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“Leaving the nest with wings spread or rooted down”

**Exploring the relation between parental socioeconomic status and the
geographical proximity between young adults and their parents in the
Netherlands**

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Abstract

Young adults' decisions about whether or not to live close to their parents reflect complex considerations. Moving away allows them to pursue educational and career goals, while staying close by, they can maintain good family bonds and exchange mutual instrumental support. Would this decision be influenced by the socioeconomic status (SES) of the parents of the young adult? Understanding this dynamic could inform policies on familial support systems and residential decisions.

This article aims to explore how two contrasting theories of the influence of parental socioeconomic status, developed to explain the age of leaving the parental home - the socialisation and feathered nest hypothesis - apply to the travel time between parents and their young adults' residence in the Netherlands. We do so using data from the Generations and Gender Survey (GGS-II). This study examines how the separate indicators of parental SES: educational level, income, and occupational status, are associated with travel time between parents and young adults. Additionally, it analyzes whether the gender of the young adult or the urbanity of the parent's residence influences these associations.

Our findings suggest that parental educational level is positively related to travel time. However, parental income level and occupational status seem to have less impact and the relation between parental SES and the relations seem not to be influenced by the gender of the young adult or the urbanity. These results offer partial support for the socialisation hypothesis but can also indicate that these theories don't explain the differentiation in intergenerational distance.

Keywords: intergenerational proximity, travel time between child and parent, parental socioeconomic status, socialisation hypothesis, feathered nest hypothesis, young adults, Netherlands.

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List of abbreviations

ESS	European Social Survey
GGs-II	Second round of the Generation and Gender Survey
ISCED	International Standard Classification of Education
ISCO.....	International Classification of Occupation
ISEI	International Socioeconomic Index of Occupational Status
KDE.....	Kernel Density Estimates
SES	Socioeconomic status

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1. Introduction

As a parent, witnessing your adult children leave home and establishing an independent household is pivotal for them, but it also profoundly impacts your relationship with them (Mulder, 2009). The locational choice of young adults is often not easy, as they weigh the options between pursuing personal development goals, related to education or career which may entail moving far away (Gillespie et al., 2021; Michielin & Mulder, 2007), or opting to remain nearby to maintain family bonds and exchange instrumental support (Brandén & Haandrikman, 2019; Gillespie & Lei, 2021; Leopold et al., 2012; Michielin & Mulder, 2007; Mulder & Van der Meer, 2009). Despite the growing ease of providing some forms of family support from a distance through technological advancements, such as economic and emotional support (Isengard, 2013; Reyes et al., 2020; Treas & Gubernskaya, 2018), there persists a negative relationship between familial support exchange and spatial distance (Compton & Pollak, 2015; Mulder & Van der Meer, 2009).

Some families tend to live farther apart than others, prompting the question: what determines this variation?

Previous studies have examined the relationship between the age at which young adults leave home and the SES of the parents. These studies underscore parental socioeconomic status (SES) as a crucial factor, though findings are mixed. Billari et al. (2019) suggest young adults with high-SES parents leave home earlier, influenced by parents encouraging exploration and delaying permanent transitions like marriage, aligning with the 'socialisation theory' (Ferraretto & Vitali, 2023). In contrast, Angelini et al. (2022) found a positive relationship between parental SES and the age of leaving home, supporting the opposing 'feathered nest' hypothesis, which posits that high-SES young adults delay independence due to comfortable living conditions at their parental home (Avery et al., 1992; Ferraretto & Vitali, 2023).

Similar factors may influence young adults' decisions on how far to move when leaving home. Both the timing and distance of their move are critical in the transition to adulthood, as these decisions affect their residential location and the balance between receiving support from parents and pursuing individual development independently. Previous Dutch studies have found a significant relationship between early nest leaving and a greater distance to parents in the Netherlands (Gillespie & van der Lippe, 2015; Michielin & Mulder, 2007). Those who left home earlier might seek greater independence by moving further away or they already had more time for subsequent long-distance moves away from the parental home (Rogerson et al., 1993). In contrast, we argue that those who delayed leaving may stay closer to their parents to continue receiving their support. Therefore, we propose that theories explaining the impact of parental SES on the timing of nest-leaving may also shed light on intergenerational spatial dynamics.

According to the ‘socialisation’ hypothesis, young adults from higher SES backgrounds are likely to live farther from their parents. This aligns with studies across Europe and the US, indicating that young adults with highly educated parents tend to reside farther away compared to those with less educated parents (Gillespie & Lei, 2021; Isengard, 2013; Leopold et al., 2012; Michielin & Mulder, 2007). Conversely, the ‘feathered nest’ hypothesis suggests that affluent parents may provide resources that keep their children close to home.

Despite social benefits and family policies promoting independence, Dutch young adults opt to live close to their parents compared to other (also similar-sized) European countries (Isengard, 2013). Moreover, the Netherlands faces a housing shortage, primarily due to rapid population growth, which resulted in higher housing prices and ownership costs (Boelhouwer, 2020; Ministerie van Binnenlandse Zaken en Koninkrijksrelaties, 2023). Consequently, young adults have to rely more on parental support in their housing choices (Hochstenbach & Boterman, 2017). An Italian study showed that receiving this support leads young adults to buy a house close to their parents (Tomassini et al., 2003), aligning with the ‘feathered nest’ hypothesis that suggests that the more resources the parents have, the bigger the chance that the children live nearby. These circumstances in the Netherlands underscore the need for further research into the relationship between parental SES - beyond solely the educational level - and the proximity of young adults to their parents.

Literature suggests that this relationship could vary in specific conditions. Firstly, the gender of the young adult might amplify the effect of parental SES on proximity as daughters tend to be more influenced by their parents (Blaauboer & Mulder, 2010). Secondly, the pull factor for young adults to urban areas (Feijten et al., 2008; van der Pers & Mulder, 2013), could potentially limit the distances for well-off parents living in urban areas.

Therefore this paper examines the relationship between the geographical proximity of young adults and their parents and parental socioeconomic status in the Netherlands by applying the ‘socialisation’ and ‘feathered nest’ hypotheses and investigates the moderating effect of gender of the young adults and the degree of urbanity on this relationship. To do so, log-linear regression analyses are conducted on the travel time between parents and their children using recently collected Dutch data (2022-2023) from the second round of the Gender and Generation Survey.

This study contributes to the existing literature in multiple ways: firstly, previous research in intergenerational proximity mainly focuses on the distance between older parents and their middle-aged children, while this study contributes to the understanding of this distance for a younger group. Young adults experience different factors in deciding their residential location. For instance, they have a higher chance of still being dependent on their parents for support than older children; therefore their parental SES may have more influence on their housing decisions, especially now when entering the housing

market is becoming harder (Arundel & Hochstenbach, 2020; Hochstenbach, 2018). Moreover, younger adults, who are less likely to have children compared to older young adults, may find themselves more flexible in their living arrangements. As a result, younger adults have more choices in where they live, without necessarily needing to prioritize proximity for grandparental support in childrearing (Gillespie & Lei, 2021; Isengard, 2013; Isengard et al., 2019; Leopold et al., 2012).

This study's second contribution is the application of the 'socialisation' and 'feathered nest' hypotheses, traditionally used in the study of the 'propensity of leaving the parental home,' to the context of intergenerational proximity. Thirdly, we examine these theories in greater depth by testing their applicability under specific conditions, such as differences between daughters and sons and between urban and rural areas. Lastly, we separately investigate the influence of each indicator of parental socioeconomic status - educational level, occupational status, and income - on the distance between young adults and their parents. By examining these indicators separately, we gain a more nuanced understanding of how different aspects of SES impact intergenerational proximity. Notably, to our knowledge, this study is the first to examine the effect of income on intergenerational distance between parents and young adults in the Netherlands.

If our results show that higher parental SES leads to longer distances between parents and young adults, this would support the socialisation hypothesis, indicating that economic resources enable young adults to move farther away for better opportunities. Conversely, if higher SES results in shorter distances, this would support the 'feathered nest' hypothesis, suggesting that wealthier families can afford to live close to each other. Understanding these patterns can inform policies aimed at reducing socioeconomic inequality in mobility by ensuring more equal access to housing and mobility options for all socioeconomic groups in the Netherlands.

2. Theoretical framework

This section introduces the theoretical framework underpinning hypotheses concerning the influence of parental socioeconomic status on intergenerational proximity, as well as potential moderating factors. It begins with an exploration of theories surrounding the role of parental SES in intergenerational proximity, followed by an examination of key moderators, including the gender of young adults and the urbanity of their parents' residential location.

2.1. The role of parental socioeconomic status on intergenerational proximity

Previous research concludes that parental socioeconomic status has a significant impact on the distance between parents and their adult children (Chan & Ermisch, 2015; Gillespie & Lei, 2021; Isengard, 2013; Michielin & Mulder, 2007). Leopold et al. (2012) found in Germany that young adults who receive transferable support from their parents, such as financial assistance, advice, or emotional support, are better positioned to make independent spatial decisions and pursue opportunities in various geographical areas. The issue of how these parental resources, broader than only educational level, translate into differences in proximity for young adults in the Netherlands remains unanswered.

Since the theory of spatial outcomes for young adults is relatively underdeveloped, there is no integrative theoretical framework for explaining why most young adults relocate close to their parental home and why some move across greater distances (Leopold et al., 2012). This paper, therefore, tests two contrasting theories - the 'socialisation' and 'feathered nest' hypotheses - on the impact of parental SES on the spatial proximity of young adults. We argue that similar factors might influence both the propensity to leave the parental home and the distance moved, as previous studies found a significant relationship between early nest-leaving and greater distance to parents in the Netherlands (Gillespie & van der Lippe, 2015; Michielin & Mulder, 2007). Ferraretto and Vitali (2023) applied these two theories to examine SES differences in the timing of leaving the parental home. In the following paragraphs, we translate these hypotheses into the context of spatial proximity.

2.1.1. The socialisation theory

The first hypothesis states that young adults with a high parental SES are more likely to move sooner out of the parental house. According to socialisation theory, parents shape their children's values, attitudes, and intentions regarding demographic issues. This suggests that young adult children of high- and low-SES parents might have different intentions on these matters (Billari et al., 2019). High SES children would be encouraged to explore their options, leading to a postponement of nonreversible transitions like childbearing and marriage, thereby preparing for transitions that foster independence and autonomy. Accordingly, they might be more inclined to leave the house sooner to attend higher education and/or live independently (Ferraretto & Vitali, 2023).

When applying this reasoning on the impact of parental SES on intergenerational proximity, this would suggest that parents with a high SES would encourage their children to move farther away. This could be explained via two mechanisms. Firstly, as said previously, highly educated parents are likely to transmit their children values of self-exploration and self-focus and therefore delay nonreversible transitions such as marriage and childbearing (Billari et al., 2019; Ferraretto & Vitali, 2023; Rijken & Liefbroer, 2009). By postponing having children, young adults might be able to choose more freely where to live, as literature emphasizes the role of grandparents' proximity in assisting child-rearing (Gillespie & Lei, 2021; Isengard, 2013; Isengard et al., 2019; Leopold et al., 2012). The parents might also encourage their offspring to attain a high education level, to avoid downward mobility (Billari et al., 2019). Likewise, Leopold (2012) explains this encouragement as a motive of status maintenance, whereby parents from higher SES are more inclined to accept greater distances as their children move to areas that allow maximizing educational attainment and returns to education. As enrollment in higher education often requires a long-distance move, this makes them live farther away (Michielin et al., 2008). Contrastingly, low-SES parents may prioritize their children to fulfill adult roles and commit to union formation, marriage, and parenthood above attaining a higher diploma. An earlier entry into the labor market also makes them economically independent from their parents (Billari et al., 2019).

Secondly, as high-SES parents have more financial resources, they can also help to realize the wish of the children to live far away to access more development goals. For instance, they assist the grown child with paying tuition fees and rent in a remote place to live alone and attend occupational opportunities far away from home (Gillespie & Lei, 2021; Iacovou, 2010). They can even help their adult children purchase a house far away, wherefore they can freely choose where to live as they have more resources (Hochstenbach, 2018).

2.1.2. The feathered nest hypothesis

The 'feathered nest' hypothesis states that high socioeconomic status parents make their children stay at home longer because they live in comfortable houses and receive a lot of parental instrumental support (Ferraretto & Vitali, 2023). When applying this reasoning to the intergenerational distances, it suggests that parents with a high SES tend to make their children reluctant to move far away. This might be because the parents have more resources and can provide more support if the young adults stay close by, such as meal preparation and household chores (Fingerman et al., 2015; Gillespie & Lei, 2021). Studies suggest that affluent parents often live in good neighborhoods with high locational-specific capital, increasing the costs of leaving for young adults (DaVanzo, 1981; Michielin & Mulder, 2007).

Yet again, the possibility of parental financial support in purchasing a house can also back this contrasting hypothesis up. As discussed above, young adults would want to stay close to their parents, facilitating face-to-face contact, care exchange and familial support exchange (Mulder & Cooke, 2009; Mulder & Van der Meer, 2009). This proximity desire, along with financial assistance in buying a house

from their parents, makes it more likely that they will purchase a house nearby (Tomassini et al., 2003). This might be because young adults feel obligated to stay close in exchange for this financial support, allowing them to provide care as their parents age. However, Gillespie and Lei (2021) did not find evidence supporting this hypothesis in the US. Lastly, parents might pass residential property to their children, giving them no choice where to reside (Isengard, 2013).

2.1.3. Summary of empirical literature

Previous studies conducted in the Netherlands (Michielin & Mulder, 2007), the US (Gillespie & Lei, 2021), Germany (Leopold et al., 2012), and a cross-national European study (Isengard, 2013) found support for the 'socialisation' hypothesis, as the children from highly educated parents tended to live farther away from their parental home.

Studies exploring parental socioeconomic status beyond educational attainment have yielded varied findings. Gillespie and Lei (2021) investigated the relationship between intergenerational proximity and factors such as parental home ownership and income levels in the US. They found no clear link between these factors and the distance young adults live from their parents. Likewise, Isengard (2013) utilized aggregated data from fourteen European countries, including the Netherlands, incorporating household financial situations as categorical variables, capturing how well the household makes ends. Her analysis also revealed that the economic circumstances of parents had minimal influence on intergenerational. However, Leopold et al. (2012) discovered a clear positive correlation between the per-capita household income and the intergenerational distance in Germany, contradicting the 'feathered nest' hypothesis.

The preceding paragraph underscores the gap in the explicit examination of parental SES, broader than only educational attainment, in the Netherlands, except in the aggregated data analyzed by Isengard (2013). Nonetheless, Isengard (2013) found that in nations with substantial social benefits and family-policy expenses, parents and their children tended to live farther apart. Interestingly, the Netherlands deviated from this trend; despite offering robust social benefits, it ranked third, following Spain and Italy, among the fourteen countries studied in terms of generations residing within a maximum radius of five kilometers, closely followed by Greece and Belgium (Isengard, 2013). This anomaly makes the Netherlands a compelling case for a detailed examination of how the SES indicators influence intergenerational living distances.

To summarize, according to the applied 'socialisation' hypothesis, parents with a high SES might encourage and enable their children to move far away to live alone and attend occupational or educational opportunities far away from home (Billari et al., 2019; Gillespie & Lei, 2021; Iacovou, 2010; Leopold et al., 2012). Contrastingly, the applied 'feathered nest' hypothesis would predict that a higher parental SES makes young adults reluctant to move far away, as they can enjoy more support when staying closer or they can easily reciprocate the support they received (Gillespie & Lei, 2021).

Lastly, financial parental support in buying a home could impact the location of the young adults' residence in either way, enabling them to buy a house far away or closeby (Gillespie & Lei, 2021; Hochstenbach, 2018; Isengard, 2013).

This leads to **hypothesis 1a**: the higher the socioeconomic status of the parents, the greater the distance between the parent and the young adult child (socialisation hypothesis) and to **hypothesis 1b**: the higher the socioeconomic status of the parents, the smaller the distance between the parent and the young adult child (feathered nest hypothesis).

2.2. Moderating variables in the relation between parental socioeconomic status and intergenerational proximity

The relationship between parental SES and distance is intricate, as additional factors might also influence this dynamic. In the subsequent sections, this paper discusses the role of the plausible moderating factors: gender and the degree of urbanization of the residence of the parents.

2.2.1. Gender of the young adults

The effect of parental SES on intergenerational proximity might be influenced differently based on the gender of the young adult. Gender differences affect intergenerational solidarity (Rossi & Rossi, 1990), and parental SES has been shown to influence the timing of the transition of home-leaving for daughters and sons differently (Blaauboer & Mulder, 2010; Mulder et al., 2002). Therefore, it is plausible the effect of parental SES on intergenerational proximity differs depending on the gender of the young adult. However, there is no consensus in the literature about the the direction of this impact.

Parents often keep a closer eye on their daughters than on their sons (Mitchell, 2004), and women tend to have closer relationships with their parents than men (Rossi & Rossi, 1990). As a result, parents might be more willing to support daughters than sons, therefore we expect that the effect of parental resources on travel time are greater for females than for males. Blaauboer and Mulder (2010) examined the effect of parental SES on the timing of the transition of leaving the parental home for the first time and to what extent these effects differ between men and women. Their findings, which suggest that parents may be more likely to provide financial assistance to their daughters than to their sons or that women may be more receptive to accepting help from their parents than men, are thus in line with our expectations (Blaauboer & Mulder, 2010).

However, the interaction effect of gender with parental SES is different depending on the theory that applies. According to the 'socialisation' hypothesis, higher parental SES leads to longer travel times between parents and their young adult children. We expect this effect to be stronger for daughters than for sons because high SES parents might encourage and assist their daughters more in exploring opportunities and resisting traditional gender norms, potentially reducing the pressure to stay close for

caregiving, than lower SES parents. In contrast, the ‘feathered nest’ hypothesis suggests that parents with high SES might make their children reluctant to move further away. Since daughters tend to have better relationships and receive more support from their parents (Blaauboer & Mulder, 2010), this would encourage daughters of affluent parents to stay close by compared to sons, thus strengthening the impact of parental SES on intergenerational distance.

Thus, we hypothesize the following: “according to the socialisation hypothesis, we expect that higher parental SES increases intergenerational distance, with this effect being stronger for daughters” (**hypothesis 2a**). In contrast, “according to the feathered nest hypothesis, we expect that higher parental SES decreases intergenerational distance, with this effect also being stronger for daughters” (**hypothesis 2b**).

2.2.2. Urbanity of residence parent

The effect of parental SES on intergenerational proximity might also be influenced by the availability of suitable housing that supports access to essential resources such as education, employment, and housing careers. Urban areas tend to offer a wider array of opportunities for education and employment, cultural, and leisure facilities (Feijten et al., 2008). This attracts many young adults to move towards urban areas (van der Pers & Mulder, 2013). Consequently, the degree of urbanity could affect the relationship between parental SES and intergenerational proximity as young adults are drawn to urban environments.

Taking this into account, the ‘socialisation’ theory argues that parents with a high SES will encourage their grown children to move farther away to explore opportunities unless they already reside in an urban area that offers development opportunities for young adults (Feijten et al., 2008). This could result in smaller intergenerational distances if the parents live in an urban area (van der Pers & Mulder, 2013). Van der Pers and Mulder (2013) established in the Netherlands that parents living in an urban area, particularly a university town, live closer to their adult children. This brings us to the conclusion that individuals from higher SES backgrounds, who have greater financial resources and access to desirable urban locations, may be more inclined to maintain closer proximity to their parents if they live in the Randstad, as they have more possibilities there.

Following the reasoning of the ‘feathered nest’ hypothesis, the parental resources will enable the young adults to stay close by, regardless of the urbanity of the parental residential location. The Netherlands is experiencing a housing shortage, particularly in the Randstad, leading to affordability issues (Boelhouwer, 2020; Ministerie van Binnenlandse Zaken en Koninkrijksrelaties, 2023). This housing shortage disproportionately affects young adults particularly those without parental support, as they are looking for their first home or first owner-occupied house (Arundel & Hochstenbach, 2020; Boelhouwer, 2020; Ministerie van Binnenlandse Zaken en Koninkrijksrelaties, 2023). Therefore, grown children with a high SES background who receive parental support can afford to stay close to their parents if the

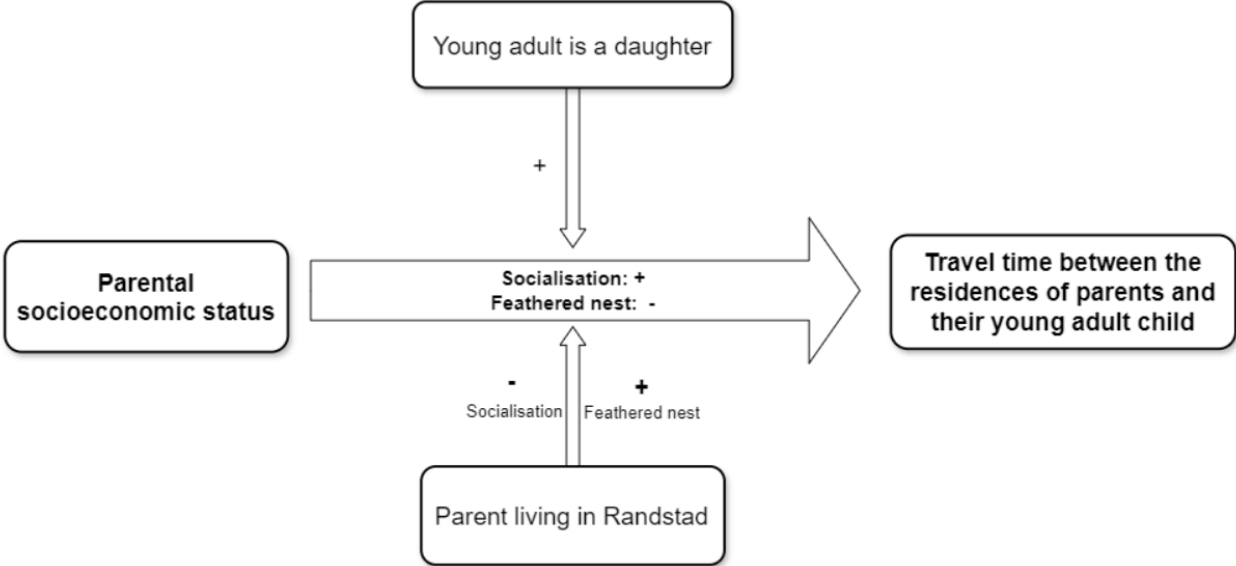
parents reside in the Randstad, while less well-off families may be forced to live farther apart due to affordability constraints.

These findings suggest that living in urban areas moderates the relationship between parental socioeconomic status and intergenerational distance. This would result in smaller distances if high SES parents live in the Randstad. However, according to the socialization theory and the feathered nest hypothesis, our expected relationships between parental SES and intergenerational distance are contradictory, so the moderating effect of urbanity differs between the two theories. According to the socialization theory, we expect that higher parental SES increases intergenerational distance, with this effect being weaker in case the parents live in an urban area, particularly in the Randstad, compared to non-urban areas (**hypothesis 3a**). Conversely, the feathered nest hypothesis posits that higher parental SES decreases intergenerational distance, with this effect being stronger in case the parents live in an urban area, particularly in the Randstad, compared to non-urban areas (**hypothesis 3b**).

2.3. Conceptual model

In the conceptual model (Figure 1) it is visualized how the the different theories of parental SES influence the travel time between parents and their young adult child and how the two moderating variables influence this relation.

Figure 1: Conceptual model



3. Research design

3.1. Data collection and research population

To study the effects of parental SES on intergenerational proximity, the data from the second round of the Generations and Gender Survey is used. The GGS-II is a cross-national panel survey on life-course and family dynamics of non-institutionalized individuals aged 18-59/79¹. The GGS collects information about retrospective fertility, partnership histories, and family dynamics in several European and some non-European countries. The questionnaire adapts a multi-dimensional extension of life-course research. There is a focus on life-course transitions and ‘linked lives’. The latter emphasizes that there is data collected about the network of social relationships of the respondents, including the relationship between parents and their independently living children (Gauthier et al., 2023). This makes the GGS-II an appropriate dataset to test our hypotheses with recently collected data.

To ensure high-quality data that is comparable across different countries, the country teams must follow the Technical Guidelines: specific standards and requirements for data collection, such as a probability sampling method and a minimum sample size, and this is closely monitored and supervised by the Central Coordination Team (Gauthier et al., 2023).

The Dutch sampling happened via simple random sampling in the population registers of people who didn’t live in institutions and was collected between 2022 and 2023, CAWI (computer-assisted web interviews) method (Gauthier et al., 2023). As a result, 8,078 respondents participated in the survey, with 7,355 completing it. While the exact response rate was not available to us, it is important to acknowledge that non-response can affect the representativeness of the data. Despite this, we used unweighted data because the weights are based on characteristics we control for, such as age, region, and marital status of the respondents, as well as gender, which we do not control for in our final models but we controlled for it in other models and this didn’t affect the results. Additionally, we conducted the analysis with weighted data, which did not significantly alter the outcomes. Therefore, we opted to proceed with the unweighted data.

Out of the total sample (7,355), the following selections were performed to obtain our analytical sample. First, due to possible errors in the indicated birth years or an ineligible household member filling the survey in, because they were too old or too young, we had to drop 195 cases. From these, we selected respondents with at least one child aged 18 and 35 (N = 1,823). From these, 817 respondents had only children in the age range who lived, at least some of the time, at home at the time of the survey. These were omitted from the analysis. Lastly, twelve respondents were minors at the time their qualifying young adult child was born, as they are mostly step-parents. To avoid potential misinterpretations, we

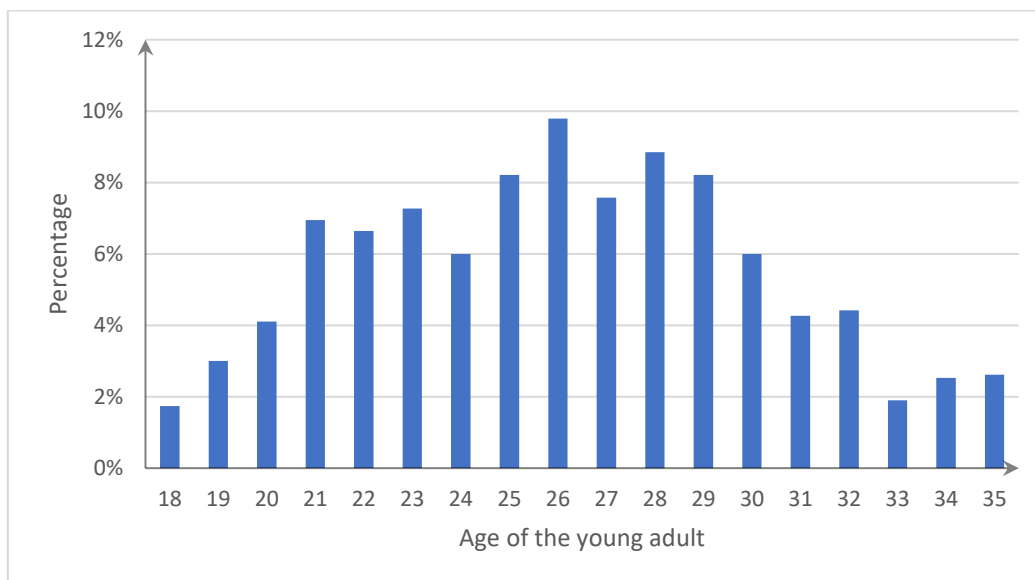
¹ The standard age range of the GGS-II is 18 to 79. However, if there exists a representative survey on the older population in the survey, the GGP allowed an age range from 18 to 59 (Gauthier et al., 2023)

decided to exclude them from the research population. This resulted in a research population that met all the requirements of 994 respondents.

To select the travel time to a young adult child, we selected all the parents that provided all the necessary information about at least one of their young adult children, meaning that they indicated the travel time, the gender, the age, the type of child (biological, adopted or step-child) and information about the other parent. 79 respondents didn't indicate at least one of these, which resulted in 915 respondents with young adult children. From this group, we randomly selected one child per respondent, to filter out possible birth-order effects.

It is crucial to note that a segment of our study population is not fully captured in our sample² due to the maximum age limit being 60 years. This limit is relatively young for parents of the "older" young adults in our sample (Centraal Bureau voor de Statistiek, n.d.). This is reflected in the relatively small group of "older" young adults, as shown in Figure 2. The smaller groups in younger age categories can be attributed to a significant portion of these individuals not having yet left their parental homes, given that the average age of leaving home is 23.9 for men and 22.2 for women in the Netherlands (Schwanitz & Mulder, 2015). Regarding the characteristics of the young adults is 27.5% enrolled in higher education, 63.5% is (self-) employed, 1% (= 8 individuals) are unemployed and 8% have an "other" type of occupational status. 78.8% are biological children of the respondent, 21% are stepchildren and 0.2% (= 1 child) is adopted.

Figure 2: Age distribution of the randomly selected young adult children



² According to data from the Dutch Central Office of Statistics, the average age at which parents in our sample of young adults (born between 1987 and 2004) had their first child is as follows: for mothers, it increased from 27 to 29 years old, meaning they would be now on average 47 to 62. For fathers of young adults (for the birthyears of 1996 to 2004, as only this is available), it was around 32 years old resulting in fathers of 52 to 69 years.

The final research population consists of 633 respondents. Of the initial 915 respondents who provided all necessary information about a young adult child that met the requirements, 10 did not provide information about their educational level. Furthermore, after the suggested adaptation of the ISCO categories of Avvisati (2020) (see operationalisation occupational status), so we were able to include the unemployed and inactive respondents, there are still 31 respondents who didn't indicate their or their partner's occupational status. Lastly, 241 didn't provide information about their income level (134 didn't know and 107 refused to answer). Although the inclusion of income data significantly reduces the sample size and can cause an attrition bias, its contribution to the literature justifies its inclusion. To ensure the robustness of our results, we conducted a robustness analysis to examine whether excluding income data alters the outcomes of our analysis (see 4.4. Robustness analyses), which was not the case.

3.2. Operationalisation

3.2.1. Dependent variable: travel time between parent and young adult

To examine the intergenerational distance, we look at the answer to the question "*how long does it take you to get to child X*" which is asked to all the respondents that indicated that they have at least one child, child X doesn't live in the same household at the moment and child X is alive. In the GGS-II, travel time to an independently living child is recorded rather than distance, which we believe can be a crucial distinction for studying intergenerational proximity. This approach emphasizes the actual time required for visiting the family member, which has significant implications for support exchange. Distance measurements alone can be misleading due to variations in infrastructure. For example, in remote areas, even a short 15-kilometer distance can result in extended travel times compared to regions with better infrastructure. Thus, travel time might provide a more accurate measure of accessibility and potential for face-to-face interaction. The respondents were asked to fill in an HH:MM format and the GGP data process team coded these answers to minutes.

The generated time-duration variable, containing the information about how long the respondents have to travel to her/his "randomly chosen" young adult child, is topcoded at 3 hours and a half (210 minutes). This decision is based on the observation that a few respondents reported values significantly higher than the rest of the sample, which could disproportionately affect the results. By topcoding at 210, we ensure that these extreme values (N = 78) do not excessively influence the analysis while still capturing the overall variation in the data.

It can be argued that the travel time in minutes is not the best specification for the dependent variables, as travel time differences are likely to have a different impact if the travel time is shorter compared to longer. So can a five-minute difference matter more at short travel time (e.g., between five and ten minutes) than at long travel time (e.g., between 2 hours and 2 hours and 5 minutes) (Michielin & Mulder, 2007; Mulder & Kalmijn, 2006). Furthermore, the travel time is strongly right-skewed (see Appendix 1). To tackle these issues, we took the logarithm of the travel time.

3.2.2. Independent variable: parental socioeconomic status

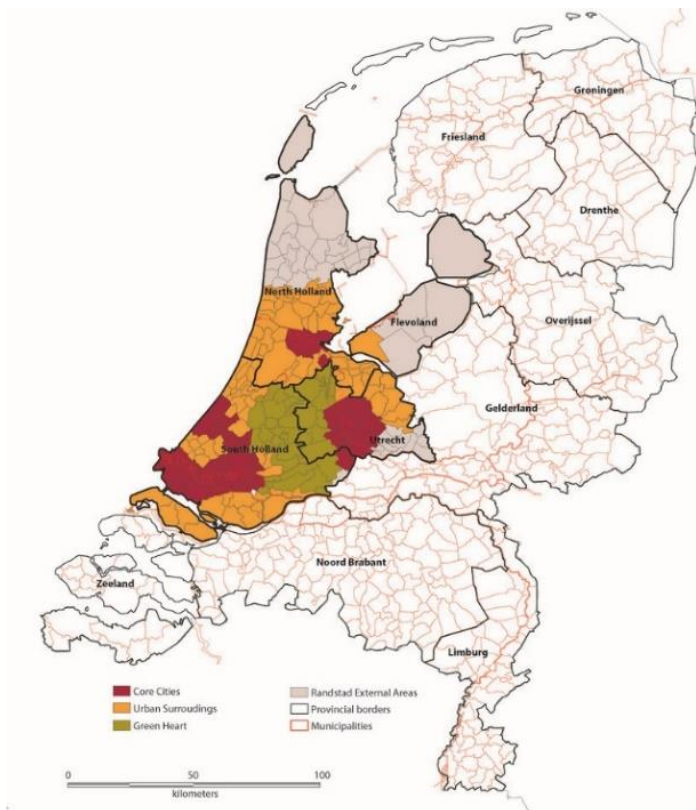
To capture parental SES, information on education, occupation, and income are used, as there exists a substantial agreement among research on the “tripartite nature of SES that incorporates these as the three main indicators of SES” (Sirin, 2005, p. 418). Furthermore, this approach gives us additional insights beyond solely relying on parental education, which has been done in the Netherlands before (see: Michielin & Mulder, 2007), allowing us to capture the impact of parental resources explicitly.

Firstly, parental education is measured with the International Standard Classification of Education (ISCED). This is an eight-point scale. The highest value of either parent (if the parents are still living together) is selected. Secondly, information about the parental employment status is based on the International Classification of Occupation (ISCO) scale. This is an international classification developed by the International Labour Organisation, distinguishing over 400 occupations. These are grouped in 28 groups, defined by the first two digits of the code, and 10 major groups, defined by the first digit. We use the expansion suggested by Avvisati (2020), whereby special codes are added for unemployed and inactive parents (9700 “Not in paid work, but looking for work” and “Not in paid work and not looking for work”). From these we select the lowest value of either parent, as this indicates the profession that requires more skill or training. This code is then converted to an ordinal or interval scale (10 to 90) ranking on prestige or income using the “International Socioeconomic Index of Occupational Status” (ISEI) developed by Ganzeboom (2010). The code for people not in paid work is added to category 17, followed by the recommendations of Avvisati (2020). Thirdly, the GSS-II categorizes yearly household income into eight groups: €4,999 or less, €5,000 to €9,999, €10,000 to €19,999, followed by categories from €20,000 to €100,000, with a final category for households earning above €100,000 annually. To incorporate this variable into our analysis as a continuous measure, we combined the first three groups into a single category representing respondents with a yearly household income of €20,000 or less. This resulted in five income categories, each with intervals of €20,000, and a sixth category capturing respondents with a yearly household income above €100,000.

3.2.3. Moderating variables

The measurement of our first moderating variable, the gender of the “randomly selected” young adult, is straightforward. As there are only 7 children in our sample whose parents indicated their gender as “Other”, we excluded these from being selected as the “random selected” child. The urbanity of the residence of the parent is based on the province where the respondent resides. To examine the influence of the Randstad, we recoded this variable in a dummy variable where the reference category (0) exists of the respondents who don’t live in a province of the Randstad and (1) entails the respondents living in a province of the Randstad. The Randstad provinces exist of: North-Holland, Utrecht and South-Holland (see Figure 3) which leaves the other nine provinces in the reference category.

Figure 3: Map Randstad Region



Note. A map of the Netherlands where the provinces belonging to the Randstad are highlighted. Adapted from Roberto R., n.d., Randstad according to the Regio Randstad (<https://www.flickr.com/photos/robertorocco/5554750099/>).

3.2.4. Control variables

To ensure the robustness of our study, we control for the age and parental marital status of the parent as this seems to play a significant role in the distance young adults move from their parents and on their SES. Michielin and Mulder (2007) suggested that older parents might require more support, which could influence young adults to stay closer. Despite their study not finding a significant relationship, we included this aspect in our research to explore its potential relevance. As discussed above, the respondent's age distribution has a strong left tail with a minimum age of 29 and 1.02% is even younger than 36. Their young adult children are mostly stepchildren, wherefore we put the respondents that were minors when the young adults were born (under 36) to missing (N = 12). This results in a left-skewed age distribution ranging from 37 to 60 years.

Regarding the parental marital status, on one hand, if the childhood family structure of young adults is not intact anymore, Leopold et al. (2012) assume that this increases tension between the generations, which results in greater distances between the family members. On the other hand, if the parent lives independently, this could constrain the geographical distance as a young adult as they might feel an obligation to provide emotional support (Leopold et al., 2012). Nonetheless, Michielin and Mulder (2007) found that this didn't have an impact in the Netherlands. To capture this, we designed a variable with four categories to capture the parental relationship status: (1) living together with the other parent of the child (2) living together with another partner, (3) living alone, and (4) no information. Results show that 64% still lives together with the other parent of the young adult, 15% cohabits with another partner, 5% lives alone and we don't have information about the relationship status of 16%.

We considered incorporating gender of the parent in the analysis, as the gender gap in income makes the mother having a lower income in general, and research on proximity between a single parent, all focuses on mother-child proximity assuming that mothers are more likely than fathers to provide and receive hands-on care (Compton & Pollak, 2015). However, as we work with information about household income and also incorporate the relationship status, we left the gender of the parent out. We considered dividing the category "living alone" between mothers and fathers, but these categories became too small, respectively, 24 and 10 respondents.

3.3.Method

For the empirical analysis of this study, the statistical program STATA is used. Firstly, univariate analyses are performed to examine the sample characteristics. Since the dependent variable is the logarithm of the travel time in minutes, log-linear regressions are done to examine the relationship between parental SES and intergenerational proximity. Secondly, we run bivariate analyses with the logarithm of the travel time and all indicators of parental SES separately. Then we run an analysis with all three indicators together, after which we add the control variables to test the first hypothesis. Next, we first add only the gender of the young adult to the model, followed by the interaction terms to estimate the interaction between the indicators of parental SES and the gender of the young adult, so we can test hypothesis 2. To test hypotheses 3a and 3b, we remove the gender variable again and add the degree of urbanity and then the interaction terms between this and the indicators of parental SES. Lastly, we estimate the full model, including all factors, to determine how much all factors combined explain the differences in intergenerational distance. Before coming to these models, we run numerous other models, which are briefly discussed in the robustness analyses section.

3.3.1. Statement of AI use

ChatGPT (GPT-3.5/4), OpenAI has been used in this research project as writing improvement tool and to solve issues in my STATA code.

To enhance the quality the readability of my research paper, I utilized the prompt: “Could you rephrase this paragraph so there are no grammatical or spelling mistakes, it reads easier and is constructed logically without changing the content?”. After this, I often still rephrased the paragraph until I was happy with its structure and readability.

When cleaning my data and selection the my research population in STATA, I encountered some (small) issues. Then I utilized the prompts: “What is the problem with my STATA code and how could I solve this” or “I get this error message from STATA, could you tell me what the problem could be when this is my code?”.

4. Results

4.1. Descriptive statistics

Before discussing the characteristics of our research population, we examine the distribution of the dependent variables (see Table 1 and Appendix 1). Our findings indicate that over half of the young adults live within a 30-minute travel distance from their parents. Additionally, 12% live within a five-minute radius, and 26.5% have a travel time of more than one hour. Amongst this group, 12% require no more than two hours to reach their child, while only 14% have to travel more than two hours.

At first glance, these results may seem extreme. However, they are consistent with the findings of Hank (2007) and Isengard (2013), who also observed that Dutch adult children tend to live closer to their parents compared to those in other European countries. To ensure the robustness of our findings and rule out any potential issues with our data, we compared our data with other data sources. Notably, we found a similar pattern in the Dutch data from the tenth wave of the European Social Survey (ESS), which was also recently collected (see appendix 2). Therefore, we conclude that our data accurately reflects the intergenerational distance of Dutch young adult children and their parents.

Table 1: Distribution of travel time

Travel time	Abs	Rel	Cum
5 minutes or less	74	11.69	11.69
6 - 15minutes	145	22.91	34.60
16 - 30 minutes	149	23.54	58.14
31 – 1 hour	97	15.32	73.46
1 – 2 hours	77	12.16	85.62
More than 2 hours	91	14.38	100.00

Table 2 and 3 contain information about the distribution of our research population over the independent variables. Regarding the indicators of parental SES, we see that educational level is distributed on a scale from 0 to 8 and occupational status from 10 to 90. The mean values are always slightly higher than the middle of those scales, indicating an average high educational level and occupational status. The parental income consists of 6 categories, with each category representing a €20,000 interval. The mean value of 3.38 indicates that the average yearly household income falls within category three, corresponding to incomes between €40,000 and €59,999 euros. The mean age of respectively the parent and the young adult are 54.71 and 26.15.

Table 3 contains the information of the categorical independent variables. For both parents and young adults, women are overrepresented compared to men, this overrepresentation is bigger for the parents.

We see that a minority (43%) lives in the Randstad. 66% still is together with the other parent of the young adult child, 15% lives together with a different partner, 5% lives without a partner. We don't have information about the relationship status or if they live together of 100 respondents. The table also provides information about the occupational statuses of the young adult children, but important to note that this is not a part of the analysis but it insightful to understand the profiles of the young adults. So is 27.5% in education or training, 63% is (self-)employed, 8 are unemployed and 50 fall under the category of "other" occupation. The overall median travel time from the 633 parents to their to children is 30 minutes.

Table 2: Descriptive statistics, continuous variables

Variable	Mean	Standard deviation	Min	Max
Parental educational level	4.94	1.75	0	8
Parental occupational status	49.23	18.43	10	89
Parental income	3.38	1.42	1	6
Age parent	54.71	4.53	37	60 ³
Age young adult child	26.15	4.15	18	35

Table 3: Descriptive statistics, categorical variables

Variable	Categories	Abs	Rel	Median travel time to child	Standard deviation
Gender young adult	Female	350	55.29	30	62.50
	Male	283	44.71	25	65.17
Urbanity residence parent	Not living in Randstad	361	57.03	30	64.41
	Living in Randstad	272	42.97	25	62.64
Gender parent	Female	361	57.03	30	64.74
	Male	272	42.97	25	62.23
Parental marital status	Together with parent of child	403	63.67	25	64.00
	Lives together with another partner	97	15.32	30	66.33
	Lives alone	33	5.21	30	71.50
	No info	100	15.80	22.5	56.40
Occupational status child	In education/training	174	27.49	40	67.87
	(Self-)employed	401	63.35	20	61.05
	Unemployed	8	1.26	18.5	37.49
	Other	50	7.90	30	66.78
N		633		30	63.66

³ Due to the time lapse between the selection of respondents and the actual completion of the survey, some respondents were older than 59, despite the intended age range for respondents being 18-59.

4.2. Bivariate regression results

The results of the bivariate regression analysis on each indicator of parental SES on the travel time to the young adults are presented in Table 4. The coefficients in the log-linear regression model can be interpreted as growth rates: the coefficient of each independent variable represents the expected percentage change in the logarithm of travel time for a one-unit increase in the independent variable, holding all other variables constant. Model 1 and 2 are run with the observations without deleting the cases with a missing value for income.

Table 4: Linear regression models of logarithm of travel time to young adult to each indicator of parental SES

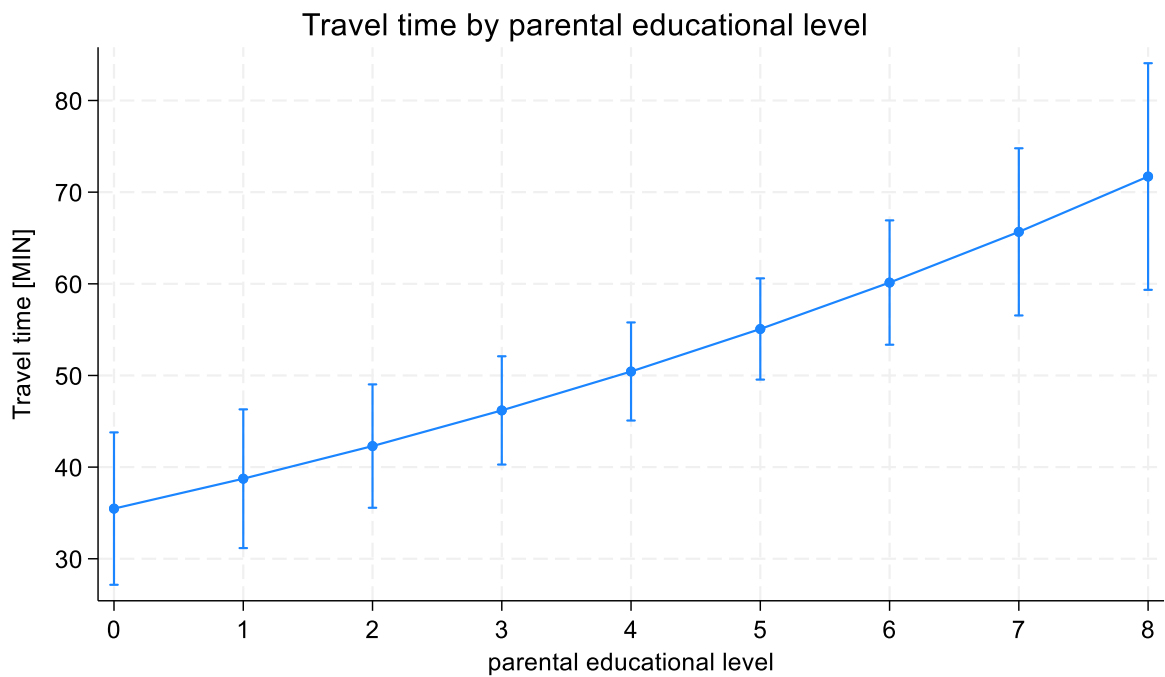
	Model 1		Model 2		Model 3	
	Parameter estimate	Standard error	Parameter estimate	Standard error	Parameter estimate	Standard error
Constant	2.891***	0.115	3.073***	0.110	3.228***	0.170
Parental educational level	0.088***	0.022				
Parental occupational status			0.005*	0.002		
Parental income level					0.031	0.033
F-test	15.28***		5.57		0.89	
R ²	0.017		0.006		0.001	
Adj R ²	0.016		0.005		0.000	
N	874		874		633	

Significance: * $p < 5\%$, ** $p < 1\%$, *** $p < 0.1\%$

Model 1 indicates that there is a statistically significant association between parental education level and travel time. Specifically, a one-unit increase in parental education level is associated with a 9.1% ($e^{0.088} - 1, p < 0.001$) increase in travel time. Model 2 indicates that the parental occupational status in ISEI coding is also statistically significant, on the 5% significance level, correlated with the travel time between the young adult and their parents, meaning that a one-unit increase in the ISEI score, which ranges from 1 to 89, associated with a 0.5% ($e^{0.005} - 1$) increase in travel time. Those significant positive relationships are illustrated in Figure 4 and 3. Lastly, model 3 indicates that there is no statistically significant association between the parental income level and the travel time.

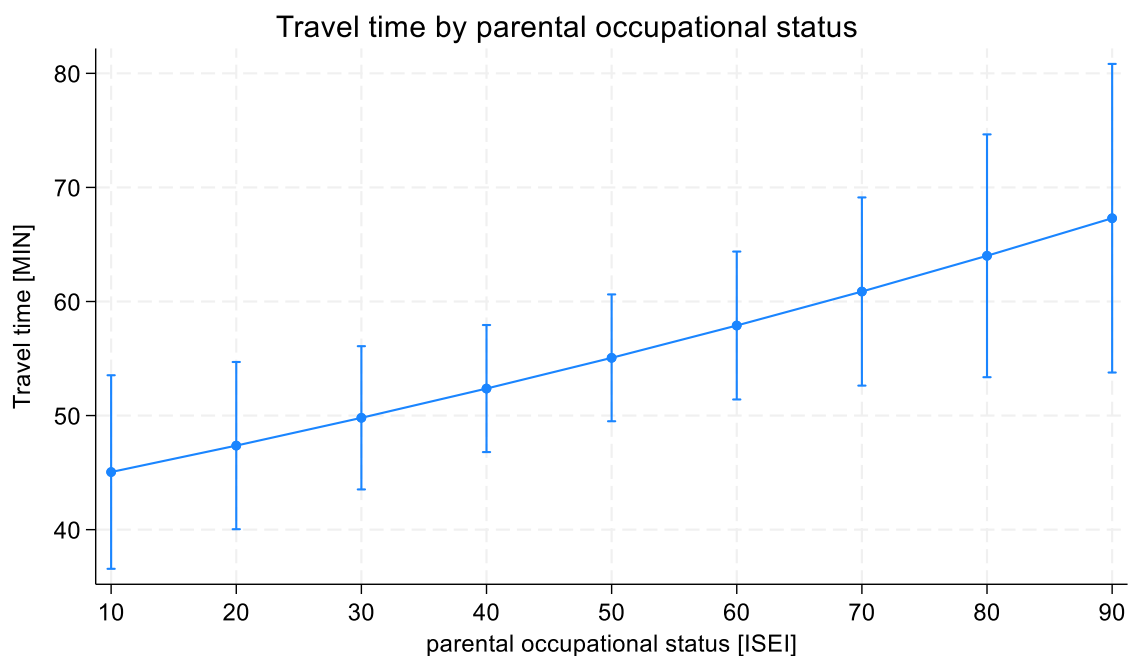
These findings partially support the applied ‘socialisation’ hypothesis (Ferraretto & Vitali, 2023), and thus hypothesis 1a, as a higher educational level and occupational status are correlated with farther distances, and thus a longer travel time, between the parent and their young adults child. However, the third indicator of parental SES - parental income - does not seem to have a significant correlation, wherefore we don’t find full support for hypothesis 1a.

Figure 4: Graph travel time by parental educational level



Legenda: (0) Early childhood education, (1) Primary education, (2) Lower secondary education, (3) Upper secondary education, (4) Post-secondary non tertiary education, (5) Short cycle tertiary education, (6) Bachelor or equivalent, (7) Master or equivalent, (8) Doctoral or equivalent

Figure 5: Graph travel time by parental occupational status



4.3. Multivariate regression results

Table 5 displays the outcomes from the multivariate regression analysis examining all parental SES indicators' effects simultaneous on the logarithm of travel time to young adults. Model 4 presents these findings, and Model 5 includes the control variables.

Table 5: Linear regression models of logarithm of travel time to young adult to the indicators of parental SES and control variables

	Model 4		Model 5	
	Parameter estimate	Standard error	Parameter estimate	Standard error
Constant	2.933***	0.160	2.842***	0.591
Parental educational level	0.078*	0.032	0.091**	0.033
Parental occupational status	0.003	0.003	0.003	0.003
Parental income level	-0.028	0.038	-0.041	0.041
Age parent			0.000	0.010
Relationship status parent				
Lives together with other parents of child				
Lives together with another partner			0.295*	0.136
Lives alone			0.142	0.218
No info			-0.027	0.141
F-test	3.89**		2.43**	
R ²	0.018		0.026	
Adj R ²	0.016		0.016	

N = 633 - Significance: * p < 5% , ** p < 1% , *** p < 0.1%

Model 4 results in a smaller, but still significant effect of parental education. This might indicate that the effect attributed to parental education in model 1 may be influenced by the effects of the other SES indicators. The insignificance of the occupational status coefficient suggests that occupational status may not have a direct effect on travel time once other socioeconomic factors are included in the model. Alternatively, this lack of significance could be attributed to associations with observations that were excluded due to missing income values. The adjusted R² indicates that the model explains 1.6% of the variation in travel time.

Model 5 also incorporates the control variables. As the coefficient of parental education becomes larger, this indicates that (one of the) control variable(s) suppresses the effect of the parental educational level. This may be because lower-educated individuals tend to divorce more frequently in recent times (de Graaf & Kalmijn, 2006), and according to our findings, tend to live closer to their children, which suppresses the relationship between parental SES and intergenerational distance if we don't control for this. The travel time for older parents does not significantly differ from that of younger parents. If the respondent lives together with another partner as the parent of the young adult child, this is associated with a 34.3% ($e^{0.295} - 1, p < 0.05$) increase in travel time, compared to cohabiting with the other

parent. The differences between this latter group and living alone or with missing information are insignificant.

Table 6 contains the regression results from the remaining analyses. Hereby, we first test the effect of gender of the young adult solely, whereafter we add the interaction term. The eight and ninth model test the same for the urbanity of the residence of the parents. Lastly, the tenth model contains all the variables that were discussed.

Table 6: Linear regression models of the logarithm of travel time to young adults – all variables

	Model 6		Model 7		Model 8		Model 9		Model 10	
	Parameter estimate	SE	Parameter estimate	SE	Parameter estimate	SE	Parameter estimate	SE	Parameter estimate	SE
Constant	2.870 ***	0.595	2.745 ***	0.605	2.872 ***	0.600	2.856 ***	0.618	2.763 ***	0.631
Parental educational level	0.091 **	0.033	0.097 *	0.046	0.095 **	0.033	0.102 *	0.044	0.106 ***	0.054
Parental occupational status	0.003	0.003	0.005	0.004	0.003	0.003	0.006	0.004	0.008	0.005
Parental income level	-0.039	0.041	-0.028	0.053	-0.039	0.041	-0.077	0.056	-0.068	0.065
Gender young adults (ref: female)										
Male	-0.042	0.094	0.335	0.325					0.352	0.326
Parental SES*Gender young adult (ref: female)										
Parental educational level*Male			-0.016	0.064					-0.016	0.065
Parental occupational status*Male			-0.004	0.006					-0.005	0.006
Parental income level*Male			-0.024	0.077					-0.025	0.077
Urbanity residential location parent (ref: not living in Randstad)										
Living in Randstad					-0.115	0.095	-0.046	0.327	-0.055	0.329
Parental SES*Urbanity residential location parent (ref: not living in Randstad)										
Parental educational level*living in randstad							-0.007	0.065	-0.006	0.065
Parental occupational status*living in randstad							-0.006	0.006	-0.007	0.006
Parental income level*living in randstad							0.081	0.077	0.089	0.078
Age parent	0.000	0.010	0.000	0.010	0.000	0.010	0.000	0.010	-0.001	0.010
Relationship status parent (ref: lives together with other parents of child)										
Lives together with another partner	0.297 *	0.137	0.297 *	0.137	0.295 *	0.136	0.307 *	0.137	0.311 *	0.138
Lives alone	0.143	0.218	0.132	0.218	0.155	0.218	0.135	0.219	0.123	0.219
No info	-0.022	0.142	-0.014	0.141	-0.020	0.141	-0.022	0.141	-0.008	0.143
F-test	2.15 *		1.71		2.31 *		1.82 *		1.47	
R ²	0.027		0.029		0.029		0.031		0.035	
Adj R ²	0.014		0.012		0.016		0.014		0.011	

N = 633 - Significance: * p < 5% , ** p < 1% , *** p < 0.1%

In model 6, one-unit increase in parental educational level is associated with a 9.5% ($e^{0.091} - 1, p < 0.01$) increase in travel time. The difference between the young adult being a female or male seems insignificant. However, as the coefficient is negative, it suggests sons living closer by. When adding the interaction between these two into the next model, the interaction coefficients are also all insignificant. This indicates that there is no strong evidence that the effect of parental SES on the logarithm of travel time is different for daughters and sons. Nevertheless, the negative coefficients suggest a decrease in the effect of parental SES on the logarithm of distance when the young adult is a son compared to a daughter. This would support hypothesis 2a and 2b, which posited that gender moderates the relationship between parental SES and distance, such that the relationship is stronger for daughters compared to sons. However, the lack of significance suggests that any observed difference could be due to random variation rather than a true moderating effect.

In model 8, we add the dummy of the urbanity to the model with parental SES and the control variables, and consequently, in model 9, the interaction term. However, these coefficients are not significant. The interaction coefficients of urbanity with parental educational level and occupational status are negative, suggesting a weaker relationship when parents reside in a Randstad province compared to other provinces in line with hypothesis 3a, but this difference is not significant. Conversely, the coefficient for the interaction term between parental income and urbanity is positive, indicating a stronger relationship in line with hypothesis 3b, yet this difference is also not significant.

Lastly, model 10, includes all of the variables. A noteworthy aspect in this model is that the effect of parental education is not significant anymore. However, the significant is now exactly 5%. The coefficient then says that one unit increase in parental educational level is associated with a 11.2% ($e^{0.106} - 1, p = 0.05$) increase in travel time. The only significant finding in this model is that if the respondents live together with another partner as the parent of the young adult child, this is associated with a 36.5% ($e^{0.311} - 1, p < 0.05$) increase in travel time, compared to cohabiting with the other parent.

In assessing the overall significance of our regression models, we conducted F-tests. These indicated that in each model, except the full model, at least one independent variable affects the travel time. The low percentage of variance explained by the model (R-squared) is not unexpected, as our focus was on exploring how parental SES influences travel time rather than directly predicting intergenerational travel time patterns. According to Kalmijn and Mulder (2006), explaining distances based on residential locations involves complex processes such as location choice, migration, and residential mobility. Our model reflects these indirect influences of SES on travel time, which are shaped by various factors not accounted for in this analysis. This might explain the low percentage of explained variance.

4.4. Robustness analyses

To ensure the accuracy of our regression results, we conducted several additional analyses. Firstly, we ran regressions without logarithmically transforming travel time. This approach simplifies the interpretation of the coefficients. However, given that travel time is strongly right-skewed, this method introduces problems for the regression analysis. The coefficients in this approach have a similar direction but are all insignificant and yield a lower R-squared value, indicating a poorer model fit.

We chose to perform our analysis using unweighted data since we control for all the characteristics on which the weights are based, except gender: age, region, and marital status of the respondents. Although gender is one of the characteristics used for weighting, we do not control for it in our final models. As discussed in Section 3.2.4 on control variables, we excluded gender based on the literature and verified that its inclusion did not affect the results. Additionally, our analysis with weighted data yielded similar results. Therefore, we use unweighted data in our final analyses.

Next, considering that our dependent variable is not normally distributed, we attempted to recode it into categories. We tried two methods. The first method involved dividing travel time into five categories: maximum 5 minutes, between 5 and 15 minutes, between 15 and 30 minutes, between 30 minutes and 1 hour, between 1 and 2 hours, and more than 2 hours. The second method involved creating a dummy variable to indicate whether the travel time was less than 30 minutes or more than 30 minutes. The first approach, with five categories, resulted in mostly insignificant coefficients, likely due to an excessive number of categories relative to the sample size. The dummy coding yielded similar significant findings to those described above. However, due to the loss of information when recoding as a dummy variable, we opted to use the logarithmic transformation for better precision and interpretation.

Furthermore, due to 343 respondents not providing information about their yearly household income, we replicated the analysis in two ways: either coding them as missing or excluding the income variable from the analysis entirely. These results did not substantially differ from the main analysis. Given the importance of income information in the literature, we decided to include these cases without manipulating the missing values.

Additionally, we examined two other variables suggested by previous studies to impact intergenerational distance: the child's occupational status and sibling structure in relation to distance from parents. These variables significantly influenced travel time but did not substantially affect the other coefficients. As this thesis does not focus on explaining travel time, we excluded these variables from our main model.

In summary, our robustness checks involved running regressions without logarithmically transforming travel time, weighted data, recoding the dependent variable into categories and a dummy variable, handling missing income information by replicating the analysis with different approaches, and

examining additional variables related to intergenerational distance. These additional analyses reaffirm the reliability of our main findings and indicate that our results are robust and well-founded.

5. Discussion

In this study, we explored the relationship between parental SES and the travel time between the residences of parents and their young adult children, using two contrasting theories from Ferraretto and Vitali (2023) on the timing of leaving the parental home: the ‘socialisation’ and ‘feathered nest’ hypotheses. The first theory posits that high SES parents encourage their offspring to move far away, while the second suggests that higher SES parents make their children more reluctant to move far away. We investigated the effect of various indicators of parental SES—parental educational level, income, and occupational status—separately. Additionally, we analyzed whether the gender of the young adult or the urbanity of the parent’s residence influences these relations. Our descriptive analysis showed that overall, Dutch young adults tend to live relatively close to their parents.

The regression results showed a significant positive relationship between parental education level and the logarithm of travel time from parents' to their young adults' residence, partially supporting the socialization hypothesis and thus hypothesis 1a. This implies that parents with higher SES might encourage their children to explore opportunities farther away, potentially delaying transitions that could anchor them to a specific location. Parental occupational status also showed a positive association with travel time, albeit only in the bivariate model. This suggests that its direct impact on travel time may be limited; its significance in the initial model likely stemmed from its correlation with parental educational level. Notably, parental income level did not show any significant relationship with travel time.

The finding that only parental educational level has a significant positive effect reveals an interesting aspect. Could the inclination to live farther away and explore new residential areas primarily stem from the parents' educational attainment? According to socialization theory, parents influence their children's values, attitudes, and preferences regarding demographic issues, such as proximity to their parents' residence. This suggests that young adults from high- and low-SES backgrounds may have different perspectives on these matters (Billari et al., 2019). Thus, our findings suggest that these values, attitudes, and intentions regarding intergenerational proximity are predominantly linked to parental educational level rather than their occupational status or income level. While the "feathered nest" hypothesis emphasizes the role of parental resources, suggesting they can provide more support when living nearby or in desirable neighborhoods.

The insignificance of parental income's impact on travel time is noteworthy, especially considering that wealthier parents often assist their children in purchasing homes (Centraal Bureau voor de Statistiek, 2019). However, these findings may reflect the coexistence of both hypotheses in the Netherlands: some affluent well-off parents financially stimulate their children to stay close by, while other well-off parents support their children's autonomy in establishing lives away from home. These contrasting effects may render the combined impact insignificant.

As expected, the relationship between parental SES and intergenerational proximity is complex. Therefore, we also explored two additional factors potentially influencing this dynamic: the gender of the young adult and the urbanity of the parent's residence. Regarding gender, we found that differences between sons and daughters in the relation of travel time and parental SES were not significant. This could suggest that parents may not differentiate between their sons and daughters in passing their preference or expectation of intergenerational proximity, regardless of their SES.

Regarding the urbanity of the parents' residence, we observed no significant differences in the association between parental SES and travel time, whether the parents lived in the Randstad or elsewhere. This could be attributed to the contradictory nature of our two hypotheses, which could make the overall effect insignificant. According to the socialization hypothesis, the positive relation between parental SES and travel time diminishes when parents reside in the Randstad, as affluent children tend to live closer to their parents compared to other areas. Conversely, the feathered nest hypothesis suggests that the negative relation between parental SES and intergenerational distance is stronger in the Randstad, where mainly high-SES children can afford to live near their parents.

We also accounted for the age of the parents and their relationship status. We found that the travel time for older parents does not significantly differ from that of younger parents. This suggests that parental age, which Michielin and Mulder (2007) argue may necessitate more support, does not significantly impact travel time. However, this lack of difference could also be attributed to the relatively young age of the parents in our sample (up to 61 years), who may not yet require substantial support from their children. If the parents cohabit with another partner as the parent of the young adult, this seems to significantly increase the travel time. The difference between the travel time of single parents and the parents still living together with the other parent was insignificant, but positive, meaning single parents living further away. However, the direction of this relation align with our expectations based on Leopold et al. (2012), with parents who still live together with the other parent of the young adult tend to live closest as disruptions in the home situation could increase tension between the generations, which results in greater distances between the family members.

5.1. Limitations

Despite these valuable insights, several limitations must be acknowledged. We categorize these limitations into two groups. First, we encountered some data limitations. Second, there are inherent drawbacks to working with a survey like the GGS-II.

One crucial indicator identified in the literature as influencing the proximity of young adults to their parents is whether they already have children. This often motivates them to live closer to their parents so that grandparents can assist with childrearing (Gillespie & Lei, 2021; Isengard, 2013; Leopold et al., 2012; Michielin et al., 2008; Mulder & Kalmijn, 2006). However, the GGS-II in the Netherlands selects respondents aged 18 to 59, lacking a focus on grandchildren. The respondents are asked if they have grandchildren, but the survey does not specify which child is the parent, preventing us from linking grandchildren to young adult children and controlling for this factor. Additionally, and as mentioned before, leads this age range to a selection of parents who had children relatively young, as the maximum respondent age is 60. Another valuable missing indicator is the educational level of the young adult, as highly educated individuals might need to live farther away due to specialized labor markets located in urban areas (Michielin & Mulder, 2007; Michielin et al., 2008). Furthermore, we simplified the classification of the Randstad area based on available data, which only covered entire provinces. However, not all regions within North Holland, South Holland, and Utrecht are recognized as part of the Randstad region. These misclassified regions may not account for crucial factors we aim to control, such as opportunities for development and housing shortages. This limitation may have resulted in an underestimation of the influence of residing in the Randstad on the relationship between parental SES and travel time.

Surveys like the GGS are increasingly reliable, but they can still suffer from nonresponse bias (Groves, 2006). Possibly due to this nonresponse bias, we did not have enough respondents to incorporate the effect of having a migration background in our model. Previous research indicates that the majority of foreign-born individuals residing in the Netherlands originate from non-Western countries (Michielin et al., 2008), which tend to have more familialistic attitudes (Kalmijn & Saraceno, 2008). These attitudes lead to more frequent intergenerational contact and support exchange with their parents. This suggests that, regardless of the socioeconomic status of the parents, the children of foreign-born individuals are less likely to live far away from their parents in the Netherlands (Michielin et al., 2008; Mulder & Kalmijn, 2006). Therefore, the lack of inclusion of migration background in our analysis could have led to an underestimation of the association between parental educational status and travel distance.

5.2. Conclusion and recommendations

In conclusion, applying Ferraretto and Vitali's (2023) contrasting theories on the influence of parental SES on the age of leaving the parental home to the context of intergenerational distance in the Netherlands reveals an intriguing discovery: parental educational level is positively linked to travel time between young adult children and their parents, supporting the socialization theory. This suggests that parental educational attainment could be a crucial factor driving variations in intergenerational distances. However, parental income level and occupational status do not appear to significantly influence travel time. This could indicate that either both theories are applicable, or these theories do not adequately explain the variations in intergenerational distance in the Netherlands.

This investigation into whether there is socioeconomic stratification in intergenerational distance is crucial for policies aimed at reducing socioeconomic inequality in mobility and ensuring equal access to housing opportunities in the Netherlands. While our results do not indicate widespread socioeconomic stratification, the positive relationship between educational level and distance could intensify societal reliance on formal care services. As highly educated individuals move farther away, often benefiting from economic advantages passed down through generations, these families are likely to rely on formal care facilities such as childcare centers or nursing homes rather than informal family support networks. This trend could escalate societal costs associated with institutional care. However, given that intergenerational distances are generally modest in the Netherlands, the impact of this trend is expected to be limited. Additionally, the increasing housing costs may prevent less affluent families, who rely on informal support networks, from living close to each and accessing these resources. This emphasizes the need for policies that foster informal support networks beyond immediate family, including support from neighbors. Encouraging multigenerational living arrangements, where feasible, can also help maintain close family ties and support networks. Given that finding a house will likely become even more difficult in the future, these policies are crucial.

Regarding future research, next to incorporating the missing variables which are described above (the educational level of the child, if the young adult has children, more precise residential location of the parent, and the migration background), we suggest investigating the subjective feelings of young adults as potential drivers of these differences. The intergenerational proximity is (almost) always the result of an individual decision, where subjective factors are as influential as objective ones. Emotional bonds between parents and their children, as well as personal values strongly impact intergenerational co-existence (Gillespie & van der Lippe, 2015; Isengard, 2013). A large distance is likely to occur only if young adults and/or their parents prioritize living farther apart and are willing to support this (Iacovou, 2010). Young adults who feel emotionally close to their parents or hold familialistic attitudes are likely to stay nearer to them, regardless of their ability to move farther away or the parent's encouragement (Gillespie & Lei, 2021; Gillespie & Treas, 2017; Gillespie & van der Lippe, 2015; Tosi, 2017).

6. References

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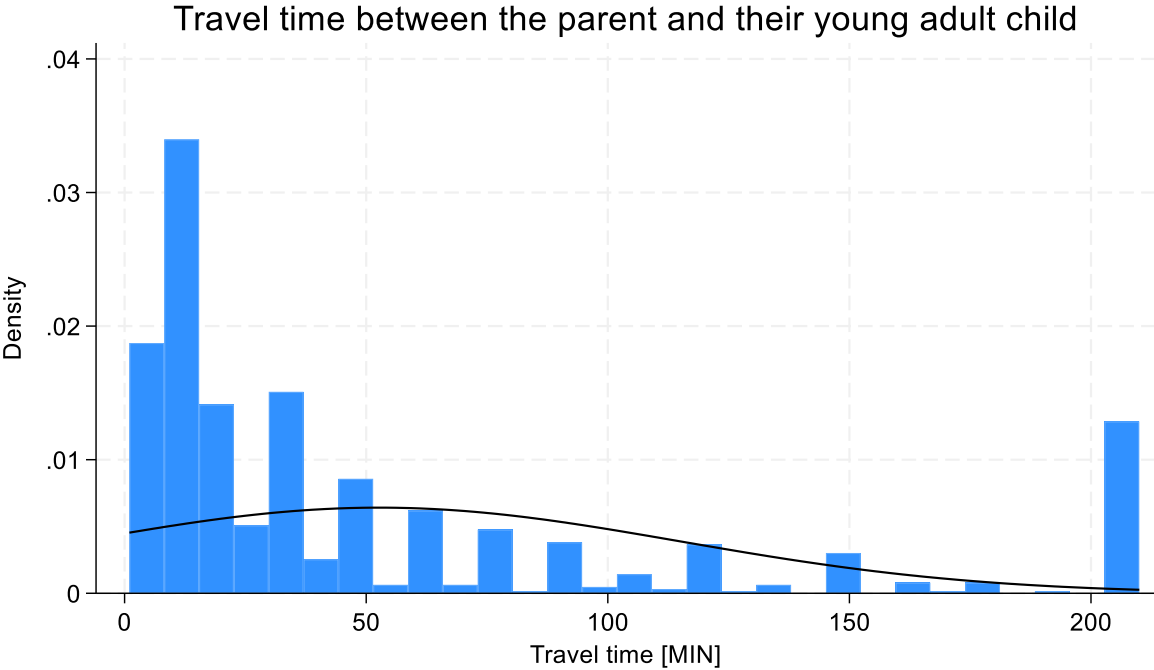
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Appendix

Appendix 1: histogram dependent variable – travel time to young adult

Figure 6: Distribution of the travel time between the parent and their "randomly selected" young adult child



Note: the data is topcoded at 210 minutes.

Appendix 2: reflection data quality, compare with ESS10

The initial descriptive analysis in this thesis indicates that young adults tend to live very close to their parents. At first glance, this observation might appear somewhat unrealistic. To substantiate this claim, we compared the Dutch data from the second round of the Generations and Gender Survey II (GGSII) with data from the tenth round European Social Survey (ESS). The ESS is an academically driven cross-national survey that has been conducted every two years across Europe since its establishment in 2001. It involves face-to-face interviews with newly selected, cross-sectional samples each time (European Social Survey, n.d.). In the tenth round of the ESS, conducted in 2020, Dutch respondents were asked about the distance in minutes they lived from their children who did not reside in the same household. Focusing on young adult children (ages 18-35), we identified 255 respondents.

Table 7 compares key distribution indicators from the two surveys, while Figure 7 illustrates the Kernel Density Estimates (KDE) of the two datasets. The consistency between the distribution indicators and the KDE plots suggests a similarity between the GGS-II data and the ESS10, indicating its reliability.

Table 7: Distribution indicators of travel time to young adults of the GGS-II and ESS10

	GGS-II	ESS10
Mean value	55.84	48.52
Median	30	20
Standard deviation	63.66	56.82
Interquartile range	60	65

Figure 7: Kernel Density estimates function of travel time data of GGS-II and ESS10

