division of Labour to Urban Form*. Berkeley and Los Angeles: University of California Press.

Scott, A.J. (1996) 'The manufacturing economy: ethnic and gender divisions of labour', in Waldinger, R. and Bozorgmehr, M. (eds) *Ethnic Los Angeles*. New York: Russell Sage, 215–44.

Scott, A.J. (2001) *Global City-Regions: Trends, Theory, Policy*. Oxford: Oxford University Press.

Scott, A.J. (2006) 'Creative cities: conceptual issues and policy questions', *Journal of Urban Affairs*, 28(1): 1–17.

Schnore, L.F. (1954) 'The separation of home and work: a problem for human ecology', *Social Forces*, 32(4): 336–43.

Shearmur, R., Coffey, W., Dube, C. and Barbonne, M. (2007) 'Intrametropolitan employment structure: polycentricity, scatteration, dispersal and chaos in Toronto, Montreal and Vancouver, 1996–2001', *Urban Studies*, 44(9): 1713–38.

Simon, R. and DeLey, M. (1984) 'The work experience of undocumented Mexican women migrants in Los Angeles', *International Migration Review*, 18(4): 1212–29.

Spain, D. (2002) 'What happened to gender relations on the way from Chicago to Los Angeles?', *City and Community*, 1(2): 155–76.

Squires, G.D. and Kurbin, C.E. (2006) *Privileged Places: Race, Residence, and the Structure of Opportunity*. Boulder, Co: Lynne Rienner.

Waldinger, R. (1996) *Still The Promised City? African Americans and New Immigrants in Postindustrial New York*. Cambridge, MA: Harvard University Press.

Wang, Q. (2006) 'Linking home to work: ethnic labour market concentration in the San Francisco CMSA', *Urban Geography*, 27(1): 72–92.

Wang, Q. and Pandit, K. (2007) 'Measuring ethnic labour-market concentration and segmentation', *Journal of Ethnic and Migration Studies*, 33(8): 1227–52.

Wilson, F.D. (2003) 'Ethnic niching and metropolitan labour markets', *Social Science Research*, 32(3): 429–66.

Wright, R. and Ellis, M. (1997) 'Nativity, ethnicity and the evolution of the intra-urban division of labour in metropolitan Los Angeles, 1970–1990', *Urban Geography*, 18(3): 243–63.

Wright, R. and Ellis, M. (2000) 'The ethnic and gender division of labour compared among immigrants to Los Angeles', *International Journal of Urban and Regional Research*, 24(3): 583–601.

Wright, R., Ellis, M. and Reibel, M. (1997) 'The linkage between immigration and internal migration in large metropolitan areas in the United States', *Economic Geography*, 73(2): 232–52.

Wyly, E.K. (1999) 'Local labour markets and occupational sex segregation in an American metropolis', *Journal of Urban Affairs*, 21(1): 1–33.

Yancey, W.L., Ericksen, E. and Juliani, R. (1976) 'Emergent ethnicity; a review and a reformulation', *American Sociological Review*, 41(3): 391–403.

Zecker, R. (2004) 'Where everyone goes to meet everyone else: the translocal creation of a Slovak immigrant community', *Journal of Social History*, 38(2): 423–53.

Zelinsky, W. and Lee, B. (1998) 'Heterolocalism: an alternative model of the sociospatial behavior of immigrant ethnic communities', *International Journal of Population Geography*, 4(4): 281–98.