



# Social capital and leaving the nest: Channels and housing tenures

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## ABSTRACT

Young adults in Europe sometimes have trouble moving away from their parents and obtaining a home of their own, which is considered an important step in the transition to adulthood. This paper investigates whether nest-leaving is affected by individual social capital and parental economic capital. The paper also examines how these resources are related to the type of housing tenure obtained and whether the housing was acquired through informal channels. In addition, the paper assesses whether differences in access and returns to social capital can explain the later nest-leaving of the children of immigrants. The study uses a Swedish two-wave panel survey of young adults aged between 19 and 22. Individual social capital is operationalized as an extensive social network measured with the position generator, while parental economic capital is estimated with registered disposable income. The results show that individual social capital is positively related to prospective nest-leaving, but parental income is not. Nevertheless, both individual social capital and parental economic capital are related to the obtained housing tenure type: social capital is linked to informal 'second-hand' rental agreements often acquired through contacts, whereas having high-income parents is linked to obtaining owned housing tenure. The children of immigrants are found to be more likely to live with their parents, but this is not explained by lower access or return to social capital.

## 1. Introduction

There are considerable housing shortages in many European countries and regions, including Sweden, where the shortage is especially dire in terms of suitable rental housing for young adults (Boverket, 2013; Housing-Europe, 2015). The process of an individual becoming socially independent usually begins with leaving the parental home, which is a key step in the transition to adulthood (Buchmann and Kriesi, 2011). Challenges in establishing an independent household may lead to young adults living with their parents longer than desired, affecting their potential to transition to a better labour market or enrol in higher education.

A crucial factor in nest-leaving is access to resources and various types of support. One important source of support are parents; in this regard, previous research has argued that parental economic capital enables parents to support their children in the housing market in general and their children's nest-leaving in particular (Iacovou, 2010). Furthermore, research on adult populations reveals a relationship between housing outcomes and social capital, where the latter is understood as access to resources through a large or extensive social network (Röper et al., 2009). However, little research has investigated whether social capital is related to nest-leaving. The present

paper compares the effect of these two possible sources of resources and support in the nest-leaving process.

Previous research in Sweden shows that children of immigrants have a delayed nest-leaving (Nilsson and Strandh, 1999), and that ethnic minorities face discrimination when using formal channels to attain housing (Ahmed and Hammarstedt, 2008), but relatively little is known about how the children of immigrants fare when using informal channels, such as contacts, to obtain housing and whether their access to social capital can explain their later nest-leaving.

Research on the effects of access to social capital faces challenges in identifying the causal process through which social capital is linked to certain outcomes. Mouw (2003) argues that a causal effect of network social capital should be funnelled through the use of contacts, and that individuals with high social capital would use their contacts more often. To highlight the mechanisms linking social capital to housing outcomes, the current paper specifically investigates whether social capital is linked to the use of contacts, and whether the obtained housing tenure is of the informal 'second-hand rental contract' type.

The purpose of this paper is, first, to examine whether parental economic capital and an individual's access to social capital are related

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to the ability of young adults in Sweden to leave their parental homes. Second, the paper aims to give a better understanding of how these resources are linked to housing outcomes by examining what housing tenure they lead to and whether they were obtained via contacts. Third and last, the study examines whether social capital and contact use can explain the later nest-leaving of children of immigrants.

The current study is contextualised within Sweden, a country with a housing shortage that is especially dire in metropolitan areas, a large public housing sector and rent control (Boverket, 2013; Housing-Europe, 2015). Besides the traditional first-hand rental contract, there is also an informal type of contract called the ‘second-hand’ rental contract, in which individual property owners or first-hand contract tenants sublet their apartments to new tenants. This makes Sweden an interesting context for examining how the usefulness of the two types of resources depend on institutions and the regulatory framework in an advanced market economy.

To this end, a two-wave panel survey collected in 2009 and 2013 is used; the respondents were 18 or 19 years old in the first survey wave and 22 or 23 years old in the second. This signifies that the participants were at an age at which they could be expected to move away from their parents, as the mean nest-leaving age in Sweden was 20 years old when these survey waves were conducted (Eurostat, 2020). The survey also includes register-based measures of parental and individual income over several years and a position generator measure of access to social capital. Further, the survey oversampled individuals whose parents were born in Iran or former Yugoslavia. In all, this makes the survey suitable to helping answer the questions about the role of social capital in nest-leaving in Sweden.

## 2. Theory and previous research

### 2.1. Housing allocation

Several factors are likely to affect how and when young adults obtain a home of their own. A key component is one’s preferences for moving out, which are likely determined by factors linked to family formation, family climate, work and education. Moving out does, however, generally require somewhere to move into, pointing to the constraints related to housing availability. To sort individuals into housing when the demand exceeds the supply, there must be some allocation mechanism where access to resources plays an important role. Economic capital is one such resource, but the current paper argues that access to housing among young adults is also determined by access to social capital. Prior to considering the specific role of social capital in nest-leaving, though, a brief discussion is needed about the other factors that affect nest-leaving age.

### 2.2. Previous research on nest-leaving: Income, education and family

There are several factors that affect nest-leaving, the most straightforward of which being an individual’s income, which has been shown to be positively related to residential independence (Avery et al., 1992). Additionally, previous research from Sweden shows that individuals who are employed or enrolled in education are more likely to leave their parents’ home (Nilsson and Strandh, 1999). Specifically, students in higher education are often required to move relatively long distances away to attend university (Bernhardt et al., 2005; Chudnovskaya and Kolk, 2017).

Several family structure factors are also related to nest-leaving, including the family’s social climate. Previous research shows that children living with both their biological parents tend to live at home longer than children with other family structures, particularly those living with a stepparent (Bernhardt et al., 2005; Mitchell, 1994; Tosi and Gähler, 2016; van den Berg et al., 2018). Furthermore, family formation is a major factor in housing decisions (Chudnovskaya, 2019), and researchers show that having a partner (Gierfeld et al., 1991) and being a parent (Cooney and Mortimer, 1999) are both related to leaving the parental home. Sibship size and birth order are likely to play a role as well in nest-leaving age, since more siblings implies a dilution of parental resources over several children (Avery et al., 1992).

Another important factor is ethnicity and immigration background.

Nilsson and Strandh (1999) show that belonging to an immigrant group or having immigrant parents is negatively related to nest-leaving, which partly could relate to landlord discrimination. Using a correspondence field experiment, Ahmed and Hammarstedt (2008) find that an Arabic-sounding male name had a lower call-back rate from landlords than a Swedish-sounding name. This type of study is, however, limited to assessing behaviour when there are no previous direct or indirect social ties between the landlord and applicant; in contrast, the current study investigates whether difficulties in using contacts contributes to immigrants’ lower likelihood of nest-leaving.

### 2.3. Social capital, economic support and nest-leaving

This paper compares two types of resources that are drawn from social relationships and that could affect nest-leaving in several ways. First, *individual social capital* is defined as the resources embedded in a social network that can be used in intentional action (Lin, 2001). Second, the current paper compares social capital’s effect to that of *parental economic capital* and the possible support that parental economic resources enables (Wellman and Wortley, 1990). Although social capital and parental economic capital are similar in that they both are relational assets, they might have a fundamentally different influence in the housing market and, hence, in the nest-leaving process.

### 2.4. Social capital in the housing market

#### 2.4.1. The embeddedness of housing transactions in social relations

Two types of motivation might influence the extent to which housing transactions are embedded in social relations, and thus the usefulness of social capital in the housing market. One type of motivation relates to altruism and reciprocity, reflecting the extent to which housing contact holders want to grant favours to their network members. The other motivation relates to rational economic action and the function that social networks have on mitigating risks and transaction cost problems by embedding transactions in social relations (Granovetter, 1985; Williamson, 1981). The relevance of embeddedness in the housing market is a consequence of the substantial risks associated with housing agreements. In most cases, there is asymmetrical information, meaning that the transaction partners do not have access to the same information, which increases the risk that the quality will be lower than expected (Akerlof, 1970). When transactions concern ownership rights, they often involve high values in relation to the monetary constraints of the involved individuals (DiMaggio and Louch, 1998). For deals regarding rental agreements, there is asset specificity, a situation in which transaction partners become ‘effectively “locked into” the transaction to a significant degree’ (Williamson, 1981: 555), meaning that opportunistic actors can take advantage of this situation.

These factors imply that there are substantial ‘transaction costs’ in housing deals that possibly make people refrain from making agreements. A transaction embedded in social relations can mitigate risks and transaction cost issues, because trusted ties can transmit reliable information about housing quality and ensure the transaction partner’s reliability (DiMaggio and Louch, 1998; Granovetter, 1985; Uzzi, 1997). However, we should not expect universal contact usage, because within-network exchanges narrow the range of potential transaction partners, and negotiating prices with a friend or relative can feel awkward (DiMaggio and Louch, 1998). Furthermore, there are other ways to solve uncertainty, such as using commercial agents as brokers. Still, the arguments above suggest there is a rationale for using contacts to embed the housing transaction in social relations when there are important transaction costs and risks in relation to the possible gains.

#### 2.4.2. Social capital and housing market advantage

Some people might have an advantage in using contacts in the housing market. Research on social capital indicates that access to resources through a social network varies in the population and is related to factors such as occupational class, gender and ethnicity (Lin, 2000). Having

access to social capital offers an advantage in facilitating the use of contacts to acquire housing, as people with higher social capital can be expected to have a network with a greater number of direct and indirect connections to possible transaction partners, helping ensure their trustworthiness, as well as providing information about available housing opportunities. However, using contacts is in itself not a measure of an advantaged position in the housing market and is only a poor indicator of social capital, because the use of contacts might be driven by other factors, such as a high need to move out or lower access to other resources. Nevertheless, we should expect that higher social capital makes it more likely to use contacts and, indeed, previous research finds support for the role of an extensive social network in the housing market, with studies from the Netherlands (Röper et al., 2009) and Germany (Abraham and Kropp, 2000) showing that individuals with higher social capital are more likely to use their contacts to obtain housing. Since social capital increases this channel's availability, it should give people with higher social capital an advantage in the housing market, which yields the hypothesis that higher social capital makes it more likely to leave the nest.

## 2.5. Economic support in the housing market

Economic support requires helpers to have access to a substantial amount of resources and a willingness to provide aid. The helpfulness of others likely depends on certain relationship characteristics, such as the relationship type and quality as well as the individual's role within the relationship. Several types of strong relations are possibly relevant, such as grandparent–grandchild or friendship relations, but the parent–child relationship has been shown to be the most important for transferring housing-related resources, such as large cash gifts or low-interest loans (Albertini et al., 2007; Helderman and Mulder, 2007; Wellman and Wortley, 1990). The extent to which parents can provide help depends on their possession of relevant resources, such as monetary or real estate assets. A subset of such resources are transferable, and having parents with access to these resources is arguably an advantage for young adults in establishing independent living (cf. Mulder and Smits, 1999).

In contrast to transferable resources, parents might also have non-transferable resources that are of importance to nest-leaving. The feathered nest hypothesis posits that parents with higher incomes provide resources, such as spacious, high-quality housing, making their children more likely to stay at home (Avery et al., 1992; Gierveld et al., 1991).

The relative strength of the contradictory mechanisms related to transferable and non-transferable resources, respectively could play out differently depending on age. Avery et al. (1992) argue that transferable resources increase in relative importance as children age, and previous research supports this claim: children of high-income parents are more likely to leave the nest after a certain age threshold (Avery et al., 1992; Iacovou, 2010). Given the counteracting mechanisms suggested by previous research, this paper does not have a hypothesis about the direction of the effect of parental economic capital on likelihood of having left the parental home.

## 2.6. Housing tenure and institutions

The usefulness of economic resources versus social capital depends on the channel used for housing allocation. The housing list – through which municipalities or private landlords allocate first-hand rental contracts according to principles such as waiting time – is an example of a formal channel. Other channels are semiformal, such as private agencies with online platforms; they are formal in the sense that information is publicly announced but have elements of informality to the extent that there are no publicly stated principles to guide allocation (i.e. landlords can choose the tenant they want). There are also purely informal channels, where individuals approach landlords directly or via intermediating contacts. In general, it can be expected that the relative importance of social capital is higher for informal channels, and economic capital is relatively more important when using formal channels, especially if these formal channels allow allocation according to market

principles in contrast to, for instance, waiting time.

The channel used – and hence the type of resources needed – likely depends on the institutional setting and the housing tenure (Röper et al., 2009). Two dimensions of housing tenure are in turn important: ownership relation and the degree of contract formality, though the latter is especially relevant for rental contracts.

In Sweden, there are two type of rental contracts. First is the formal ‘first-hand contract’ signed between the owner of the building – typically a corporation – and the tenant. The other is the more informal ‘second-hand rental contract’, where the landlord is an individual who holds either a first-hand rental contract or an owner-occupied contract.

A central institutional feature is that (when the surveys used in the current paper were conducted) the rental sector in Sweden was marked by a form of rent control in which rent was negotiated between the owners of the building and the tenant association (Anas et al., 1985). This rent regulation also applied to second-hand rental contracts, regardless of whether the landlord was an owner or a subletting tenant, which in both cases implied that they could only charge rent roughly equivalent to their own costs (SOU, 2012). Because the possible financial gains for the subletter from deals involving a second-hand contract tended to be low, the motivation for them to sublet typically came from covering their costs while not being able to use the housing themselves: for example, when the owner was on short-term work abroad.

There are several reasons suggesting that contact use is more prevalent for obtaining second-hand rental contracts. First, landlords are often individuals rather than corporations, implying that they are sensitive to the risks related to housing agreements. Second, deals are short-term, which increases the transaction costs in relation to possible gains. It is therefore a viable risk-minimising option for both tenants and landlords to have someone who can vouch for the transaction partner. It can hence be hypothesised that contacts often are used to facilitate agreements in second-hand rental contracts. Moreover, a consequence of this hypothesis is that individuals with extensive social networks can be expected to have an advantage in obtaining informal contracts (cf. Hochstenbach and Boterman, 2015). Thus, this paper hypothesises that greater access to social capital leads to a higher likelihood of obtaining second-hand rental contracts.

An owner-occupied property transaction also entail uncertainty given the prevalence of asymmetric information. On the other hand, these deals often involve transactions of large values, suggesting that the downside of informal channels in terms of profit maximisation become more important.<sup>1</sup> To obtain a owner-occupied contract, the key resource is instead to have substantial amounts of economic capital, which might be difficult to acquire for young adults with limited savings.<sup>2</sup> Furthermore, banks may be unwilling to grant loans to high-risk customers, such as young adults, though parents can increase the possibility of their children getting a mortgage by acting as a guarantor, without having to dispense any monetary resources of their own (e.g. SEB, 2019). Previous research from several different countries reveals a positive relationship between parental income, parental home ownership and children's increased likelihood of owning a home (Clark and Mulder, 2000; Galster and Wessel, 2019; Mulder and Smits, 1999), including a study from Sweden (Öst, 2012). This relationship can arguably be explained by factors such

<sup>1</sup> In Sweden, property ownership is only common for detached and semi-detached housing, while apartment buildings are typically tenant-ownership cooperatives (*bostadsrätt*). Ownership contracts provide the right to live in an apartment in a building co-owned by its members, and these ownership rights function as capital traded at market prices, with a small caveat that the buyer must be recognised as a member of the cooperative association (Ruonavaara, 2005). Thus, in terms of allocation, these contracts are like regular ownership contracts.

<sup>2</sup> The need for private wealth likely increased during the period of study as a result of state regulations since 2010 requiring a loan-to-value ratio. These regulations state that a mortgage can only cover 85 % of market value, implying that one often needs a substantial cash deposit (FFFS, 2010). Most of the home purchases analysed in this paper likely occurred after this regulation.

as in vivo transfers from parents to their children (Helderman and Mulder, 2007), inheritance (Köppe, 2018) and children living independently in a property owned by their parents (Li and Hung, 2019). Parents with higher incomes are also more likely to provide these types of support (Mulder and Smits, 1999), meaning it can be hypothesised that their children are more likely to live in owner-occupied housing.

### 3. Material and methods

#### 3.1. Data

The data were acquired from the Swedish survey *Social Capital and Labour Market Integration: A Cohort Study* (Edling and Rydgren, 2010). The gross survey sample consists of 5695 individuals selected for telephone interviews, which were carried out by Statistics Sweden. The population was defined as individuals born in 1990 and who were included in the Swedish register of the total population. There are three subsamples within the gross sample: (1) all individuals with at least one parent born in Iran; (2) a random selection of half the individuals with at least one parent born in former Yugoslavia; and (3) a simple random sample of 2500 individuals with two Swedish-born parents. The survey data consist of two waves. In the first wave, 2942 respondents from the gross sample were interviewed, resulting in a response rate of 51.6 %. For the second wave, 1577 respondents from the first survey wave responded, while an additional 667 respondents from the gross survey sample also participated, giving a response rate of 39.7 %. The present study analyses the 1577 respondents who answered both survey waves, meaning there was a 28 % response rate in relation to the gross sample.<sup>3</sup> The interviews for the first wave were conducted between October 2009 and January 2010 and between January 2013 and March 2013 for the second, with most respondents 19 years old at the time of the first survey wave and 22 during the second. The survey was matched with register data containing information about the respondents' individual and parental income, residential area, demographics and education.

The respondents are more likely than non-respondents to have a native Swedish background, high parental education, higher elementary school grades, completed upper secondary school and not lived in a large city municipality (SCB, 2010). Moreover, using a panel sample implied a second stage of selection due to attrition. Although the coefficient for social capital is somewhat upward biased in models using the panel sample, the main results are not substantially different when using the full second wave sample with its higher response rate, indicating that the conclusions are not driven by attrition (Appendix A).

#### 3.2. Variables

##### 3.2.1. Housing outcomes

The present study focuses on housing outcomes and the channels through which they are obtained. Three variables are analysed. First, whether an individual lived together with his or her parents is measured with an item querying if the respondent mainly lived alone or with another in the last 12 months. All who said that they lived with their parents are coded accordingly. For those not living with their parents, living arrangements based on several different relationship types are coded into the combination category; however, this type of living arrangement is very uncommon (see Table 2). The second variable measured the channel used and is based on an item that asked about the way in which the respondents acquired their accommodation. Ten

alternatives were presented to the respondents, but answers in the alternatives 'cooperative organisations' (n = 2), 'under the table' (n = 3) and 'social office' (n = 8) are recoded into the 'other' category because of the limited number of cases.<sup>4</sup> The third variable measures housing tenure and consists of four categories: first-hand contract, second-hand contract, student room/apartment and owned housing (including cooperatives and detached and semidetached houses).<sup>5</sup>

##### 3.2.2. Social and economic capital

The measurement of respondent access to social capital relies on estimating the resources embedded in social connections. Social capital is measured here with a method called *the position generator*, which asks respondents whether they know anyone in a sample of positions, mostly occupations (Lin and Dumin, 1986). In the present survey, the respondents were asked if they knew anyone in 40 different positions, consisting of 39 professional occupations and the university student position. The current paper focuses on a dimension of social capital that concerns the extensivity of social network, counting in how many of these positions the respondents knew someone.

The idea is that contacts' occupations are an indicator of the resources they can make available to the individual, and that more diverse and extensive networks contain more resources than homogenous ones (Lin and Erickson, 2008). This measure's validity is supported by its correlation to the measures of access to informational, personal and financial support (Van der Gaag et al., 2008), job leads (McDonald et al., 2009) and better labour market outcomes (Hällsten et al., 2017). Although the importance of occupational positions in advanced societies makes this a strong measurement tool, there could be systematic measurement errors in estimating access to specific resources that are only moderately correlated with the occupational structure, such as control over real estate assets, an error that might differ systematically between native Swedish versus immigrant groups.

Parental economic capital is operationalised as the parents' summed disposable income averaged from 1990 to 2012. This information was acquired from tax registers, with disposable income defined as post-tax and transfer income (SCB, 2009). Parental incomes are then logarithmised and standardised ( $m = 0$ ,  $Sd = 1$ ) to decrease the influence of outliers and to allow for a straightforward interpretation. The analysis also includes the respondents' standardised average income from 2008 to 2012 as a control variable ( $m = 0$ ,  $Sd = 1$ ).<sup>6</sup>

##### 3.2.3. Other variables

The models include immigration background based on parent place of birth, as acquired from administrative registers, and that is defined as having at least one parent born abroad. The models control for several other variables to avoid confounding the effect of social capital: first, gender and whether the respondent has children measured with straightforward survey items; second, the number of siblings and the

<sup>4</sup> The respondents were asked the following: How did you obtain your accommodation? [Author's translation] (in Swedish: *Hur har du fått tag i ditt boende? Svarskategorier: Köpt av mäklare, Köpt svart, Tips via kontakter, Bostadskön, Via förmedlingstjänst, t ex på internet, Genom annonser, Via medlemskap i kooperativ förening, Via socialkontoret, Via studentkåren/nation, Annat.*)

<sup>5</sup> This paper assumes that villas and attached houses are owned by those who live there. This is most often, but not always, the case because rarely, the inhabitants are also tenants. See [www.statistikdatabasen.scb.se/sq/82549](http://www.statistikdatabasen.scb.se/sq/82549).

<sup>6</sup> Parental income was based on family income. Statistics Sweden calculated family income as the sum of the income of all family members living at the same address, while to which household the respondent belonged was determined by measuring where the respondent resided in 2006. The SCB defines *family* as a unit of people living at the same address and having a relation, such as married, in a civil union, have children together or are parents/children. In cases where the respondent lived with parents, the respondent's income was subtracted from the parental (family) income to avoid measuring individual income twice (for the period 2008–2012).

<sup>3</sup> Excluding overcoverage.



**Table 1**  
Descriptive statistics of the independent variables based on immigrant background.

	Parents born in Sweden		Parent(s) born abroad		All	
	Mean	sd	mean	sd	mean	sd
Do not live with parents (Wave 1)	0.21		0.12		0.16	
Extensivity of contacts (Wave 1) *	15.15	6.50	16.37	6.57	15.74	6.56
Individual's disposable income*	890.16	376.12	727.97	358.24	810.87	376.22
Parents' disposable income*	3881.03	1851.44	3135.13	1067.77	3516.37	1564.31
Woman	0.49		0.46		0.48	
Parent(s) born abroad	0.00		1.00		0.49	
Have children of their own	0.05		0.03		0.04	
Number of siblings	1.69	1.05	1.76	1.31	1.73	1.18
Birth order	1.83	0.88	1.87	0.94	1.85	0.91
Mother and father lives in the same household	0.56		0.63		0.59	
In a romantic relationship	0.51		0.43		0.47	
In employment	0.65		0.60		0.62	
Enrolled in education	0.45		0.53		0.49	
Elementary school grade point average	13.83	3.71	13.23	3.86	13.54	3.80
Lives in a different municipality than parents	0.31		0.25		0.28	
Larger city municipality 2012	0.15		0.24		0.20	
Medium city or suburb 2012	0.55		0.56		0.55	
Rural municipality 2012	0.30		0.20		0.25	
Larger city municipality 2007	0.09		0.20		0.14	
Medium city or suburb 2007	0.52		0.52		0.52	
Rural municipality 2007	0.40		0.27		0.33	

Note: \* Standardised in the analysis.

**Table 2**  
Living arrangements and immigrant background over Wave 1 (Ages 18–19) and Wave 2 (ages 22–23).

	Parents born in Sweden		Parent(s) born abroad		All	
	W1 %	W2 %	W1 %	W2 %	W1 %	W2 %
<b>Living arrangements</b>						
With Parents	79.4	20.7	87.9	42.5	83.5	31.4
Alone	11.4	35.4	6.5	27.8	9	31.7
Siblings	0.9	0.6	1.3	2.5	1.1	1.5
Relatives	0.6	0.4	0.4	1.3	0.5	0.8
Partner	5.7	33.4	2.3	19.4	4.1	26.5
Friend	2	9.5	1.6	5.9	1.8	7.7
Mix of the other	0	0.1	0	0.7	0	0.4
N	804	803	770	769	1575	1572

Note: W1, wave 1; W2, wave 2.

respondent's birth order acquired from administrative registers; third, cohabitation with parents indicated by parents having the same registered family income in 2012; fourth, the respondent's earning potential, as indicated by human capital and measured as the respondent's grade point average in the final grade of elementary school; fifth, the respondent's self-reported main activity, that is, whether the respondent is currently employed, studying or unemployed; sixth, register-based information about the municipalities in which the respondents resided in 2007 and 2012, coded as larger cities, rural or other municipalities;<sup>7</sup> and finally, whether the respondents reside in the same municipalities as either of their parents, as based on data from 2012 on the registered place of residence for mothers, fathers and the respondents. See [Table 1](#) for a description of the means and dispersions of these variables.

### 3.3. Analytical strategy

The main event analysed is nest-leaving, with the assumption that the respondents lived with their parents prior to the window of

observation and could have moved away up until the time of the survey.<sup>8</sup> As discussed, nest-leaving depends on housing availability, desires, needs and resources, which indicates that the models need to account for these to estimate an unbiased social capital effect. The control variables specified above aims to adjust for these factors.

Still, a problem in estimating the effect of resources on nest-leaving is reverse causality between nest-leaving and social capital. Specifically, moving away from parents might lead to relationship replacements as individuals become detached from their old family-based networks ([Tosi and Gähler, 2016](#)). To mitigate reverse causality, nest-leaving is analysed in a lagged dependent and explanatory variable model, where living with parents in wave two is regressed on extensivity of contacts and living with parents in wave one.

The current study also examines the housing tenure the respondents obtained and whether they used contacts to find this housing. These models exclude respondents living with their parents, thus comparing the effects of social capital among nest-leavers. The benefit of this approach is that the analysis only considers individuals obtaining accommodation, which ultimately helps reduce the bias related to preferring to remain with parents. However, this introduces a potential selection bias because those with insufficient resources for moving are excluded. Still, this is the preferred modelling strategy, as the process of obtaining housing can, to some extent, be considered separate from the process of nest-leaving. In addition to the controls included in the nest-leaving analysis, the models introduced a control for whether the respondents lived in the same municipality as their parents.<sup>9</sup>

The variables measuring housing tenure have multiple nominal outcomes. Here, the preference is to dummy code variables and analyse them in linear probability models (LPM) with robust standard errors. In effect, the results from the LPM are very similar to the average marginal effects from the multinomial regression, so the conclusions do not depend on the estimation procedure.

The interpretation of the housing tenure models ([Table 5](#)) is whether the likelihood to obtain a certain housing tenure is higher or lower than the average, and a positive coefficient means that one is more likely to obtain a housing tenure than the average among nest-leavers, which

<sup>7</sup> This classification was based on municipality groups that reflect structural conditions, such as population size, labour market opportunities and industrial structure ([SKL, 2011](#)).

<sup>8</sup> Six respondents without parents with a registered income were excluded.

<sup>9</sup> The nest-leaving model controlled for urbanity in the places respondents lived with their parents in 2007, whereas the housing attainment model included where they lived in 2012.

**Table 3**

Cross tabulation of channel and housing tenure.

	First-hand contract	Second-hand contract	Owned	Student housing	Other	Total column %
Bought from estate agent	0.6	0.0	52.5	0.5	0.0	14.3
Ads	6.4	13.8	6.8	5.0	10.7	6.9
Tips via contacts	26.4	61.3	12.9	13.4	25.0	22.9
Housing list	38.0	2.5	1.4	40.1	0.0	25.0
Private agency, e.g., web-based	12.2	11.3	7.9	15.8	17.9	11.8
Student organization	3.2	0.0	0.4	16.3	0.0	4.6
Other	13.1	11.3	18.2	8.9	46.4	14.4
Total Column %	100	100	100	100	100	100
Total Row %	44.1	7.6	26.5	19.1	2.7	100
N	466	80	280	202	28	1056

Note: The table is based on respondents who do not live with their parents.

gives a good indication of what resources distinguish people obtaining a specific housing tenure.

## 4. Results

### 4.1. Accommodation arrangements

Table 2 shows the respondents' living arrangements analysing those with and without immigrant backgrounds separately. In wave 1, when the respondents were about 19 years old, 88 % of those with an immigrant background and 79 % with a Swedish background lived with their parents. By the time of the second wave, by which the respondents were 22 or 23 years old, the situation was quite different. At this age, only 21 % of the respondents with Swedish backgrounds and 42 % with immigrant backgrounds still lived with their parents. This is in line with previous studies showing that the mean nest-leaving age in Sweden is 20, which is the earliest nest-leaving age in the EU (Eurostat, 2020).

Table 2 also displays the difference in living arrangements among those who left their parental homes. The wave 2 results demonstrate that about one-third of all the respondents lived alone, and almost as large a proportion lived together with a partner, while living with a friend or sibling was less common.

Next, Table 3 displays the results from a cross-tabulation of channels used to obtain housing and housing tenure for respondents not living with their parents in wave 2. Regarding the overall distribution of obtained housing tenure, the marginal distributions show that first-hand rental contracts were the most common housing tenure that the respondents obtained (44 %), followed by owned apartments (27 %). Obtaining a second-hand rental contract was relatively uncommon, with only 8 % of the sample having housing with such contracts. In terms of the channel used to obtain housing, the housing list and tips via contacts were the two most common channels, both used by about a quarter of the respondents (25 % and 23 %, respectively).

The cross-tabulation reveals important differences in the channel used across housing tenures (Table 3). To obtain owned accommodations, real estate brokers dominate (53 %), while 'other' channels are also quite common (18 %), and tips via contacts is the third most used channel (13 %). For first-hand rental contracts, the housing list is the most used channel (38 %), but tips via contacts are also used quite often (26 %). Tips via contacts are even more common for second-hand rental contracts (61 %). Thus, contacts are most often used for informal second-hand rental contracts, which is in line with the hypothesis based on the transaction costs associated with this agreement type.

### 4.2. Nest-leaving: regression analysis

Table 4 displays the models for the likelihood to not be living with parents at age 22. To test whether any of the variables can explain the difference between the respondents of native and immigrant backgrounds in likelihood to leave their parents' home, model 1 includes only immigrant background and basic controls, though subsequent models introduce additional variables to see whether these account for the lower likelihood of nest-

leaving in the children of immigrants.

Model 2 includes the respondents' own income and other control variables, and the results show that these are quite important in explaining nest-leaving, and that they also account for some of the lower likelihood of nest-leaving among children of immigrants. Model 3, introduce the extensity measure of social capital, and its results show that it is significantly related to nest-leaving. The coefficient for extensity is 0.39, indicating an extra standard deviation increases the likelihood of the respondents' nest-leaving by about 4 percentage points. In other words, respondents with higher social capital are substantially more likely to leave their parental home.

Model 3 also includes parental income, and for this variable, the coefficient is not significant. This null result could perhaps be explained by counteracting mechanisms pertaining to transferable and non-transferable resources that cancel each other out in the early twenties. Therefore, it does not account for the gap between children of immigrants and others.

To explain the higher nest-leaving age of children of immigrants with differences in access to social capital, the children of immigrants would need to access less social capital. However, this is not the case: the children of immigrants in the groups under study access more social capital than the group with a native background (see Table 1 and Andersson et al. (2018)). As a result, the difference in nest-leaving age cannot be explained by access to social capital or parental income (model 3), as indicated by the fact that the coefficient is larger in these models compared with the control model.

Model 4 introduces family structure variables, and several of these show important relations with nest-leaving, which is in line with previous research. Moreover, the coefficient for immigrant background was reduced when these variables were included, indicating that these, to some extent, account for the difference between the children of immigrants and others.

Although there are no social capital deficits for the children of immigrants, it might be the case that immigrants have a lower return on their social capital (cf. Smith, 2005). This is tested in model 5, which introduces an interaction between immigration background and extensity. The results indicate that the interaction coefficient is rather small and not significant, suggesting that social capital is about equally valuable for respondents with immigrant and native backgrounds. Thus, these results suggest that a lack of social capital or economic support does not explain why the children of immigrants are less likely to have moved out of their parental homes by age 22.

### 4.3. Social capital, channels used and obtained housing tenure

To better understand the process in which social capital and parental economic support lead to outcomes, the analysis below investigates if these are related to obtained housing tenure (Table 5) and whether housing was obtained through contacts or other channels (Table 6).

It was hypothesised above that social capital is related to obtaining second-hand rental housing, which involves substantial transaction costs in relation to possible economic profits. Table 5 displays an analysis of the obtained housing tenure. Indeed, the results show that extensive social capital is related to the likelihood of acquiring housing with a second-hand rental contract, with a coefficient of 0.19, indicating a 2

**Table 4**  
Not living with parents (W2) and social capital (W1) (LPM).

	(1)	(2)	(3)	(4)	(5)
<b>Immigrant backgrounds</b> (ref = Swedish born parents)					
Parent(s) born abroad	−0.194*** (0.023)	−0.151*** (0.024)	−0.166*** (0.025)	−0.134*** (0.025)	−0.134*** (0.025)
<b>Gender</b> (ref = male)					
Female	0.079*** (0.023)	0.075** (0.023)	0.075*** (0.023)	0.050* (0.023)	0.050* (0.023)
<b>Own income</b>					
Disposable income (z-stand.)		0.102*** (0.012)	0.100*** (0.012)	0.091*** (0.012)	0.091*** (0.012)
<b>Parental income</b>					
LN Parental disposable income (z-stand.)			−0.010 (0.013)	0.017 (0.014)	0.017 (0.014)
<b>Social capital</b>					
Extensity (z-stand.) (W1)			0.039*** (0.012)	0.035** (0.011)	0.038** (0.014)
Extensity (z-stand.) (W1)* Parent(s) born abroad					−0.006 (0.023)
<b>Family structure</b>					
Number of siblings				−0.019^ (0.012)	−0.019^ (0.011)
Birth order				0.019 (0.014)	0.018 (0.014)
Mother and father live in the same household (yes = 1, no = 0)				−0.087*** (0.025)	−0.087*** (0.025)
Have children of their own (yes = 1, no = 0)				0.193*** (0.030)	0.194*** (0.030)
In romantic relationship (yes = 1, no = 0)				0.131*** (0.023)	0.131*** (0.023)
<b>Controlling for</b>					
Lagged dependent variable	Yes	Yes	Yes	Yes	Yes
Main activity (Employed/Studying/NEET)	No	Yes	Yes	Yes	Yes
Grade point average	No	Yes	Yes	Yes	Yes
Urbanity 2007 (Large city/Rural/Other)	No	Yes	Yes	Yes	Yes
Constant	0.724*** (0.020)	0.579*** (0.061)	0.608*** (0.062)	0.552*** (0.068)	0.553*** (0.068)
Observations	1488	1488	1488	1488	1488
R-squared	0.077	0.129	0.136	0.171	0.171

Robust standard errors in parentheses.

\*\*\* p < 0.001.

\*\* p < 0.01.

\* p < 0.05, ^ p < 0.10.

percentage point higher likelihood, which is substantial given that only 7.6 % of the respondents have these contracts. This result suggests that greater access to second-hand rental contracts can explain some of the positive relation between social capital and the likelihood of nest-leaving.

Table 5 also displays the coefficient for parental income, with the results demonstrating a positive relation between parental income and home ownership, as well as a negative relation between parental income and the likelihood of acquiring first-hand rental housing. This suggests that the respondents with high-income parents substitute rented with owner-occupied housing.

The results in Table 5 also show that children of immigrants have a higher likelihood of living in owner-occupied housing and a lower likelihood of living in housing with second-hand rental contracts. One explanation for this could be that children of immigrants are less likely to use contacts to obtain housing, which is tested in Table 6.

Table 6 displays models of the likelihood of using tips via one's contacts to obtain housing. Because this channel and obtained housing tenure are interdependent, Table 6 displays separate models for owner-occupied and rented housing. The social capital results show that extensity is associated with the likelihood of acquiring a home through contacts, but only if the home is rented. A significant coefficient at 0.062 implies that an extra standard deviation in extensity predicts an increased likelihood of obtaining housing through contacts by 6 percentage points if the housing is rented. Hence, individuals with an extensive network have an advantage when obtaining rental housing through contacts.

Regarding the results for contact use among children of immigrants model 1 displays that they are significantly less likely to have obtained

their rented housing through contacts. This difference decreases somewhat in model 2, which includes parental income, social capital and the control variables, but most of the difference remains, suggesting that neither access to social capital nor the other variables can account for the lower contact use of children of immigrants. To test whether the lower contact use of children of immigrants can be explained by a return deficit, model 3 includes an interaction between extensity and immigrant background. The results show that there is an interaction effect at -0.021 and a main effect at 0.067. Although this could be a sign that the children of immigrants have lower returns on their social capital, the interaction is not statistically significant. In conclusion, access or return differences in the type of social capital analysed here does not seem to be the main explanation for the lower use of contacts among children of immigrants.

## 5. Discussion

The current paper investigates the effects of two possible sources of support on nest-leaving: parental economic capital and an individual's access to social capital. The results demonstrate that social capital is related to nest-leaving, but parental economic capital is not. However, both of these sources of support are associated with the type of obtained housing tenure. The results also indicate that social capital is related to finding rented housing through contacts and that the children of immigrants use contacts less often to obtain their accommodation.

Here, social capital is understood as the extensity of an individual's social network in terms of connections to people in a wide range of positions in society. The results show that this type of social capital is related to a higher

**Table 5**  
Social capital and housing tenure (LPM).

	First-hand rental contract	Second-hand rental contract	Owned apartment/ House	Student housing	Other
	(1)	(2)	(3)	(4)	(5)
<b>Social capital</b>					
Extensity (z-stand.) (W1)	−0.027 (0.016)	0.019* (0.009)	0.009 (0.014)	0.006 (0.011)	−0.008 (0.005)
<b>Parental income</b>					
LN Parental disposable income (z-stand.)	−0.071*** (0.018)	−0.004 (0.012)	0.079*** (0.018)	0.004 (0.013)	−0.007 (0.006)
<b>Own income</b>					
Disposable income (z-stand.)	0.014 (0.018)	−0.021* (0.009)	0.037* (0.016)	−0.021 (0.012)	−0.010 (0.006)
<b>Immigrant background</b> (Ref = Swedish born parents)					
Parent(s) born abroad	−0.055 (0.034)	−0.050* (0.019)	0.071* (0.029)	0.023 (0.025)	0.010 (0.012)
<b>Gender</b> (ref = male)					
Female	0.036 (0.032)	0.010 (0.018)	0.026 (0.027)	−0.079*** (0.023)	0.007 (0.011)
<b>Family structure</b>					
Number of siblings	0.002 (0.016)	0.007 (0.010)	−0.029* (0.013)	0.005 (0.012)	0.015* (0.007)
Birth order	0.018 (0.020)	−0.003 (0.011)	0.001 (0.017)	−0.004 (0.014)	−0.012 (0.006)
Mother and father live in the same household (yes = 1, no = 0)	0.040 (0.034)	−0.015 (0.020)	−0.009 (0.032)	−0.007 (0.025)	−0.010 (0.012)
Have children of their own (yes = 1, no = 0)	−0.201** (0.075)	−0.062*** (0.016)	0.340*** (0.074)	−0.038 (0.029)	−0.039*** (0.011)
In a romantic relationship (yes = 1, no = 0)	0.109*** (0.031)	−0.039* (0.018)	0.040 (0.027)	−0.094*** (0.023)	−0.015 (0.011)
<b>Controlling for</b>					
GPA, urbanity, main activity, and distance to parents.	Yes	Yes	Yes	Yes	Yes
Constant	0.574*** (0.092)	0.132* (0.054)	0.257*** (0.076)	−0.046 (0.055)	0.083 (0.044)
Observations	1033	1033	1033	1033	1033
R-squared	0.069	0.042	0.102	0.205	0.030

Robust standard errors in parentheses. \*\*\*  $p < 0.001$ , \*\*  $p < 0.01$ , \*  $p < 0.05$ .

Note: Models do not include respondents living with their parents and controlling for Urbanity 2012 (Large city/Rural/Other), grade point average and main activity (Employed/Studying/NEET) and living in a different municipality than parents.

likelihood of nest-leaving, obtaining an apartment through contacts and obtaining housing with a second-hand rental contract. In addition, the current paper demonstrates that the association between social capital and nest-leaving cannot likely be explained with reverse causality or a relationship between social capital and likely confounders, such as individual income, family structure or earning potential. The analysis shows that social capital is related to the theoretically expected channel – obtaining housing via contacts – and the expected type of housing tenure – second-hand rental contracts – which strengthens a causal interpretation. This is in line with the arguments that the main function of this dimension of social capital is to mitigate the transaction costs associated with short-term personal agreements. However, it remains unclear whether the effects of social capital variables actually funnel through the proposed network mechanisms, such as information, or if they are related to individual characteristics related to the extensity dimension of social capital, such as trustworthiness, openness or extroversion (Tulin et al., 2018). This topic could be considered in future research.

The current paper also investigates the effects of parental economic capital on nest-leaving, which is measured as the long-term average income of parents, arguing that a higher income allows parents to provide support for their children. The results show that having high-income parents did not increase the likelihood of the respondents' nest-leaving by age 22. Nevertheless, the findings show that high parental income makes it more likely to live in owner-occupied accommodations, suggesting that children do benefit from parental support. These results suggests that there are both push and pull factors related to transferable and non-transferable resources, such as spacious housing, which can counteract each other. The current paper could not, however, show the relative importance of mechanisms such as preferences, inheritance, in vivo cash gifts, or some forms of co-ownership

(cf. Helderma and Mulder, 2007; Li and Hung, 2019).

In comparison, the effects of an extensive social network are arguably situational and less structured by family networks. Nevertheless, one shortcoming of the current paper is that it did not consider parental networks and, therefore, could not help in estimating the extent of intergenerational transmission involved when housing is obtained through contacts. Investigating the role of parental networks, as well as other non-monetary resources, in acquiring housing is a topic for future research accordingly.

The results also show that the respondents with immigrant backgrounds were much more likely to live with their parents at the age of 22; the current paper tests whether this can be explained by access to social capital. Its findings show that neither access to social capital nor return deficits can account for the lower likelihood of nest-leaving. Yet, the results did identify that individuals with an immigrant background are less likely to obtain housing via contacts. Although less contact use is not necessarily an indication of a disadvantage, it could indicate landlord bias against immigrants when informal channels are used, which is a topic for further research. In this vein, it is important to investigate the role of possible referrals, since previous research in the labour market context points to that disadvantages for minorities are larger in informal channels without referrals i.e. direct application (Holzer, 1987). Furthermore, there might also be measurement issues, as the current study used a social capital measure that did not specifically measure contacts possessing (housing) wealth, which is likely a key resource for housing outcomes. It is possible that the children of immigrants are disadvantaged in this type of locally bound social capital in contrast to the measure of extensive occupational networks used herein. Finally, it should be highlighted that even if discrimination and social capital disadvantage occurs, it is unlikely to explain the entire gap between children of immigrants and others. Sweden is a country with a very low average



**Table 6**

Social capital and using contacts to obtain accommodations (LPM). Separate models for owner-occupied and rented housing tenure.

	Using contacts (rented)			Using contacts (owner-occupied)		
	(1)	(2)	(3)	(4)	(5)	(6)
<b>Immigrant background</b>						
(ref = Swedish born parents)						
Parent(s) born abroad	−0.074*	−0.067*	−0.064*	−0.018	−0.026	−0.035
	(0.033)	(0.036)	(0.036)	(0.042)	(0.047)	(0.047)
<b>Gender</b>						
(ref = Male)						
Female	0.018	0.034	0.033	−0.011	0.004	0.009
	(0.032)	(0.032)	(0.032)	(0.041)	(0.045)	(0.045)
<b>Social capital</b>						
Extensity (z-stand.) (W1)		0.059***	0.067**		−0.022	−0.049*
		(0.016)	(0.021)		(0.022)	(0.029)
Extensity (z-stand.) (W1) * Parent(s) born abroad			−0.021			0.063
			(0.033)			(0.045)
<b>Parental income</b>						
LN Parental disposable income (z-stand.)		0.005	0.006		−0.008	−0.004
		(0.021)	(0.021)		(0.023)	(0.023)
<b>Own income</b>						
Disposable income (z-stand.)		−0.004	−0.004		−0.044*	−0.043*
		(0.019)	(0.019)		(0.022)	(0.022)
<b>Family structure</b>						
Number of siblings		0.011	0.010		0.016	0.016
		(0.016)	(0.016)		(0.028)	(0.028)
Birth order		−0.036*	−0.037*		0.051*	0.051*
		(0.021)	(0.021)		(0.029)	(0.029)
Mother and father live in the same household (yes = 1, no = 0)		−0.037	−0.038		−0.028	−0.032
		(0.038)	(0.038)		(0.046)	(0.046)
Have children of their own (yes = 1, no = 0)		−0.115	−0.113		−0.015	−0.025
		(0.096)	(0.096)		(0.074)	(0.074)
In a romantic relationship (yes = 1, no = 0)		−0.017	−0.016		−0.024	−0.026
		(0.032)	(0.032)		(0.044)	(0.044)
<b>Controlling for</b>						
GPA, urbanity, main activity, and distance to parents.	No	Yes	Yes	No	Yes	Yes
Constant	0.286***	0.469***	0.471***	0.145***	0.101	0.101
	(0.027)	(0.094)	(0.094)	(0.035)	(0.127)	(0.127)
Observations	743	743	743	273	273	273
R-squared	0.007	0.083	0.083	0.001	0.076	0.083

Standard errors in parentheses. \*\*\*  $p < 0.001$ , \*\*  $p < 0.01$ , \*  $p < 0.05$ , ^  $p < 0.10$ .

Note: Models do not include respondents living with their parents and controlling for urbanity 2012 (Large city/Rural/Other), grade point average and main activity (Employed/Studying/NEET).

nest-leaving age, and young adults with backgrounds in other cultures likely hold preferences for nest-leaving and cohabitation that differ from those of young adults with Swedish background.

There are some policy relevant issues related to this study's findings. First, the results showing that individuals with high social capital have better access to housing could have consequences for residential segregation. For instance, if some neighbourhoods are more accessible to individuals with specific contacts, it may explain the high concentrations of immigrants in certain areas (cf. [Hochstenbach and Boterman, 2017](#); [Van Kempen and Şule Özüekren, 1998](#)).

Second, the fact that social capital is related to a specific housing tenure suggests that the role of social capital in the housing market depends on the legal and institutional framework. Although there are private companies trying to solve the transaction costs problem, the results in [Table 4](#) suggest that their market share, at the time of study, was quite limited (11 %). [Boverket \(2015\)](#) highlights the lack of public institutions in reducing transaction costs for short-term informal deals; thus, establishing such institutions would likely reduce the role of contacts and social capital in the second-hand rental contract market.

In conclusion, the current paper demonstrates that not only economic resources and market mechanisms can explain an individual's nest-leaving ability, but contact use and access to social capital also play an important role. This suggests that institutional framework affects housing access: the more homes acquired via a formal channel, the less useful social capital is. However, when market mechanisms and house ownership become more important, this increases the importance of access to monetary resources and parental economic capital, suggesting that studies of housing market

inequality need to have a multi-dimensional perspective.

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## Declaration of Competing Interest

The authors report no declarations of interest.

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## Appendix A

[Table A1.](#)

**Table A1**  
Sensitivity analysis depending on wave and sample (LPM).

	Not living with parents			Tips via contacts			Second-hand rental contract		
	Wave 2 sample	Panel sample	Panel sample	Wave 2 sample	Panel sample	Panel sample	Wave 2 sample	Panel sample	Panel sample
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
<b>Social capital</b>									
Extensy (z-stand.) (W1)			0.035** (0.011)			0.036* (0.014)			0.018* (0.009)
Extensy (z-stand.) (W2)	0.013 (0.010)	0.017 (0.012)		0.036** (0.012)	0.053*** (0.014)		0.020* (0.008)	0.031** (0.010)	
<b>Parental income</b>									
LN Parental disposable income (z-stand.)	0.009 (0.011)	0.016 (0.014)	0.017 (0.014)	−0.020 (0.013)	−0.020 (0.016)	−0.019 (0.016)	−0.005 (0.011)	−0.005 (0.012)	−0.004 (0.012)
<b>Immigrant background</b> (ref = Swedish born parents)									
Parent(s) born abroad	−0.135*** (0.021)	−0.130*** (0.025)	−0.134*** (0.025)	−0.075** (0.024)	−0.073* (0.029)	−0.069* (0.029)	−0.046** (0.017)	−0.050* (0.020)	−0.046* (0.020)
<b>Lagged dependent variable</b>									
Not living with parents (W1)		0.100*** (0.027)	0.097*** (0.026)						
<b>Including all control variables</b>	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Constant	0.524*** (0.055)	0.528*** (0.067)	0.552*** (0.068)	0.326*** (0.068)	0.280*** (0.080)	0.294*** (0.081)	0.151** (0.046)	0.084 (0.053)	0.084 (0.054)
Observations	2087	1493	1488	1392	1021	1016	1419	1033	1033
R-squared	0.183	0.167	0.171	0.041	0.046	0.040	0.024	0.043	0.035

Note: Models include the same variables as corresponding models in the main analysis. Robust standard errors in parentheses. \*\*\*  $p < 0.001$ , \*\*  $p < 0.01$ , \*  $p < 0.05$ .

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