Does the extended family cause migration?
Internal migration among West-German youth.[1]

Sergi Vidal[2] (sergi.vidal@upf.edu) or (svidal@empas.uni-bremen.de)
Universitat Pompeu Fabra & Universität Bremen

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Abstract

This article aims to contribute to the understanding of the conditions under which the social capital from the extended family impacts on the first decision of internal migration. Focusing on the geographical proximity, we analyse the impact of the extended family as a location specific attribute, which may mediate on the decision to move as resources non transferable between locations or with normative obligations. Following residence histories since age 16, from a sample of West-Germans using the German socio-Economic Panel, we apply hazard regressions. As expected, ties' location plays an important role of attraction and retention. Using other network measures such as size of the network and type of relative; we contrast competing mechanisms to relax the role of transferable resources and values exerted by the extended family. However, the results of ties' proximity kept unchanged. Measures on regional and family level heterogeneity are controlled for, as well as other covariated that proxy selection towards mobility and lower attachment to family. However, family proximity still seem to play an important role. Differences are to be found, however, by personal attributes and characteristics.

Keywords: Internal Migration, Family Structure, Ties to Relatives, Event-History Analysis, West-Germany

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1. Introduction

Long distance moves are defined for purposes of this research as a move between locations, covering a distance of at least 50 km. Such migration results in the disruption of the "life space" (Courgeau, 1988; Bonvalet and Lelièvre, 1995) or the socio-spatial context of regular daily activity (work, leisure, etc.), including regular interaction with social ties. We consider in this research that more than an hour travel-time by car to visit social ties hinders the regular interaction. Long distance moves also hinder use of and benefit from "between locations" non-transferable family resources such as property and social networks. The purpose of this article is to examine the relationship between geographic placement of the extended family and long distance moves among West German youth.

During young adulthood the family plays an important role in forging pathways toward adulthood (Baizan, 2002), and in the residential trajectory. Youth may rely on family resources since those derived from the market are still insufficient to launch into an independent life with one's own family (partner and children). The extended family (all relatives except the partner and children) and the family context (i.e. relatives living outside the household) may therefore exert different influences according to the resources they hold. The effect may however also be due to the value placed on family solidarity (Rossi and Rossi, 1990) or community attachment (Sampsons, 1989; Stinner et al, 1992), and the normative constrains that the family imposes on individual residential decision-making (Harbison, 1981; Billari & Liefbroer, 2007).

Generally speaking, the influential micro economic literature on internal migration as the result of a cost-benefit calculus assumes that relational ties are part of the set of regional assets which work, to constrain migration based on geographic proximity (Da Vanzo, 1981; Greenwood, 1997; Fischer and Mallberg, 2001). This negative effect should grow over-time (i.e. residence stability) because the relative value of assets in alternate regions is likely to depreciate (Da Vanzo, 1981). This article is the first to treat geographic proximity of the family network as a dynamic process. The hypothesis, discussed later in more detail, is that sharing ties within a "life space" is a determinant of the probability of leaving the "life space". However, this effect is mitigated by the family's "transferable resources" and selection effects which are also embedded in other network characteristics (i.e. network size, network influence or network intimacy)."Transfearable resources" refer mainly to financial support as

well as other resources that one can benefit disregarding the place of residence. The selection effects refer to unobservable or difficult to measure characteristics that individuals with similar family and community structure hold and make them more likely to migrate. This characteristics are migration preferences, importance assigned to family and the 'knowledge of migration'.

The hypotheses are explored using the German Socio-Economic Panel, a large panel dataset representative of the German population over time (see GSOEP, 2006). The sample is limited to West-Germans, and consists of more than 2,200 individuals and nearly 200 first-order long distance relocation events for an observation window of 15 years, between 1992 and 2006. The data are transformed into discrete time units, resulting in 18,000 person-year observations for running hazard regressions. Residence duration is analyzed starting at age 16. It has been demonstrated that until age 16 the individual residential trajectory depends on that of the parents, due to cohabitation (e.g. Goldsheider, 1996). The dynamic assessment of residential change allows for the assessment of parallel trajectories of employment, education and family domains, which are main catalysts for migration (Wagner, 1989; Mulder, 1993). More importantly, the study of the residential trajectory aims to avoid endogeneity inherent in the effect of relational ties on residential outcomes. In other words, previous network configurations and location may not be independent from current configurations. Hazard regressions allows for an analysis of dynamic features of migration correcting for such endogeneity.

Results indicate that, controlling for family size, the higher the proportion of family living within a one hour of travel-radius (i.e. here considered within the "life space") the lower the probability of migration. The effects of proximity of ties as an indicator of higher investment in social assets embedded in the location can explain the latter association; however, it may be mediated by the transferable resources of ties. As transferable resources are generally provided by close relationships we controlled for the proportion of co-residential ties, as well as parental and sibling proximity, parental home residence, parental relationship stability, parental education, and sibling structure. Though most of these variables have significant effect on migration outcomes; they do not eliminate the significance of network proximity in predicting negatively migration.

Controlling for selection effects such as parental residential stability or importance of the family, the coefficients remain unchanged. Analysis of higher order variances, which tackle unobserved heterogeneity at contextual levels, indicates that regions differ in family structure and the probabilities of regional out-migration. Similar results were obtained when including within family variance for all observations. In fact, results reveal that the family structure affects the likelihood of migration, possibly indicating that changes in family structures will provoke changes in migration patterns. In the subsequent sections of the paper I will discuss the aforementioned findings in detail.

2. Hypotheses

Empirical studies have examined the influence of family ties other than couple and children (heretofore the "extended family") on migration behavior. Empirical literature on the analyses of family networks has focused primarily on structural characteristics: network size, residence/ concentration and the types of relationship (e.g. Palloni et al, 2001; Massey et al, 2003; Lindstrom et al, 2001). However, these articles have dealt primarily with international rather than internal migration, though the mechanisms behind them are very similar. Generally speaking, relational ties function to either support or constrain migration or serve as a motivation for migration,. Hugo (1981) gives a complete overview of how ties to relatives mediate migration behavior, discussing three different mechanisms: instrumental, normative and affective. Together they explain different aspects of family interaction such as economic transactions, commitment and conflict. However, some of this different effects have been rarely disentangled as they are likely to collude in similar family structures. In other words, highly cohesive families are more likely to give more economic support, but also to exert higher commitment to their members.

The following section will discuss the possible effects of extended family structure in easing or constraining migration. Following the "micro-investment" theory within social capital literature (Coleman, 1990; Lin, 1999), family resources affect migration behavior according to resource characteristics. When resource utilization requires physical proximity the resource is referred to as *location-specific*, while when resource utilization is not contingent upon physical proximity the need is referred to as *transferable*. The latter are family resources which are embedded in the location of residence. Individuals mainly benefit from these embedded resources residing in the location where ties live.

Ties possess properties that might be used or lent. Their usage requires non-mobility, a possible future acquisition by inheritance or donation may either encourage or force individuals to remain in the place where the assets are established[3]. Furthermore, family ties can also connect individuals to services which they may otherwise have to access on the market, such as childcare or other favors which require a physical presence (e.g. assistance with household maintenance). As a networking unit, family networks connect individuals to other community members which may lead to employment or other opportunities. Moreover, ties exert commitment and affiliation. In general a stronger emotional connection with relatives will demand closer geographical proximity (Georgas et al, 2003). Accessing these resources is contingent upon proximity - the greater the distance from one's relational network the less able one is to maintain such relationships and to benefit from the resources based there from on a regular basis.

Transferable resources from relatives are those for which geographic location does not constrain usage. Here, we are generally referring to financial support. The main difference among the two types of resources is that the location-specific resources attach or attract individuals, analogous to push-pull factors. Nevertheless, transferable resources do not necessarily have a socio-spatial effect, or do not necessarily attract or repel from a region where ties reside. For example, financial resources transferred by the family may be used to settle down in the same location of residence or represent a possibility to relocate[4]. Therefore, transferable resources may also condition the residential outcomes although the direction of the relationship remains unclear.

According to the distinction between *location-specific* and *transferable* resources, we should be able to distinguish different pull factors stemming from the geographic proximity of relational ties, as we did with other dimensions of extended family structure. Family here is assumed to include only the extended family, which contains all relatives except the partner and children. The latter is normally considered to be part of the unit of residential decision-making, as they live under the same roof and therefore generally constitute a "household" (Mincer, 1978; Bielby and Bielby, 1992; Juergues, 2006). The extended family may also reside within the household…Thus, the resource effect of the extended family may be

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[3] However, in case of adquisition there is also the possibility that the asset becomes a 'transfearable resource' because it can be sold.
[4] Despite, Bonvalet et al (1999, 2007) found in France that transferable resources are also a parental strategy to keep shorter distances with children, by easing the purchase of a house nearby

embedded in different of their dimensions: (1) the geographical proximity, (2) the size of the network and (3) the type of ties (or closeness of the relation).

The geographical proximity of ties is measured as the share of relatives whose location of residence facilitates regular interaction within the same space. The idea of geographical proximity is analogous to the concept of "life space", which encompasses all spaces of daily interaction. This proximity eases the use of location-specific resources. If a higher proportion of relatives live close by, they would exert a negative effect on migration, as fewer location-specific assets would be available elsewhere. A higher share of networks in the location of residence may produce *inertia* (Clark and Huff, 1977) or a higher opportunity cost represented by abandoning family ties and their resources. In principle, a greater disbursement of family should decrease the attractiveness of alternate regions where family is located. To sum up,

H_0: *The higher the proportion of family within close geographical proximity the lower the migration probabilities. The lower the geographical proximity of the family, the higher the migration probabilities, due to a higher concentration of location-specific assets.*

Research has demonstrated that larger families are more likely to be geographically dispersed (De Jong, 1990; De Miguel, 2008). Therefore network size is a necessary control because, larger networks may provide access to more family members from which to obtain resources. However, some research suggests that relationship characteristics may serve to determine the ease of access to and transmission of resources. The closeness of the relationship, however, should be important to explain the difference between some stable structures of kin support, meaning of regular support such as parent-children, from other less stable (Georgas et al, 2003). In that sense the size of the family may only impact its geographic dispersion, but not necessarily migration outcomes as a result of resource provision[5].

Another effect of family network size which may collude with geographical concentration are family values. A larger extended family is likely to be associated with traditional values, as a result of a traditional demographic behavior among high fertility groups (Goldsheider and Goldsheider, 1988). Values such as 'family solidarity' may be transmitted through

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[5] This may hold true since it may depend on conditioning values of the ties proximity-dispersion (for location-specific resources) and of the closeness of the relationship (for transferable resources).

socialization processes, and may increase the cost associated with breaking up daily family interaction (Rossi and Rossi, 1990). If it is assumed that these traditional values are higher among larger extended families, then the effect of family network size should have a negative impact on the probability of young adult migration. This holds true as long as young adults start a residential trajectory in the parental home. In families valuing solidarity, parents will pressure or encourage children to stay close, and children will associate more importance with geographic proximity to family.

Differences may also exist among those families in which siblings or multiple generations are co-residing. In fact, it is likely that the higher the share of extended family within the household, the higher the traditional values of the family and the lower the opportunities elsewhere. Conversely, a higher shares of co-resident relatives may also hinder the intimacy of individuals and/or the lower the share of within-household location-specific resources such that increased co-residence may lead to higher out-mobility probabilities (Uhlenberg and Cooney, 1990). However, the latter may not necessarily cancel out the former, in that intimacy issues need not be resolved by a long distance relocation, as the aim would be a simple household re-adjustment.

According to previous research, the type of support of close ties is contingent upon the relationship. Studies of material resource transmission in Western countries demonstrate that resource transmission tends to take place between close family members and in response to intergenerational solidarity (Attias-Donfut et al., 2005), due to either emotional ties or normative pressures[6]. While financial and material resources tend to be intragenerational, like parents to children (Deggene et al, 2004), siblings may supply higher friendships networks (Bonvalet, 2007).

Differences may also be found regarding parents' social background, which is an important factor in launching children into independence (Baizan, 2002, Goldsheider and Da Vanzo, 1989) and can help to fund migration. Such material support is important at young ages due to the scarcity of personal income. Additionally, wealthier or more educated parents also exert less normative expectations of proximity (Rainer and Siedler, 2008), partly due to the parental

[6] Generally speaking, it is more likely that parents pay for the education of children, which is the most important trigger for the first independent migration at a very young age. Probably grandparents cannot do it because they have to share the money to the whole set of grandchildren, but also because channels of intra-family support are mainly set between the most directly tied relatives: parents and siblings (Uhlenberg and Cooney, 1990).

human capital associated with migration investment and transmission of "migration knowledge" (Palloni et al, 2001). The literature also finds greater opportunities for young adults in intact families or living with long-term co-residing parents, since both are correlated with increased parental resources (McLanahan and Sandefur, 1994; Musick and Bumpass, 1999).

Number of siblings may condition parental resources. A higher number of siblings within the household may correspond to limited resources shared among multiple children and may be associated with families with lower socio-economic status. Previous studies have found that families are also strategic in that they tend to invest financially in one member (Stark, 1991) - or from the individualistic perspective, one member of the household takes advantage of the family resources first. The latter tends to be the eldest sibling, who is faced first with the opportunity to migrate. Konrad et al (2002) found that in Germany and Holmlund et al.(2007) in Sweden, that the number of siblings and birth order are important predictors of migration. They find higher migration rates among older siblings and those in smaller families. A plausible explanation for the latter is that they are a proxy for quality of community life. A large number of siblings is associated with both a higher frequency of social contacts, and a higher valuing of family (Uhlenberg and Cooney, 1990).

Unlike previous research, Rainer and Siedler (2008) find no evidence for the effect of birth order in Germany, but surprisingly, the study finds that having no siblings increases the probability of staying close to the parents. They propose that the sibship size has a hump-shape effect on the probability of migration. They argue that only children feel pressured to take care of parents. According to the same authors, female sibs are also more likely to remain close by the parental home when there are brothers, even if female sibs are older. They argue that because of gender bias, female siblings have to face parental care activities, and therefore may feel pressured remain closer to home. Other close relatives living nearby could relax the normative expectation that children remain close to parents to provide care or run a family business. However, this effect is not expected to be as important as number of siblings or birth order, as higher obligations of support take place between parents and children (Rossi and Rossi, 1990).

3. Conditioning effects and control variables

3.1. Community influences

Research on community and spatial factors prove that economic differences among locations may create patterns of migration from poorer towards wealthier areas, where employment opportunities are more readily available or individuals can expect higher wages (Greenwood, 1985; Flecher et al, 1997; Borjas, 1999). Conversely, family in the location of residence decreases the importance of interregional economic differences, since family may provide access to economic resources and contacts, generally embedded in the location of residence.

However, extended family structure, concentration and placement are a function of family values, which are likely to represent community activities and norms. (Goldsheider and Goldsheider, 1988; Georgas, 2003). Sampsons (1988) finds that contextual indicators such as population density, unemployment levels, crime rate or social activities have an impact on the probability of migration, controlling for residential stability (for similar results see Fernandez and Dillman, 1979; or Richmond, 2003). Sampsons (op cit) also finds that local friendship ties and extended family structure varies across communities. It can therefore be expected that contextual level factors are mediating the effect of proximity of ties on migration behavior. However, as the context exerts socio-economic and normative effects, the contextual effect might be uncertain. On the one hand, traditional family values and commitment are likely to be concentrated in rural communities or less densely populated areas which make individuals to be more reluctant of leaving their family away (Stinner *et al*, 1992). On the other hand, these areas also hold less economic opportunities for education, employment, high wage occupations and urban life-styles, which may make pull young adults from the context young adults (Hugo, 1981).

3.2. Life Course and the Transition to Adulthood

According to life course theory, young adulthood is the most likely stage to encompass a migration, because long distance moves allow for the pursuit and attainment of various other transitions necessary to reach full adulthood – and so migration is most likely to be found during this stage of development [7] (Willekens, 1991; Billari et al., 2001). Current dynamics in

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[7] Actually, once the individual has done most of the transitions to adulthood, his or her probability to migrate decrease sharply. This is argued by the life-course literature as there are no important triggers left to migration, except at older ages, also known as retirement migration (Puga, 2004) but never reaching high intensities as in

Western countries show that migration at the early adulthood is largely explained by the pursuit of higher education, job seeking, and to a lesser extent by early family formation (Mulder, 1993; Baizan, 2002; Willekens, 1991; 2004). This literature regards the family network as support for the main transition that the individual seeks when migrating. As stated before, the probability of migration at young ages should be highly influenced by the parental resources, since a full integration into the labor market is unlikely, and young people may not possess enough personal resources to finance such life-projects. A family may then support the child's development through financial transfers aimed at helping the young couple to establish a new household or finance a child's education while outside the parental home.

Literature on transition to adulthood also examines the role of location-specific assets, focusing mainly on measures of proximity and distance between family members (e.g. Mulder and Kaljmin, 2006; Mulder, 2007; Michielin and Mulder, 2008). For instance, when entering into a marriage or having children, the ties to relatives in a particular region will be an important factor in where to establish a new household. Relatives may support by helping with the childcare, housework, etc. It is probable in some cases that simultaneous events of migration and transition to marriage are related to couple's different residence of origin (Mulder, 2007). In some other cases migration relates to the anticipation of needs associated with childbirth or work-career changes of one of the partners[8] (Mulder, 1993).

3.3. Selective & Feed-back Processes

In his analysis of economic factors driving migration, Borjas (1989) found that *movers* and *non-movers* are not comparable groups. If migrants demonstrate some characteristics which make them more prone to move when given the opportunity, then the proportion of individuals with a propensity toward migration should decrease overtime in the location of origin. This decreased concentration of would be migrants put some constrains on the feasibility of the estimation of the impact of the dimensions of extended family structure -

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the young adulthood. In fact the distribution function that follows both, the density function and the hazard function, of internal migration is log-logistic (i.e. hump-shaped), which it is not casually related to the distribution function of the transitions to adulthood.

[8] In that sense, long has been argued by the literature of the family bargaining process on why some individuals would migrate when they marry or they are already in marriage and which are the consequences (e.g. Mincer, 1978; Bielby and Bielby, 1992; Jürges, 2006). Generally speaking, women are more likely to be the 'tied-migrant' when forming union or already in it, meaning that husband's occupational career offsets the wife's one in the decision of migration.

mainly location - on the propensity to move. A higher propensity to move can be the result of difficult to measure characteristics such as lower intrinsic value of the family or towards social ties, in general. It may also reflect more fine tuned social abilities or greater adaptability that ease the cost of creating new contacts elsewhere (Belot and Ermisch, 2009).

First, given that there is selection among migrants; the effect of network proximity on migration probabilities would be biased since those individuals with a higher propensity to move are more likely to have more geographically dispersed family ties, for the simple fact that mobility is likely to change the spatial configuration of networks. Second, the selection of migrants is likely to affect dynamic processes that are also difficult to measure, such as growing commitment due to residential stability. The latter may also be associated to current network structure and the probability of residential relocation

In order to tackle dynamic selection effects, the research strategy here is to follow the residential trajectory from age 16, from which point it is possible to observe parallel dynamic processes which affect the association between residential outcomes and family configurations. On the one hand, family residential outcomes and the individual life course transitions are likely to affect the ties' geographical proximity or the need/usage of their location-specific resources, which then affect residential outcomes[9]. On the other hand, geographical mobility before age 16 tends not to be an individual decision as most individuals still live with parents. Age 16 may be an exogenous starting point for migration outcomes, and the proximity of ties, as well as the friendship, may be given and not chosen (Belot and Ermisch, 2009).

While migration before age 16 may be considered 'tied-migration' (according to the terminology of Mincer, 1978), it is likely that previous migration experiences, such as those of parents may make individuals more prone to migrate. First individuals may be more likely to migrate because attitudes towards migration are reported to become more positive once the individual has migrated, as they hold higher "knowledge of migration" (Da Vanzo, 1981; Palloni et al, 2001). Second, individuals may be more likely to migrate because previous geographical mobility has already changed the spatial configuration of ties. As measures of previous parental residential mobility where available, they were used as a proxy for migration experiences prior to age 16.

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[9] For example, to enter into parenthood is related to a lower probability to move further away from parent's location (Mulder, 2007) or at least may explain approximation to the parents of one of the couple.

As previously noted, changes in family commitment may increase with residential stability, and this is likely to be a function of ties' proximity. In order to test the relationship between family commitment and network member proximity, a possible source of selectivity data is available on whether the three people outside the household who the individual trusts most and with whom they prefer to spend time, are relatives or whether they are non-kin .

4. Methodology

Event history techniques allow for the estimation of the duration that an individual is at risk of event occurrence - in this research, migration. Observation of the entire risk period is an optimal strategy to control for endogeneity as commented in the following passage. Estimations are made using discrete time proportional hazards, in which durations are measured as discrete points of time, and the log-hazard follows a logit distribution (a). According to Allison (1982) discrete time proportional hazards is useful when only one observation per year is available with no specific record of the date of the event, as is the case with residential change measures in the data utilized. As the record of the time to the event is so unspecific, the discrete time models relax this unspecificity fixing constant hazards for each interval of time (Steele et al, 2005).

$$(a)\ln h_i(t) = \frac{\ln h_0(t)}{1 - \ln h_0(t)}$$

Hazard models are specified in order to estimate the first long distance residential relocation, as a function of residence duration (i.e. time to relocation) since age 16, network characteristics and other control variables. Results are shown for different model specifications, which include the factors commented before: (1) a baseline hazard of the time to relocation in years since age 16; (2) network dimensions, (3) characteristics of competing hypotheses such as parental background measured as educational attainment, parental relationship stability, life-course status, partnership, employment, education, number of children, whether the individual grew up in a rural area; birth order, and sibling sex-

composition[10]; (4) a multilevel model variance to control for unmeasured characteristics of the region and the family and (5) other variables that captures selection towards migration such as parents' previous migration experiences and importance of the family.

$$(1)\ln h_i(t) = \ln h_0(t)$$

$$(2)\ln h_i(t) = \ln h_0(t) + \sum_j \beta_j x_{ij}(t)$$

$$(3)\ln h_i(t) = \ln h_0(t) + \sum_j \beta_j x_{ij}(t) + \sum_j \beta_j w_{ij} + \sum_j \beta_j w_{ij}(t)$$

$$(4)\ln h_i(t) = \ln h_0(t) + \sum_j \beta_j x_{ij}(t) + \sum_j \beta_j w_{ij} + \sum_j \beta_j w_{ij}(t) + u_k$$

$$(5)\ln h_i(t) = \ln h_0(t) + \sum_j \beta_j x_{ij}(t) + \sum_j \beta_j w_{ij} + \sum_j \beta_j w_{ij}(t) + \sum_j \beta_j z_{ij} + u_k$$

Ln h_0(t) is defined as the discrete time baseline hazard, or the duration of residence (in years since age 16), which also captures age effects. X_{ij}(t) and W_{ij}(t) are vectors of time-varying covariates and W_{ij} and Z_{ij} are vectors of time-invariant covariates. β's are the coefficients. The u_k term is a variance component for all observations from the same contextual unit. As objective information on community and other unmeasured family characteristics was not available, we analyzed the variance of multiple observations clustered in the same family (i.e. siblings) and regions. This strategy is commonly used within multilevel analysis in order to uncover variance due to higher order or contextual level effects [11](see Barber et al, 2000). Variance is assessed separately by region and by family since families are not necessarily situated within the same regions (as shown later, regions are small administrative units: NUTS 3). Variance at the family level may include unobserved characteristics commonly affecting siblings such as dominant family values, attitudes towards migration or transmission of knowledge. Regional variance may account for common unobserved factors affecting the network structure and the probability of migration given socio-economic conditions or dominant values within the community for which data was not available.

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[10] Sex, nationality and educational attainment are also measured. Measures of personal and household income were correlated with employment status, for [use a specific term], and with parental education and parental relationship stability [for…]. Because there were around 30% of income data was missing, we decided to disregard these variables in order to ensure a larger sample size.

[11] Though several observation might be also embedded in the same individuals, it was not necessary to control for a variance component at the individual level as the discrete time residence duration function already identifies observations clustered in the same individual

The lack of data at the regional level is due to confidentiality of individual records of residence. It was not possible to access any economic or socio-cultural information at the regional level beyond those supplied by the GSOEP. Further, in many cases residential information was only partial and therefore disregarded. In order to use the information on distance of the relocation, the analysis was run using the GSOEP-remote system[12], which allows for the online analysis of data and prevents direct observation of individual residential coordinates. Then, it was possible to cluster individuals from the same region. Statistical analyses were done with the software STATA 9.2, compatible with the usage of G-SOEP remote. Model results can be found in tables presented in the *results* section.

5. Data[13]

Fifteen waves of the German Socioeconomic Panel Survey (GSOEP, for more information see SOEP, 2007) are used to test the hypotheses presented above. This survey is especially suitable for the research because it contains yearly data on geo-codes, allowing researchers to generate the distance of residential relocation. The survey also allows researchers to measure residential stability for a representative sample of West-German young adults[14]. Residential information is reported as of 1991 and long distance residential relocation can be measured as of 1992. The last year of observation is 2006, the last wave with information available when the analyses were done. All individuals who did not migrate by this date are censored. The GSOEP also has information on migration out of Germany, using information and proxies from the *attrition study* (Kroh and Spiess, 2008). German out-migration is coded using a dummy variable, however, there were few cases that were unlikely to distort any of the results.

In order to take part of the sample, individuals had to be 16 years of age at the beginning of the observation window or had to reach age 16 at some time during the observation period..

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[12] SOEP-remote system for on-line analysis of GSOEP data is provided by DIW-Berlin. For more information please check the following website (retrieved on the 31st of July of 2008): http://www.diw.de/documents/dokumentenarchiv/17/44069/soepremote2005.pdf

[13] An extended description of the data-set and its preparation for analysis may be found in Vidal (2007).

[14] East-Germany has been excluded from the analyses because measures of residence, regarding the administrative units, were modified and the SOEP team was not able to match the old units with the new ones. (see Spiess and Dunkelberg, 2006). As only the SOEP team has access to the level of disaggregation of the administrative units where the individuals reside, for confidentiality reasons, it was not possible to manually match old to new units, and was not possible to calculate distances of residential relocation. For that reason, records of East Germans moving to West Germany are also not regarded.

However, those reaching age 16 after the year 2000 are disregarded because the time frame of study for such individuals is too short for event occurrence[15]. One would not expect them to migrate until the average age of migration in Germany: between ages 18 to 26 (Hullen, 2001). Therefore, the sample contains individuals from cohorts 1976 to 1984.

Table 1. Descriptive Statistics

Variable	N	Mean / Prop.	Std. Dev.	Min	Max
Event	17904	0,01	0,10	0	1
Log-Size Ties to relatives (time var)	17904	2,11	0,66	0,47	4,71
Co-resident ties (share) (time var)	17904	0,59	0,27	0	0,983
Non-coresident ties (far away - share - tv)	17904	0,19	0,34	0	1
in Parental Home (time var)	17904	0,79	0,40	0	1
Parents close by (time var)	17904	0,07	0,25	0	1
Parents live together (time var)	17904	0,82	0,39	0	1
Mother educ (medium)	17904	0,53	0,50	0	1
Mother educ (high)	17904	0,07	0,25	0	1
Father more educ mother	17904	0,24	0,43	0	1
1 Sib (time var)	17904	0,17	0,37	0	1
2 Sibs (time var)	17904	0,22	0,41	0	1
3+ Sibs (time var)	17904	0,46	0,43	0	1
Sibs far away (time var)	17904	0,03	0,30	0	8
Older sibling	17904	0,48	0,50	0	1
Female with siblings	17904	0,21	0,40	0	1
Grew up rural area	17904	0,21	0,41	0	1
In Employment (time var)	17904	0,56	0,50	0	1
In education (time var)	17904	0,39	0,49	0	1
In union (time var)	17904	0,10	0,30	0	1
Children (time var)	17904	0,05	0,22	0	1
Sex (1=male)	17904	0,50	0,50	0	1
Nationality (1= non German)	17904	0,10	0,30	0	1
Intermediate education (time var)	17904	0,33	0,47	0	1
High education (time var)	17904	0,27	0,44	0	1

Source: GSOEP data.

The residential event is measure as change of residence between counties (i.e. *LandKreise*), which is the lowest geographic level provided by GSOEP. Using a technique from Juergues (2006), the event of interest a move between *LandKreise*. This geographical unit is a good approximation of a "life space" since it encompasses relatively important fluxes of daily work-residence mobility. . However, corrections were made to account for short distance migrations between contiguous small *LandKreise*. Corrections were made by setting a minimum distance of 50km between *LandKreise* in order to account for inter-county

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[15] The available waves do not allow us to follow all individuals until age 30 (see Vidal, 2007 for more information on the sample), when some individuals are still living in the parental home, which is a main deterrent of migration. The problem is more acute for the youngest cohorts in the analysis, who have shorter residence histories.

migration. The final sample contains a total of 187 first-order long distance residential events, for 2260 residential and almost 18.000 person-year units[16].

The GSOEP provides information about the size, location and closeness of ties to relatives, though detailed data is limited. The size of the household is provided yearly, but only four waves include information on non co-resident extended family (1991, 1996, 2001 and 2006). To remedy the problem of missing data imputations are made using the following technique: if the individual enters the sample in a wave with no data on ties, then information from the nearest wave with data is imputed[17]. All censored individuals or individuals who move before reaching a panel wave with family context information are discarded from the analysis. These individuals accounted for less than 2% of the original sample.

Table 1 presents descriptive statistics of the variables used in the analyses where observations are in person-years units. Measurement of the size of the extended family has been transformed to the logarithmic scale. There was no case with any relatives. The geographic location of ties was calculated as the proportion of co-residing relatives and non co-resident relatives living far away. Non co-resident ties living close by were used as a reference category. Relatives here are defined as all members of the extended family. Table 1 also includes other covariates which have used elsewhere in the analyses.

6. West German Dynamics[18]

Kupiszewsky et al. (1998) displays an exhaustive description of West-German migration patterns and found patterns similar to other Western nations, with a somewhat lower rate of

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[16] Almost 8% of the individuals in the sample migrated within the observation window. 412 short distance moves (i.e. 10-50km) were observed. They mainly corresponded to parental home leaving (already regarded and controlled for in the dummy variable: parental home). Almost 50% of the movers also moved a second time, either short or long distances, within the three years following the first move. This suggests that repeated residential relocation takes place in a short interval of time and that a migration events increase the probability of subsequent events, though it may be to return to the home town.

[17] The main drawback of this strategy is the lack of accuracy for the waves with missing data where imputations were done. We were not able to assess moves of relatives living outside the household, though it may be observed in the following waves with information on relatives proximity.

[18] The topic of East-West migration is not tackled, as the data is not available. Studies on internal migration after the fall of the Berlin Wall find important differences in the determinants of the behavior for East and West Germany. In general, East Germans had a higher propensity to move to the West (e.g., Burda, 1993; Hunt, 2006). Some authors claim that the mediation of social ties on migration should be stronger in East Germany (Kley and Mulder, 2008), however, such ties have declined overtime, as East German family networks have weakened too (Nauck, 2001)

internal migration. This pattern has been associated with low economic differences among West-German regions (Jaeger et al., 2007), or with comparatively low social mobility as a consequence of a highly stratified educational system and a rigid school-to-work transition (Breen & Luijkx, 2007; Grunow and Mayer, 2007). In fact, most of the internal migration observed in GSOEP data is short-distance moves to large urban areas, representing additional educational and employment opportunities. However, studies show that even for the highly educated the risk of migration is low. For instance, Busch (2007) finds that university graduates generally do not relocate and if they do, it is usually in the year of graduation. Using GSOEP data, he finds that only 30% of German university graduates move in the 10 years post-graduation[19].

Regarding geographic distances to relatives, Kohli *et al.* (2005) finds that 80% of Germans live within 25km from parents. The study also finds that more than 50% of children maintained contact with parents several times per week, indicating an importance of family life and intergenerational relationships with relation to other countries (see Kohli *et al*, 2005). Shorter distances from relatives could be explained by both low economic differences between regions and by the availability of relatives' location specific resources. For example, Attias-Donfut, et al. (2005) demonstrates that informal support such as elder or childcare is an important predictor of migration in Germany.

Studies find that the amount of intra-family resource transfer is quite high in West-Germany in comparison to other European countries. Approximately 35% of Germans over age 50 regularly provide financial assistance to relatives each year. Of such transfers 80% go to children or grandchildren, particularly those enrolled in school or unemployed (Attias-Donfut et al., 2005b). Since financial resources from family are important predictors of young migration, researchers expect that high intergenerational transfers should decrease the effect of location-specific resources

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[19] A recent institutional change in the educational system of Germany could affect migration in pursuit of educational in Germany. Since 2005, some regions (*Lander*) allowed universities to charge fees to students. This took place mainly in highly populated regions (Busch, 2007) and has created higher demand for seats in the universities of small regions, which do not charge fees. As far as this research is concerned, this feature has little or no relevance for migration since, in 2005, the youngest individuals of the sample were 21 years old; probably most of them had already begun their university education. However, as stated above, it is possible to find many individuals who claim to be members of the household, but already are absent due to attending school in alternative regions, or commuting on some temporal basis.

Kley and Mulder (2008) argue that the economic situation of the source region constitutes the greatest impact on migration behavior. Individuals from regions with poor economic opportunities are at a higher risk for out-migration. Conversely, these regions also retain more individuals who have access to networks of support. Kley and Mulder also note that lack of personal resources can hinder migration when the individual is already outside the parental home, but not when s/he is still there. Therefore leaving the parental home must be an important predictor of migration behavior, since migration is facilitated when both events take place simultaneously (Da Vanzo and Morrison, 1983).

Rusconi (2004) finds that leaving the parents' home and forming an independent household during or after education while not necessarily forming a family, has become more widespread among young Germans[20]. However, union formation is as important a catalyst to migration as pursuit of educational and employment opportunities (Kley and Mulder, 2008). Rusconi (2004) also finds that around 60% of German families live in rented dwellings and only spend an average of 10% of family income on rent. This implies that the housing market does not represent a mobility constraint, with the possible exception of several urban areas mainly in the south where housing is comparatively more expensive. The timing of parental home leaving is slightly different in urban and rural areas, where the former move out with twice the speed (Rusconi, 2004).

Finally, individuals are expected to remain in the parental home while in mandatory education. Most West Germans do not finish mandatory education until age 18 or 19, depending on their educational track. This determines the age of entry into the labor market. The most important tracks are *Abitur*, which is the minimum educational credential in order to have access to a university and *Berufsausbildung*, which leads to vocational training and access to qualified jobs. When pursuing education, individuals can ask for a *Bafog*, which is a credit-education program that allows them to make decisions independently. However, it is possible to discontinue education after age 16, which generally leads to limited opportunities in the labor market and, as a result, lower opportunities for migration. Hence, age 16 can be considered the moment when individuals begin to make decisions related to work and education, and by extension geographic mobility.

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[20] She finds that the patterns of parental home leaving according to timing and reasons have followed the general Western pattern of destandardisation and pluralisation for recent generations (Corijn, 2001; Mayer and Hillmert, 2003).

7. Results

7.1. Network Size and Location

In this section the main results of the hazard models are detailed. The baseline log-hazard in all model-specifications is estimated as a logarithmic transformation of time since age 16 plus the square-transformation. This specification of the baseline log-hazard aims to ensure parsimony in the model, since descriptives show that duration of residence during young adulthood has a bell-shaped curve[21]. The first two columns of Table 2 display models (2), where only baseline log-hazard covariates are considered. These include network size, geographic location and living within the parental home. Geographic location co-vary with relation to the proportion of relatives living in the same household (only in specification -2b- in second column in Table 2), those living close by (reference category) and those living far away. As expected, living in parental home deters migration and therefore constitutes a necessary control. In fact, most migration events take place either once the individual has left parental home, as migration with parents is unusual.

According to specification -2a- young individuals with a higher proportion of relatives outside the "life space" are significantly more likely to migrate. This result was expected according to the location-specific resources hypothesis. It may also be expected given earlier findings on community attachment, which suggest that more relatives living close by should be negatively correlated to values of family solidarity which deter migration (Fernandez and Dillman, 1979; Sampsons, 1988 or Richmond, 2003). However, values of family solidarity may be relaxed by controlling for the size of the extended family, which had a negative impact on migration. We were not able to separate these effects as we had no data on traditional values. Specification -2b- also include the proportion of co-resident relatives. A higher proportion of co-resident relatives is expected to imply less household resources available to financially assist children in migration experiences. Conversely, more co-resident relatives should also serve commit individuals to communities of origin given higher values of family solidarity associated with. As expected, the coefficient of the proportion of co-resident relatives has a negative impact on migration and reduces the impact of the proportion of non co-resident relatives residing far

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[21] Results shown in Vidal (2007). In fact, the duration of residence at that age follows the timing of the main events of this life cycle or the transition to adulthood, not only of West-Germany, but all western countries (see for instance Willekens, 1999).

away. This may be due to the "strength" of ties, since co-residing ties tend to be stronger than non co-residing ties living far away.

Table 2. The impact of size of the 'extended family' and its geographic location on internal migration behavior. Hazard models for the risk of migration since age 16 in West Germany, 1992-2006.

	(2a)		(2b)		(3)		(4a)		(4b)	
	exp(b)	st. err	exp(b)	st. err	exp(b)	st. err	exp(b)	st. err	exp(b)	st. err
Dimensions of Ties to Relatives (time varying)										
Size of Ties to family (log)	0,26 ***	0,14	0,30 ***	0,127	0,28 ***	0,178	0,22 ***	0,24	0,22 ***	0,163
Location of Ties (share)										
Co-resident	1		0,33 ***	0,299	0,33 **	0,376	0,27 ***	0,426	0,27 ***	0,442
Non co-resident (close by)	1		1		1		1		1	
Non co-resident (far away)	1,92 ***	0,275	1,73 **	0,277	1,68 *	0,337	2,24 **	0,392	1,65	0,354
Living in the parental home	0,08 ***	0,231	0,13 ***	0,267	0,13 ***	0,525	0,11 ***	0,679	0,10 ***	0,37
Competing factors										
Social Background										
Education of Mother										
Low					1		1		1	
Intermediate					1,46 **	0,286	1,60 **	0,332	1,57 **	0,249
High					2,75 ***	0,422	3,42 ***	0,49	4,22 ***	0,367
Father more educated than mother					1,58 **	0,205	1,63 **	0,244	1,82 **	0,274
Parents living together (time varying)					1,03	0,269	0,93	0,31	0,94	0,241
Grew up in rural area (before age 15)					1,48 **	0,193	1,55 *	0,255	1,44	0,267
Life course stage (time varying)										
In education					1,11	0,316	1,18	0,358	1,00	0,244
In employment					0,38 ***	0,249	0,35 ***	0,405	0,35 ***	0,252
In Union					1,09	0,368	1,28	0,54	1,23	0,334
Children					0,90	0,51	0,87	0,286	0,90	0,455
Heterogeneity										
Regional level							2,62 ***	0,314		
Family level									1,56 ***	0,118
Baseline Hazard	(Log-Hazard)		(Log-Hazard)		(Log-Hazard)		(Log-Hazard)		(Log-Hazard)	
age (log)	1,339 ***	0,3	1,263 ***	0,299	0,984 ***	0,286	0,97 ***	1,019	1,1 ***	0,384
age (sq)	-0,21 ***	0,004	-0,020 ***	0,008	-0,018 ***	0,006	-0,016 **	0,007	-0,018 ***	0,004
N	17889		17889		17889		17763		17889	
Log-likelihood	-727,63		-722,99		-685,45		-649,13		-671,31	
Chi-2 (df)	414,21 (5)		473,15 (6)		512,54 (18)		361,18(18)		386,35 (18)	

Source: GSOEP. Other covariates not sown in models 3 and 4 are sex, nationality and educational attainment. 'Size of ties to family (log)' measures the log-effect of size of the 'extended family'. 'Location of ties' refer to the share or proportion of individuals within each category, where the reference is 'non coresident ties close by' (i.e. within an hour of travel time by car')
* p-value under 0.1, ** 0.05, *** 0.01

The third column of Table 2 is model specification 3, which includes additional competing factors. The social background variables show that parental education is a key determinant of migration at young ages. The more educated the mother, the more likely children will migrate.

When the father is more educated than the mother, children are also more likely to migrate[22]. Similarly, growing up in rural regions increases the probability of migration, this is likely because educational and work opportunities are generally found in more urban areas. Of time-varying life course variables only employment was significant. This low significance is mainly the result of censoring before entry into union, childbirth or leaving education, as observed in the descriptives. The direction of the association is unsurprising. Being fully employed in a career or an apprenticeship is a deterrent of migration. Security of employment in the current location is more valuable than uncertain opportunities elsewhere. The inclusion of the social background and life-course variables remained virtually unchanged, although the negative effect of network far away decreased, meaning that proximity of ties retains the constraining effect mentioned before.

The next step was to control for unobserved heterogeneity at the local/regional and at the siblings/family level. These models are represented in specifications 4a and 4b in Table 2. Variance for region of residence shows a significant effect, indicating that individuals from the same region demonstrate common characteristics which impact migration. This also controls for the effect of unmeasured regional resources. The main change one observes is that a higher proportion of ties outside the "life space" raises the risk for a long distance move. This increased risk indicates that geographical proximity of the family network may be found in settlements with higher migration propensity. In fact, rural or less densely populated areas may offer less educational or employment opportunities. At the same time, such regions may place more of a value on community, thus explaining the lower dispersion of ties. The hypothesis that the regional variance in the multilevel model controls for *regions of origin* is verified by the fact that the effect parents' education increases. Educational levels tend to be lower, because of a higher share of jobs with low educational requirements. Controlling for selection into regions with higher of out-migration, the dimensions of the extended family structure remain significant.

In the case of the family-level variance, it is hypothesized that behavior among siblings is not independent. The residual term was shown to be significant at the .05 level, meaning that individuals from the same family are more likely to face similar favorable or unfavorable migration conditions. It is possible that within family variance is also capturing aspects of

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[22] To model father's education relative to the mother is only a strategy to avoid collinearity with mother's education, since descriptives showed that fathers tend to have a level of education at or above that of hte mother, but almost never below.

upbringing such as previous parental migration which are likely to affect all siblings equally, but were not included in this model. The main variation in the model is accounted for by distance to ties, where the proportion of ties far away exerts no more significant effect on migration, however, it keeps the direction unchanged. A possible explanation is that the knowledge of migration or more positive attitudes toward migrations may be more common in extended families which demonstrate greater mobility resulting in a higher proportion of ties located far away. The explanation falls in line with the result suggesting that parental background increases positive affect towards migration, since households with greater migration propensity tend to be headed by highly educated individuals.

7.2. Type of relatives

Proximity to parents or siblings is also tested. It is assumed that such relationships are more likely to influence individual migration behavior given that these represent closer ties on average. Conversely, it is expected that other dimensions of the extended family structure will reduce the impact of proximity of strong relationships. In Table 3 two different groups of models can be observed which analyze proximity to parents and siblings. Two different models for each group models regional (4c and 4e) and family heterogeneity (4d and 4f).

The addition of relationship specifics shows some improvement but almost does not reduce the significance of other dimensions of the extended family structure. First, the proximity of parents (co-resident or not) is an important determinant in constraining the migration of children. The only exception is that the impact of non co-resident ties located far away becomes less significant. Siblings' proximity also remains unchanged in the presence of other dimensions of the family network. Only children are also more likely to migrate than those individuals with siblings living close by. Sib-ship size is inversely correlated with the propensity to migrate, while number of siblings located far away increases the likelihood of a migration. A possible interpretation is that siblings work as location-specific assets. However, this effect diminishes with sib-ship size within the household, probably because the amount of resources or attention from parents is diminished as it is shared among more children. On the other hand, when sibs live far away, they could also motivate migration because the individual learns from the sibling's behavior, resulting in increased perceptions of self-ability and increased information about the migration investment.

Table 3. The impact of the type of relatives on internal migration behavior. Hazard models for the risk of migration since age 15 in West Germany, 1992-2006.

	Regional heterogeneity (4c)		Family heterogeneity (4d)	
	exp(b)	st. err	exp(b)	st. err
Results for parents				
Size of Ties to family (log)	0,24 ***	0,157	0,24 ***	0,165
Location of Ties (share)				
Co-resident	0,26 ***	0,415	0,25 ***	0,441
Non co-resident (close by)	1		1	
Non co-resident (far away)	2,05 **	0,335	1,46	0,379
Location of Parents				
Parents co-resident	0,10 ***	0,355	0,09 ***	0,37
Parents non co-resident (close by)	0,46 **	0,381	0,45 **	0,406
Parents non co-resident (far away)	1		1	
Parents living together	0,97	0,232	0,95	0,371

	(4e)		(4f)	
	exp(b)	st. err	exp(b)	st. err
Results for siblings				
Size of Ties to family (log)	0,27 ***	0,16	0,28 ***	0,168
Location of Ties (share)				
Co-resident	0,23 ***	0,42	0,23 ***	0,445
Non co-resident (close by)	1		1	
Non co-resident (far away)	1,73 *	0,338	1,21	0,365
Sibship size				
0 sibs	1		1	
1 sib	0,41 **	0,327	0,37 ***	0,353
2 sibs	0,58 **	0,256	0,53 **	0,273
3+ sibs	0,66 *	0,234	0,65 *	0,239
Sibs non co-resident (far away)	1,86 **	0,224	1,76 **	0,255

Source: GSOEP. All models include variables for specifications 3 and 4 of Table 2. Other covariates not sown in models are a dummy which captures the oldest sibling and a variable which captures females with sibs. Models for parents (3c, 4c and 4d) also include dummy variables which indicate if father or mother is dead. Model 4c and 4e control for regional heterogeneity and model 4d and 4f control for family heterogeneity. 'Size of ties to family (log)' measures the log-effect of the 'extended family'. 'Location of ties' refer to the share or proportion of individuals within each category, where the reference is 'non co-resident ties close by' (i.e. within an hour of travel time by car')
* p-value under 0.1, ** 0.05, *** 0.01

7.3. Other sensitivity tests

As commented previously, distance to ties can be explained by unobserved characteristics related to attitudes towards family or migration experiences prior to age 16. In Table 4 we use previous parental behavior and the importance of ties to relatives as proxies to internal inputs which may enhance intentions or propensity to migrate. Previous parental migration is associated to the transmission of the 'knowledge of migration' as well as higher dispersion of the extended family. Relative importance of ties is captured by a survey item which asks if the

three most important ties are relatives. Higher importance attributed to kin may capture higher traditional family values that commit individuals to live close by their family. The results show that children of parents who never moved are less likely to migrate. This does not change the result for the other dimensions of the extended family structure. A similar result has the coefficient of importance of the family, because it does not change any of the previous results.

Table 4. Controls for selectivity. Hazard models for the risk of migration since age 15 in West Germany, 1992-2006.

	Regional heterog. (5a)		Family heterog. (5b)		Regional heterog. (5c)		Family heterog. (5d)	
	exp(b)	st. err	exp(b)	st. err	exp(b)	st. err	exp(b)	st. err
Size of Ties to family (log)	0,23 ***	0,159	0,23 ***	0,164	0,22 ***	0,157	0,22 ***	0,166
Location of Ties (share)								
Co-resident	0,29 ***	0,414	0,28 ***	0,439	0,29 ***	0,418	0,28 ***	0,444
Non co-resident (close by)	1		1		1		1	
Non co-resident (far away)	2,10 **	0,342	1,53	0,364	2,19 **	0,332	1,59	0,355
Living in the parental home	0,10 ***	0,354	0,10 ***	0,369	0,10 ***	0,356	0,10 ***	0,372
Parents never migrated	0,73 *	0,233	0,64 *	0,261				
Relatives as important ties					1,24	0,141	1,14	0,149

Source: GSOEP. All models include variables for specification 4 of Table 2. Model 5a and 5c control for regional heterogeneity and model 5b and 5d control for family heterogeneity. 'Size of ties to family (log)' measures the log-effect of size of ties to family. 'Location of ties' refer to the share or proportion of individuals within each category, where the reference is 'non coresident ties close by' (i.e. within an hour of travel time by car')
* p-value under 0.1, ** 0.05, *** 0.01

7.4. Non-linear effects

Last, non linear effects of the proximity of ties are commented. In Table 1 statistically significant odds-ratio of interactions between the share of co-resident ties / non co-resident ties living far away and selected variables (via separated regression analysis) are shown. The reference category is the share of non co-resident extended family living close by.

While the signs of the coefficients are unsurprising, not all of them result to be significantly different from the reference category. First, women seem to be significantly affected by the geographical location of the extended family, while men are not. This result partially responds to the higher obligation of women to settle close by the family, in particular the parents. Second, highly educated individuals and employed ones are more likely to be affected by the share of ties elsewhere far away while lower educated and unemployed individuals are more

likely to be affected by geographically closer ties. In principle this may respond to different theses. First, individuals with lower labor market opportunities (i.e. low education and unemployed) are more likely to be constrained by the location-specific assets of the family than for individuals who are able to obtain opportunities elsewhere. Let us say that the extended family close by may work as a safety net, above all for those individuals with higher needs. Individuals with better career prospective (in employment and highly educated) are more likely to be associated to geographical mobility, and the presence of family elsewhere may work as an opportunity or location specific capital elsewhere. In general, the aim of higher occupational achievement and investment may be aligned to a better use of network' resources elsewhere.

Figure 1. Non-linear effects of the geographical proximity of the extended family.
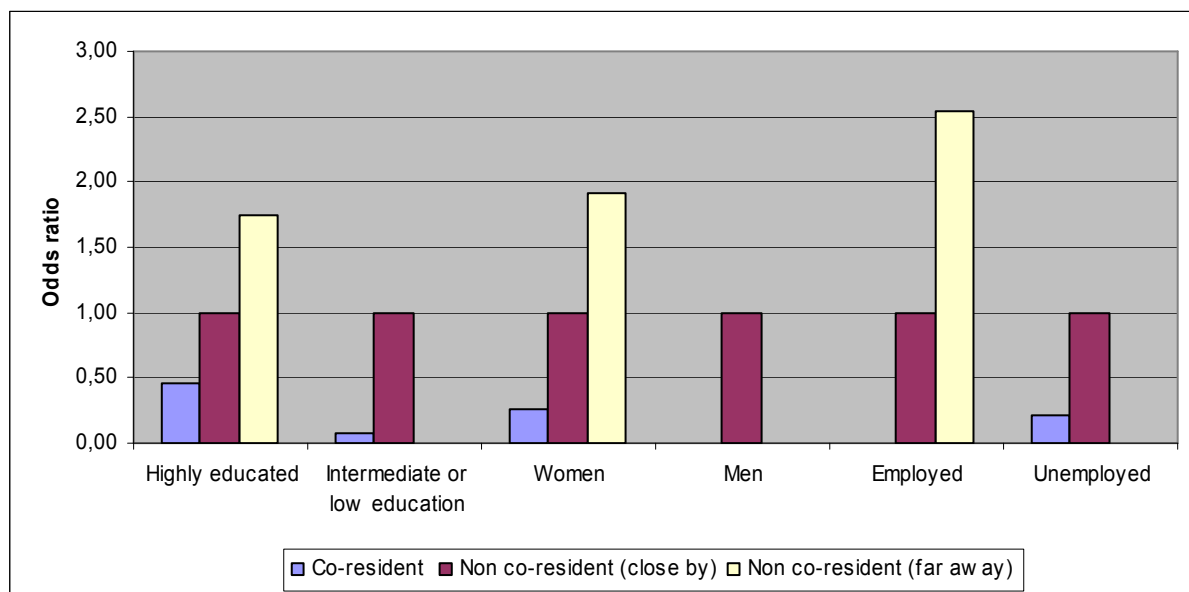
Source: GSOEP. The estimation of the coefficients (transformed to odds-ratio) is done by separated regression analyses for a sample of individuals which have the attribute or find themselves in the situation regarded. Model specification contains dimensions of the extended family variables and social background variables. No variance component to control for selectivity is allowed. Results only presented when significantly different from the reference category. The reference category is the share of the non co-resident extended family living close by.

8. Concluding remarks

In this article we aimed to describe the association between the extended family structure and the first long distance residential change. Emphasis was placed on the effect of the geographic proximity of the extended family, which is predicted to have a negative effect on migration. In fact, migration disrupts the "life space", or the socio-spatial area where interaction with ties is

likely to occur, and access to non-transferable resources is granted. Other hypotheses sought to reveal spurious effects due to the selection of migrants. Hazard regression and extensions to multilevel models were performed for West-German records of residential histories since age 16. This strategy allowed researchers to match current mobility patterns and network configuration to other life-course transitions. It was therefore possible to check the effect of ties to relatives while accounting for dynamic selection effects.

The results show how the higher the share of non co-resident relatives located outside of the "life space" (defined as the space accessible in one hour by car), the higher the hazard of migration. This result implies that ties to relatives do function as location-specific attributes. However, as other researches proved, a higher share of ties close by may be associated with higher community affiliation (e.g. Fernandez and Dillman, 1979; Sampsons, 1988 or Richmond, 2003). This hypothesis could not be straightforwardly tested. Instead, the size of the extended family was tested and turned out to have a negative effect on migration. Larger extended families related to higher family solidarity, which may discourage young adults from an eventual long-distance move. A higher share of co-resident ties with relation to the total extended family also significantly discouraged migration. This ratio reduced the effect of the extended family outside of the "life space", though the coefficient remained significant. In fact, the most influential ties tend to live under the same roof.

Due to confidentiality considerations we were not able to observe the region of residence though it was possible to cluster individuals from the same region. In some models, heterogeneity at the regional level was allowed for by using multilevel models and unmeasured effects of regional context were controlled for. The result was that the effect of the proportion of the extended family located far away was increased. A possible interpretation is that more concentrated ties to relatives may be found in settlements with less economic opportunities and therefore with higher migration propensity. At the same time, these areas may demonstrate stronger family ties ensuring close proximity of the family network. Similarly, siblings were clustered in order to analyze family level variance. In this case the extended family coefficient was insignificant. In fact, knowledge of migration or positive affect towards migrations might be found in mobile extended families, and for that reason one may find a higher share of ties elsewhere.

The parental social background turns out to have important positive effects on migration. It is more likely that individuals who migrate in search of educational and career opportunities will rely more on parental financial resources. Findings also demonstrate that more educated parents exert less normative pressure on children to stay close. In fact, some types of relationships – like parents and siblings - appear to be particularly important in explaining migration. In this case proximity of such relationships is an important deterrent to migration. However, when including the type of relative, other covariates change only slightly, suggesting that there may be some selection of individuals with larger network in closer proximity. In order to account for selection effects we tried two different strategies: (1) using parents' previous migration experience; and (2) using importance assigned to the family or family commitment. However, neither significantly changed previous results. Last, some individual attributes or characteristics interact with the proximity of the extended family. Women are more likely to be affected than men, responding the theses on traditional gender role on the care of the family. Individuals with lower labor market opportunities may use location specific capital from family as a safety net, which constrains out-migration. In contrast, individuals with better career prospective may benefit from location specific capital elsewhere.

All in all, internal migration of West German young adults is significantly mediated by the social capital exerted by the extended family. The robustness of most of the effects of the extended family structure, interpreted as transferable and location-specific resources, reveal the importance of individual social capital in predicting migration, although there are differences according to contextual factors. This means that future trends on family dynamics are likely going to affect migration patterns. It is important to consider comparative analyses contrasting these results in different contexts. To use measures of resources such as financial transfers, regular meetings, business contacts or help in household duties. Do further dynamic research on the effect of family structure and changes in the residential trajectory, and how it affects the decision-making process may also give a better overview of the effect of social ties on enhancing intentions to move.

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