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Leaving the parental home during the COVID-19 pandemic: the case of Southern Europe



Valeria Ferraretto^{a,*}, Agnese Vitali^a, Francesco C. Billari^b

^a Department of Sociology and Social Research, University of Trento, via Verdi 26, 38122 Trento, Italy ^b Department of Social and Political Sciences and "Carlo F. Dondena" Centre for Research on Social Dynamics and Public Policy, Bocconi University, via Röntgen 1, 20136 Milan, Italy

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ABSTRACT

In 2020, COVID-19-related governmental restrictions forced individuals to radically change their habits, possibly impacting on their living arrangements. Whether COVID-19 affected young adults' propensity to leave the parental home is still unknown; Southern Europe is of particular interest, as youth experience the "latest-late" transition to adulthood, face uncertainty in the labor market, and receive low welfare support. Using EU-SILC longitudinal data from Greece, Spain, Italy, and Portugal, this study examines how home-leaving rates evolved in the short-term and explores the relationship between governmental restrictions, economic characteristics of households and young adults, and leaving home behaviors. Descriptive analyses reveal that the share of young adults leaving the parental home in Southern Europe between 2019 and 2020 slightly increased compared to previous years. Discrete-time event history models show that the propensity to leave the parental home increases with the stringency of policy measures. Young adults with the highest likelihood to leave home are employed individuals whose households are in the lowest income quintile as well as students from the highest income quintile, suggesting that, in these countries, residential independence is associated with either the acquisition of economic resources in the labor market or the availability of family resources. We interpret this result in favor of an "independence effect" exerted by COVID-19-related restrictions on young adults; future research might establish whether this trend is temporary or persistent over time.

1. Introduction

COVID-19 has radically altered the way scholars study population change and life courses (Settersten et al., 2020; Zagheni, 2021). When the virus spread and lockdown measures were implemented across Europe, mobility limitations were imposed for indefinite periods of time over non-necessary movements, abruptly changing people's everyday lives. While the health consequences of the pandemic were particularly severe for the older age groups, lockdowns, closures, and curfews affected the wellbeing of young adults in particular (Eurofound, 2021; Lucchini et al., 2021; Puerto Gonzalez et al., 2020), as youth is a "demographically dense" period of life (Rindfuss, 1991). During this life stage, individuals transition from school to work, from their families of origin to independent living, and form affective relationships that may consolidate later in life. Whether and how the restrictions enacted to limit the spread of the virus changed young adults' propensity to engage in certain behaviors such as leaving the parental home, starting a non-marital cohabitation, getting married, or having a child (i.e., the events marking the transition to adulthood) is of paramount importance to understand the life-course consequences of the pandemic for young adults, their families and their social relationships on both the short- and long-term (Settersten et al., 2020).

The first studies in this area relied on small samples, collected with ad-hoc surveys, e.g., aimed at studying marriage intentions in Italy (Guetto et al., 2021), and intentions about leaving the parental home and childbearing in Italy, Spain, France, Germany, and the United Kingdom (Luppi et al., 2020, 2021). On the contrary, the consequences of the pandemic on fertility have been analyzed extensively, also in cross-country comparisons (Aassve et al., 2021; Cozzani et al., 2023; Lappegård et al., 2023). Whether and how COVID-related restrictions affected home-leaving behaviors is still unknown. Leaving the parental home is a key event in young adults' transition to adulthood, which is likely to be postponed during recessionary periods due to the increased economic hardship (Aassve et al., 2013; Sironi, 2018), thereby delaying

* Corresponding author. *E-mail address:* valeria.ferraretto@unitn.it (V. Ferraretto).

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other transitions such as partnership formation or childbearing. In Southern Europe, where young people tend to exit from their parents' home late compared to the rest of the continent, and where youth economic prospects were particularly uncertain already before the onset of the pandemic due to high youth unemployment rates, the pandemic may have delayed even further home-leaving transitions.

Building on a large body of comparative research on the event of leaving home and on its economic determinants (Aassve et al., 2002; Avery et al., 1992; Iacovou, 2010), this contribution focuses on Southern European countries (Spain, Portugal, Greece, and Italy) and aims (1) to descriptively explore short-term trends in home-leaving patterns, (2) to assess whether and how the COVID-related restrictions were associated with the decision to leave the parental home, and how this association varies depending on young adults' economic conditions and the economic conditions of their families of origin. Our sources of data are the European Union Statistics on Income and Living Conditions (EU-SILC), a European-level household survey with a panel component providing a wide range of information on household members, combined with the Oxford COVID-19 Stringency Index (Hale et al., 2021), measuring governmental restrictions at a detailed time scale for a large number of countries. EU-SILC data allow to study leaving home decisions of young adults aged 18-35 who, before the onset of the pandemic, were co-residing with their parents.

The focus on Southern Europe is motivated by both theoretical and empirical reasons. On the theoretical side, Southern Europe represents an ideal study setting. Spain, Portugal, Greece, and Italy can be considered homogenous in various respects: all share a familistic welfare state (Ferrera, 1996), strong family ties (Reher, 1998), and a "latest-late" transition to adulthood (Billari, 2004; Billari et al., 2002), resulting in relatively high levels of intergenerational co-residence; in addition, the health and economic repercussions of COVID-19 as well as the governmental response to it have been comparable (European Commission, 2022). From the empirical point of view, we take advantage of the fact that, differently from the majority of the surveyed countries, EU-SILC data have been collected in the second half of 2020 in Southern European countries, hence after the enforcement of lockdowns. We contribute to the literature in different ways: first, by studying changes in home-leaving behaviors related to the COVID-19 pandemic; second, by deepening the knowledge about the role played by economic factors on young adults' choices during a period of great uncertainty; third, by including Portugal and Greece in the Southern European cluster, as many studies on the transition to adulthood have extensively focused on Spain and/or Italy.

2. The COVID-19 pandemic in Southern Europe

The COVID-19 virus started spreading in Europe in the first months of 2020, Italy being the first country in the world to introduce a nationwide lockdown on March 9th. Greece followed shortly afterwards, imposing a lockdown starting from March 11th, Spain on March 14th, and Portugal on March 18th. During the lockdown, in all the considered countries schools and universities were closed, it was not possible to move from the place of residence unless in case of necessity (e.g., for grocery shopping), international travel was stopped, and all nonessential businesses and industries were closed. Notably, Southern European countries imposed the tightest restrictions in the whole Europe (European Commission, 2022). Depending on country-level specificities, lockdown restrictions were progressively eased between April and June. After the summer, when only limited measures such as recommendations to maintain social distancing and use face masks were adopted, infections started to rise again (the so-called second wave) and restriction measures were implemented to limit the spread of the virus, although not in the form of nationwide lockdowns: by November 2020, all the four Southern European countries had introduced curfews during the night, and restrictions to individual mobility and economic activities were in some cases adapted at the local level (e.g., across Italian NUTS-2

regions and Greek NUTS-3 regions). These measures remained in place until the first months of 2021.

Governmental restrictions had negative economic repercussions on economic activities as they remained closed for a long period of time; Southern European countries experienced the largest drop in their gross domestic product and employment rates, with Spain being the country most severely hit (Moreira et al., 2021). Young adults were particularly vulnerable to the economic impact of the pandemic in Southern Europe, where precarious and low-paid jobs were widespread among young people well before the onset of the pandemic, particularly in the aftermath of the Great Recession (Aassve et al., 2013; Sironi, 2018). Youth unemployment increased dramatically in 2020 for different reasons. First, young people are more likely to be employed in the sectors hit hardest by the crisis, i.e., retail, accommodation, tourism, and food services. Also, because they are often employed with short-term contracts, it is easier to lay young people off compared to older workers who are more likely to have permanent contracts (Eurofound, 2021; Puerto Gonzalez et al., 2020).

The psychological toll of the restrictions has been large for adolescents and young adults, as demonstrated by several studies: research on Italy has shown that mental health deteriorated more during the first lockdown among individuals aged 16–34 compared to the rest of the population (Lucchini et al., 2021), and comparative research has indicated that differences in mental health between younger and older individuals were more pronounced in the countries where the COVID-19 outbreak was most severe (Maffly-Kipp et al., 2021). Negative psychological consequences were exacerbated in low-income and minority communities, as individuals belonging to these groups may not have access to critical resources, were more exposed to contagion, and are generally less equipped to face uncertainty (Maffly-Kipp et al., 2021).

3. Theoretical framework

3.1. Determinants of leaving home

Leaving the parental home is a key event of the transition to adulthood, as it (ideally) marks the process of becoming independent from the family of origin. According to the life-course perspective, life trajectories depend on opportunities and constraints at both the individual and contextual level, with human agency being at the core of any behavioral process (Giele & Elder, 1998). While a comprehensive theory of agency in the life-course has yet to be formulated, life-course decisions such as leaving home are aimed at increasing - or maintaining one's wellbeing (see e.g., the discussion in Bernardi et al., 2019). Decisions may also be conditioned by biographical experiences occurred in the past ("shadows of the past") and expectations about the consequences of leaving in the future ("shadows of the future") (Bernardi et al., 2019). Normative factors such as the existence of perceived age norms or deadlines among peers or family members do play a role in determining home-leaving intentions (Schwanitz et al., 2021) and behaviors (Billari & Liefbroer, 2007). Gender also matters, with women traditionally leaving home before men due to earlier family formation, especially in Southern Europe (Billari et al., 2001).

Objective conditions and subjective norms that may favor or hinder the decision to leave home vary greatly according to the social and geographical context of young adults. Parental approval concerning home-leaving decisions matters more in those contexts where the welfare state is weak and does not support young adults' economic independence, as it has been shown for Italy (Schwanitz et al., 2021; Tosi, 2017), while preferences towards autonomy and individualism are emphasized over family relations in Northern and Western Europe (Reher, 1998). In Southern Europe, family ties tend to be strong and young adults rely on their families of origin for longer periods compared to Nordic countries: it is thus considered acceptable to co-reside with parents until the late 20s-early 30s. Relatedly, Mediterranean and Nordic countries represent, respectively, the "latest-late" and the "earliest-early" model of the transition to adulthood (Billari, 2004; Billari et al., 2002).

Economic factors are also important determinants of the homeleaving process. At the contextual level, few employment opportunities, low wages, or a low availability of dwellings may hamper the process of independence (Holdsworth & Irazoqui Solda, 2002; Vitali, 2010), particularly so during the Great Recession, when young adults' economic conditions considerably deteriorated, especially in Southern Europe (Aassve et al., 2013; Sironi, 2018). However, in this group of countries the economic recession did not substantially alter the probability of leaving home, due to the traditionally high age at which young people experience this event (Aassve et al., 2013; Mazzotta & Parisi, 2019). The availability of economic resources - whether own or parental resources - is considered essential to leave the parental home; young adults' own income is positively associated with the probability of leaving home (Iacovou, 2010), and this association is particularly pronounced in Southern European countries (Aassve et al., 2002). In these countries, uncertain employment prospects postpone the exit from the parental home, as this can be used as a "shelter against economic hardship" (Aassve et al., 2007, p. 20). Hence, being employed is expected to be positively associated with leaving home. Being enrolled in tertiary education programs may not represent a push factor for young adults living in Southern European countries, as universities are widespread throughout the country, allowing students not to move from the parental home, and the provision of on-campus accommodations is rather low compared to Northern and Western countries (Billari et al., 2001). However, because parental income represents the main source of support for university students, the likelihood to move from home to attend the university may well depend on young adults' socio-economic background (Iacovou, 2010; Mulder & Clark, 2002).

The effect of parental resources on leaving home decisions is instead less clear-cut. If parental income is considered, its association with the probability of leaving home is stronger in countries with a welfare regime centered on the role of families (Aassve et al., 2002), but varies according to young adults' age. Iacovou's (2010) findings reveal that a high parental income is associated with a lower probability of leaving home at younger ages, hence when parents consider it to be "too early", and a higher probability to leave home at older ages, i.e., at around age 30 in Southern Europe. We know from previous literature that intentions and the ability to realize such intentions during the transition to adulthood are socially stratified (Billari et al., 2019), with youth from more affluent families being more likely to realize their intentions compared to those from less affluent families. Thus, young adults from advantaged backgrounds may be encouraged to leave the parental home because their parents value independence (Arnett, 2000) and can provide them with financial help. This is commonly referred to as the "socialization hypothesis" and is consistent with findings by Billari et al. (2019), who measure parental socio-economic status using indicators of parental educational level and occupation. On the contrary, according to the "feathered nest" hypothesis (Avery et al., 1992), an advantaged family background may delay young adults' independence because of the availability of comfortable spaces where to live. This hypothesis has been confirmed in a comparative framework by Angelini et al. (2022) using data on older cohorts (1936-1956) and a composite measure of parental socio-economic background during childhood, and by Ferraretto and Vitali (2023) for women born in younger cohorts living in Southern and Eastern European countries. It follows that young adults living in crowded spaces or in large families with many siblings (Holdsworth, 2000) tend to leave the parental home earlier. Family structure may also affect leaving home decisions through other channels: while it is well established that young adults from non-intact families tend to leave earlier than young adults from intact families (Aquilino, 1991), in Southern Europe living in a lone-parent family decreases the probability to leave (Iacovou, 2010), but this may also depend on the number of siblings living at home (Mencarini et al., 2012). Parental resources may thus, depending on the context, slow

down or accelerate young adults' transition out from the parental home.

3.2. Leaving home during the 2020 pandemic

As discussed in the previous sections, governmental restrictions in 2020 varied according to the evolution of the pandemic, sometimes also at the subnational level; however, leaving home, or more in general relocating, has never been prohibited when considered necessary. As a result of the restrictions in the freedom of movement, in economic activities, and of school and university closures, it can be expected that, on the one hand, young people returned to their parents' home, as suggested by a study conducted in the United Kingdom finding that 10.2% of youth aged 19 moved back with their parents as of May 2020 (Evandrou et al., 2021). Still, the aforementioned study does not report the reasons behind young adults' choice of returning home, and, to the best of our knowledge, the only official statistics on young adults' changes in living arrangements during the COVID-19 pandemic consists of cross-sectional data published by Eurostat¹ on the share of young adults living with parents, which might be biased by sampling criteria (Jenkins & Van Kerm, 2017) and by missing information on previous living arrangements. On the other hand, for those who were living with their parents, the pandemic may have altered young adults' plans for leaving the parental home. Preliminary evidence by Luppi et al. (2021) showed that leaving home intentions in 2020 were revised downwards in Italy and Spain and partially so in the United Kingdom, but not in France and in Germany, and that negative revisions are associated with precarious employment conditions and bad economic prospects about the future.

Indeed, the restrictions enacted to limit the spread of contagion may have - directly or indirectly - affected home-leaving decisions in different ways. Fig. 1 illustrates two possible scenarios along with the potential mechanisms underpinning changes in young adults' homeleaving behaviors during the pandemic. In the first scenario, restrictions may have prevented young adults from leaving home ("protection effect") because of the increased uncertainty about the future, which has been shown to negatively affect marriage and fertility intentions (Guetto et al., 2021; Vignoli et al., 2020), but also because co-residence is the most common way of supporting children in familistic societies such as those of Southern Europe (Albertini et al., 2007), or due to income losses or reduced spending power at the individual or family level. In the second scenario, restrictions may have, on the contrary, encouraged young adults to leave home ("independence effect") for the following (not mutually exclusive) reasons: firstly, given that many people were forced to work or to study from home and face-to-face contacts with non-family members - such as non-cohabiting romantic partners - were drastically reduced, contact frequency between cohabiting parents and children was increased (Settersten et al., 2020), possibly causing more stress and conflicts at the individual and family level (Evandrou et al., 2021). Secondly, households' savings could actually have increased during the pandemic as most economic activities were closed (Dossche et al., 2021), increasing own and parental economic resources; lastly, young people may have wanted to move out to safeguard their family members from COVID-19 contagion. These two opposite mechanisms displayed in Fig. 1 are in line with findings from a qualitative study on young people's housing transitions during the pandemic in Poland, identifying two typologies of housing situations among young adults living with their parents before and during the pandemic: "appreciated nesting" vs. "burdensome nesting" (Kajta et al., 2023).

As shown in Fig. 1, the association between COVID-19 restrictions and the probability to leave home may vary according to young adults as well as their households' economic conditions: young adults with high parental socio-economic status are more likely to leave home even in

¹ Data code: ilc_lvps08



Fig. 1. COVID-19 and leaving home: overview of the possible scenarios and mechanisms.

difficult times, because they are more in control of their own possibilities, and more opportunities are open to them (Settersten et al., 2020); similarly, having a job should decrease one's uncertainty about the future, increasing the chances to become residentially independent from one's parent. Our expectations do not differ between women and men.

4. Data and methods

4.1. Dataset

The European Union Statistics on Income and Living Conditions (EU-SILC) are the main source of information on the economic conditions of households and individuals in Europe (Wirth & Pforr, 2022). It is a household survey providing comparable cross-sectional and longitudinal microdata used to monitor poverty and social exclusion at the European level. Data are collected at the household as well as at the individual level; notably, basic demographic data on all household members are collected, while economic conditions are measured only on individuals aged 16 and over (Wirth & Pforr, 2022). The longitudinal survey has a four-year rotational design, leading to an unbalanced short panel where each household and its members can be observed for a minimum of one and a maximum of four years. Respondents are interviewed yearly, but information is provided on the quarter in which the interview was conducted; moreover, when a household member leaves the household, information on that specific member is no longer collected, but the remaining household members are asked to recall retrospectively the quarter in which the individual left. It should be noted that the definition of household in EU-SILC does not equate that of family, therefore this dataset does not allow to distinguish between biological, foster, and step-parents (lacovou et al., 2012), or, equivalently, between full and half siblings, a limitation that will be addressed in the revision of EU-SILC from 2021 onwards (Wirth & Pforr, 2022). In addition, the follow-up of individuals in their new households after moving from the previous one is low (Iacovou et al., 2012), and varying from country to country, making it difficult to differentiate analyses by the destination of leaving home (such as living with a partner, with a flatmate, etc); home-returning events are also rare in this dataset.

Its longitudinal component covering 2017–2020 is exploited here (EU-SILC 2022 Release 2^2). In 2020, the process of data collection has been impacted by the pandemic: some countries postponed or extended the fieldwork, others changed the mode of data collection from personal interviews to telephone or web interviewing. For most countries, the survey year 2020 cannot be associated with the pandemic, as the EU-SILC fieldwork was conducted in a period including the first quarter of

2020, i.e., before restriction measures were implemented.³ In Southern Europe, on the contrary, the fieldwork was conducted in the second half of 2020, more precisely in the second, third, and fourth quarter in Portugal, third and fourth in Greece, fourth only in Spain and Italy, hence after the outbreak of the COVID pandemic. The fieldwork took place in the third and/or fourth quarter in Luxembourg, Poland, and Serbia as well; these countries were not included in the analyses as they cannot be compared with Southern Europe nor constitute a homogenous cluster of countries per se. A total of 159,168 individuals are interviewed in Southern European countries.

4.2. Sample

First, we descriptively compare the living arrangements of young adults aged 18–35 who were interviewed in 2019, i.e., the year prior to the COVID-19 outbreak, and in the second half of 2020, i.e., during the outbreak. For comparison, we also analyze the living arrangements of youth observed in each pair of consecutive years prior to 2019 (i.e., 2017/18, 2018/19). Because in this first step of the analysis we compute aggregate measures only, the sample is composed of all individuals observed in both pair of consecutive years (53,030 respondents in 2017/18, 81,191 in 2018/19, 87,249 in 2019/20). To put Southern Europe in context, descriptive analyses on all European countries included in EU-SILC⁴ are presented in the Appendix.

Second, we run regression analyses. The analytical sample of regression models consists of young adults (aged 18–35 when entering the panel) living in Spain, Portugal, Greece, or Italy (26,597 respondents), co-residing with their parents at their first observation (16,654), and with no missing or invalid information on the variables of interest. By using these criteria, we obtain a sample of 16,288 respondents, amounting to 36,694 person-years. Respondents are included in the sample of regression models also when present in only one wave, as we reconstruct our data from years to quarters (see below); however, only 11% of respondents in our sample have been interviewed once, 31% and 32% are present in two and three waves respectively, and 26% have been interviewed four times.

4.3. Dependent, explanatory, and control variables

Our event of interest is leaving the parental home. Individuals are

³ The fieldwork included the first quarter of 2020 in the following countries: Austria, Belgium, Switzerland, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Croatia, Hungary, Ireland, Lithuania, Latvia, Netherlands, Sweden, Slovenia, Slovakia.

² https://doi.org/10.2907/EUSILC2004-2020V.3

⁴ At the moment of writing, 2020 longitudinal data have not been released for Germany, Iceland, and the United Kingdom.

identified as leaving home in our regression analyses if they satisfy three conditions: 1) they co-reside with their parent(s) at wave t, 2) they move out from the household at wave t + 1, and 3) at wave t + 1 information by remaining household members is provided on the quarter when the young adult left the household (if not re-interviewed), or they are observed in a new household. In this way, leaving home events cannot be due to attrition from the panel.

Our main explanatory variable is the Oxford COVID-19 Stringency Index (Hale et al., 2021), a measure summarizing the stringency of nine policy measures⁵ implemented to contain the spread of the virus, ranging from 0 (no measure) to 100 (strictest response) and calculated on a daily basis for a broad range of countries. In case policies vary within a given country, the index refers to the strictest areas; unfortunately, the index is not available at the subnational level for the considered countries. We calculate the quarterly average of the stringency index for each country. To facilitate the interpretation of results, the index is transformed into a categorical variable taking value 0 in country-quarters characterized by absence of restrictions (a value assumed for all quarters preceding the first quarter of 2020, i.e., before the outbreak of the pandemic), 1 in country-quarters characterized by low stringency (1–50), and 2 in country-quarters characterized by high stringency (51–100).

To account for young adults' economic conditions and economic conditions of their households of origin, we include a number of variables, available at the yearly level in EU-SILC. First, households' economic conditions are captured by the equivalized disposable household income, converted into within-country quintiles⁶ to ensure comparability across the considered countries as well as across households with different family sizes (Aassve et al., 2002; Iacovou, 2010). This measure of income amounts to the income available for saving or spending after tax and deductions in the previous calendar year, divided by the number of household members (converted into equivalized adults with the OECD equivalence scale). Second, young adults' conditions are measured by their self-defined current economic status, distinguishing between employed and self-employed individuals, unemployed, inactive, and students/trainees. For those individuals who leave the parental home, for whom information on employment status in the quarter when they left home is unavailable because they are not followed up, the employment status of the previous interview is used (1839 cases imputed). Third, we include other characteristics of the household at the first observation such as the crowding index, measured as the number of household members divided by the number of rooms, and whether a single parent vs. two parents were present in the household. Control variables include country fixed effects, gender, birth cohort in five years groups, and age (time-varying in quarters, linear and squared).

4.4. Analytical strategy

For descriptive analyses, following the strategy used, e.g., by Mazzotta & Parisi (2019), we compute country-specific yearly home-leaving rates between *t* and t + 1, measured as the number of young adults leaving the parental home between *t* and at t + 1 divided by the number of young adults living with their parents at *t*, for each pair of consecutive years between 2017 and 2020. In these analyses, we do not use the information related to the quarter of leaving home, but only that related to year, as we are interested in capturing transitions from one wave to the following. We exclude from the number of young adults leaving the parental home those individuals absent from the household at wave t + 1 because of death (N = 16).

In a second step, discrete-time event history regression models are used to estimate the likelihood of leaving the parental home in a given quarter. For this particular analysis, we reshape our data in a personquarters format (N = 102,175), and measure survival time in quarters starting from age 18 (considered as the minimum age at risk of leaving the parental home). We censor an episode if the individual has not left the parental home according to the three criteria illustrated above by the last observation, or if he or she is identified as missing from the parental home for reasons other than leaving (such as death). If the individual is re-interviewed in a new household, and no information is provided by the previous household members on the timing of leaving home, the quarter of leaving home is imputed to the quarter before the interview (N = 307 on the overall sample of 159,168 individuals). Logistic regression models are used, corresponding to a proportional hazard model in a continuous-time setting (Allison, 1982). The time dependency of the hazard is captured by age. It should be noted that episodes are artificially created since age 18 for the sake of event history models only; that is to say, we exploit only the information collected in the window of observation of the survey - i.e., from one to four years maximum since the age when first entering the panel - and do not use episodes occurring before the first interview. Since no retrospective information on respondents' life histories is available, it is possible that some individuals had already left and returned the parental home before entering the panel; given that the age at which young adults leave home is relatively high in Southern Europe, we assume that this circumstance concerns a minority of cases.

The following discrete-time event history logistic regression models are estimated: a null model including controls for the stringency index and basic control variables (country fixed effects, gender, cohort, age, age squared); a model controlling for the household's characteristics and young adults' employment status (Model 1); two additional models (Models 2 and 3) including interaction terms between the stringency index and young adults' employment status, and between stringency and household income; and a fourth model including an interaction term between employment status and household income, by levels of stringency (Model 4). The latter model allows to simultaneously consider the interplay between our main explanatory variables. Average marginal effects from the null model as well as from Model 1 are also presented by gender. We conduct robustness checks with alternative model specifications.

5. Results

5.1. Descriptive results

Fig. 2 shows how young adults' yearly home-leaving rates evolved between 2017 and 2020 in Greece, Spain, Italy, and Portugal. In all the four countries, the share of young people leaving home during the pandemic, i.e., between 2019 and the second half of 2020 (hence after the outbreak of the pandemic), exceeds that of the previous years (2018/ 19) by 0.4 to 5% points. Italy is the country with the highest homeleaving rate: 16.8% of young adults who were living with their parents in 2019 left the parental home in 2020, followed by Spain (13.6%), Greece (11.3%), and Portugal (8.2%). To get a sense of the magnitude of these rates and their variation inside Europe, home-leaving rates are presented for each country in the dataset in Figure A1 in the Appendix. Trends are in line with previous results (Mazzotta & Parisi, 2019): in Finland, Denmark, and Sweden between 25% and 35% of young adults leave the parental home each year; Western European countries oscillate between 10% and 20%, while Eastern European countries present heterogeneous values, with ultra-low values (< 1%) in Romania and Slovakia. As discussed above, data referring to 2020 have been collected in a period including the first quarter for most of the countries in Figure A1, hence the comparison of home-leaving rates between 2019 and 2020 cannot be associated with the pandemic in these cases. We eventually note that 2019/20 home-leaving rates in Poland and Serbia,

⁵ The nine metrics are: school closures; workplace closures; cancellation of public events; restrictions on public gatherings; closures of public transport; stay-at-home requirements; public information campaigns; restrictions on internal movements; and international travel controls.

⁶ Calculated on the entire sample, i.e., before sample selection.



Fig. 2. Home-leaving rates between two consecutive years (t, t + 1), 2017–2020 by country,

Source: EU-SILC 2020 panel, Release 2, 2022. Note: Home-leaving rates are calculated for each country and for each pair of consecutive years as the number of young adults leaving the parental home at t + 1, divided by the number of young adults living with their parents at t. 2019/20 rates can be associated with the pandemic. N = 53,030 in 2017/18, N = 81,191 in 2018/19, and N = 87,242 in 2019/20.

two countries where the fieldwork in 2020 was conducted after the onset of the pandemic, are, similarly to Southern Europe, higher than those of the previous years, while these are lower in Luxembourg.

We furthermore calculate home-returning rates as the share of adults returning to the parental home between *t* and at t + 1 divided by the number of young adults living independently at *t* for each couple of years (available on demand). Similarly to previous studies (Mazzotta & Parisi, 2019), the resulting rates are very low, that is, below 0.8% on average for all European countries, with no clear pattern emerging from the data and considerable cross-country variation; among Greek, Spanish, Italian and Portuguese youth aged 18–35, a negligible number of home-returning events (N = 92) is observed among a sample of 26,597 individuals.

Fig. 3 illustrates the daily trend of the Oxford COVID-19 Stringency Index in Southern European countries for the year 2020. National-level lockdowns can be clearly recognized, with stringency jumping from zero to 80/90 in March 2020, to then decrease around May and during the summer. Stringency rises again starting from November, when new restrictions were adopted in all of the four countries. Italy was the first country to impose restrictions and where, compared to the other countries, policy measures remained stringent for the entire year. In Spain, Portugal, and Greece, stringent policy measures were adopted with a slight delay and fluctuated considerably between May and November. Across person-quarters, the stringency index is distributed as follows: in 75% of cases, no restriction was in place; low and high restrictions characterize 7.5% and 17.5% of the sample, respectively.

Table 1 presents descriptive statistics of the sample used in regression analyses (in persons-years), consisting of young adults aged 18-35 living with their parents when entering the panel. Descriptive measures show considerable similarities among the four countries: the age at leaving home (only for those individuals who left) ranges from age 27 to age 28.3 in Italy, the share of employed young adults is comparable (between 40% and 50%), and a small proportion of respondents (always below 4%) was first observed in a family with only one parent. Regarding the economic conditions of respondents and of their households, the share of unemployed young adults is highest in Greece (26.7%), where also that of students is lowest (24.1% compared to an average of 31.1%). In our sample, Greek young adults are also more likely to live in households in the first income quintile, compared to their counterparts from the other countries, well-distributed across the different income quintiles. Overall, male respondents are slightly overrepresented, because of the earlier age at which women tend to leave the parental home.

5.2. Regression results

Results from the null regression model and from Model 1 are expressed in odds ratios in Table 2 as well as in Average Marginal Effects (AME) in Figure A2 and A3, presented by gender in the Appendix. Results from the null model, including basic control variables only, suggest that the more stringent the policy measures, the more likely young adults are to leave the parental home. The odds of leaving home are 1.644 times higher (p = 0.000) in a quarter with a high level of restrictions, i.e., a stringency index bigger than 50, compared to a quarter when no restrictions are in place, or, equivalently, a high level of restrictions increases the average probability of leaving by 0.9%. When the level of restrictions is lower than 50, the probability of leaving home increases slightly compared to the time when no restriction was in place (O.R. = 1.310, p = 0.003). It should be noted that, in line with descriptive results, Italian respondents are more likely to leave compared to the other countries, and that no differences are detected among different birth cohorts. In line with the literature, the propensity to leave home rises with age, and women are more likely to leave home than men.

In Model 1, when we account for the households' as well as individuals' economic characteristics, the odds of leaving home with a high level of restrictions remain similar to the null model (O.R. = 1.660, p = 0.000). Being in the poorest or in the richest income quintile is positively associated with the odds of leaving home in comparison to the middle-income quintile (1st quintile: O.R. = 1.223, p = 0.014; 5th quintile: O.R. = 1.169, p = 0.037). Being unemployed or inactive markedly decreases the odds of leaving the parental home compared to being employed by 30.5% and 51.3% respectively, while the reduction is more limited when being a student (18.6%). Neither living with a single parent nor living in a crowded household significantly increase the odds of leaving home.

Average Marginal Effects for the main covariates of interest are presented separately for women and men in the Appendix. Figure A2 presenting results from the null model indicates that the coefficients of the stringency index as well as those of the control variables do not differ by gender. At a first glance, Figure A3 presenting results from Model 1 may suggest that economic characteristics of the household and of young adults affect women and men differently; however, interaction terms in Model 1 (not shown) introduced on employment status, household income, and crowding index indicate that this is not the case.

Several interaction terms are introduced to test whether the association between the stringency index and the odds of leaving home depends on the economic characteristics of young adults and of their households. Results from Model 2 and Model 3, presented in Table 3,



Fig. 3. Oxford COVID-19 Stringency Index, daily trend (2020), Southern European countries, Source: (Hale et al., 2021). Figure by the authors.

indicate that the association is not dependent on the employment status of respondents or on their households' income, separately considered: the coefficients of the interaction terms are not statistically significant.

Lastly, the relationship between disposable household income, young adults' employment status, the stringency index, and the propensity to leave home is explored by Model 4 (Table 3). Model 4 includes an interaction between household income and employment status and has been estimated separately on observations characterized by no restrictions (N = 76,635) and by a high stringency (N = 17,912). Results presented in Fig. 4 show that, while for young adults who live in highincome households the probability of leaving home does not depend on their employment status, for young adults coming from lower-income households being employed is positively associated with the likelihood of leaving home. Such differences are less marked in the middle-income quintiles and hold in both scenarios. Individuals with the highest predicted probability of leaving the parental home with high restrictions compared to the reference category (employed, third quintile) are employed/self-employed individuals in the first income quintile (p = 0.0545) and students from the fifth income quintile (p = 0.0437).

5.3. Robustness checks

Results are robust to different thresholds identifying low and high stringency levels of restrictions (not shown). Results are consistent when using the continuous measure of the Stringency Index as well, ranging from 0 to 100. In addition, we test whether the stringency index has a lagged effect on the probability of leaving home; that is, we use the stringency index of the quarter *t*-1 to predict the probability to leave in the quarter *t* and obtain that both a low (O.R. = 1.501, p = 0.000) or a high (O.R. = 1.652, p = 0.000) level of restrictions are associated with an increased probability to leave home. The other coefficients do not change substantially from those presented in Model 1, Table 2. Another control variable used in previous regression models whose coefficient was not significant was the degree of urbanization of the area of residence. Results do not vary if regional⁷ fixed effects are used instead of country fixed effects. The association between the stringency index and the outcome does not depend on age, therefore not violating the

proportional hazards assumption.

6. Conclusions and discussion

Our study contributes to the literature on the transition to adulthood by exploring how young adults' leaving home patterns were associated in 2020 with COVID-related restrictions in Greece, Spain, Italy, and Portugal, i.e., four Southern-European countries characterized by a "latest-late" pattern of transition to adulthood (Billari, 2004; Billari et al., 2002), and how this association depends on micro-level economic characteristics. We exploit the longitudinal component of EU-SILC data (2017–2020) and the Oxford COVID-19 Stringency Index (Hale et al., 2021) to perform descriptive analyses and to model the probability of leaving the parental home for young adults living with their parents when first observed with discrete-time logistic regression models. To the best of our knowledge, this is one of the first comparative studies on leaving home behaviors during the pandemic, as well as among the first studies on the transition to adulthood offering a broad perspective on Southern European countries.

Results show that in Southern European countries home-leaving rates in 2020 slightly exceeded those of the pre-pandemic period, pointing to a (slow) acceleration of the process of leaving home during the first pandemic year. This descriptive result is confirmed by regression analyses, furthermore showing that not only the presence/absence of restrictions matters, but also the level of stringency: a high level of restrictions increases the probability of leaving home more than a low level of restrictions. We interpret this result in favor of an "independence effect", which could be explained by a mix of factors: young adults may have been more prone to leave their parents' home during 2020 to escape from forced co-residence and gain some independence, e.g., in terms of private spaces where to work, meet friends, or partners. This explanation is in line with findings on the negative effects of the restrictions on mental health for young adults (Eurofound, 2021; Lucchini et al., 2021; Maffly-Kipp et al., 2021): moving out from the parental home could be regarded as a strategy to safeguard, or improve, one own's wellbeing. We can thus speculate that young adults used their own or their families' financial means to establish an independent living following the imposition of tough restrictions on individual freedom. Although these mechanisms could not be tested here, the decision to leave the parental home might have been motivated by increased savings or also by the willingness to limit the spread of the virus to family members. The independence effect does not depend on household

⁷ Operationalized with NUTS regions; specifically, in Greece and Italy information is available only at the NUTS-1 level, in Spain and Portugal at NUTS-2 level.

Table 1

Descriptive statistics by country (person-years), unweighted.

	Country					
	EL	ES	IT	PT	Total	
Ν	8385	7862	12,925	7522	36,694	
	(22.9%)	(21.4%)	(35.2%)	(20.5%)	(100.0%)	
Self-defined current						
economic status	0.000	0100	5055		16.606	
Employed/self-	3689	3133	5975	3829	16,626	
employed	(44.0%)	(39.8%)	(46.2%)	(50.9%)	(45.3%)	
Unempioyeu	2239 (26.7%)	(18.2%)	2224	(15.7%)	(10.3%)	
Inactive	433	403	396	289	1521	
macure	(5.2%)	(5.1%)	(3.1%)	(3.8%)	(4.1%)	
Student/in	2024	2897	4330	2221	11,472	
training	(24.1%)	(36.8%)	(33.5%)	(29.5%)	(31.3%)	
Equivalized						
disposable						
household						
income, within-						
country quintiles	10.40	1501	0.460	1 5 0 1	7500	
1st income	1948	1591	2463	1531	7533	
quintile and income	(23.2%)	(20.2%)	(19.1%)	(20.4%)	(20.5%)	
quintile	(17.7%)	(10.4%)	2330	(10.2%)	(18.5%)	
3rd income	1536	1675	2601	(19.2%)	7332	
quintile	(18.3%)	(21.3%)	(20.1%)	(20.2%)	(20.0%)	
4th income	1678	1575	2756	1719	7728	
quintile	(20.0%)	(20.0%)	(21.3%)	(22.9%)	(21.1%)	
5th income	1740	1494	2755	1306	7295	
quintile	(20.8%)	(19.0%)	(21.3%)	(17.4%)	(19.9%)	
Household	1.137	0.816	1.120	0.883	1.010	
crowding index	(0.416)	(0.324)	(0.438)	(0.331)	(0.414)	
Coming from a						
single parent						
No	021E	7696	10 794	7001	25 006	
NO	(99.2%)	(97.1%)	(98 5%)	(96.0%)	(97.9%)	
Yes	70	226	191	301	788	
100	(0.8%)	(2.9%)	(1.5%)	(4.0%)	(2.1%)	
Birth cohort	()					
1980/5	1082	587	1342	793	3804	
	(12.9%)	(7.5%)	(10.4%)	(10.5%)	(10.4%)	
1986/90	1469	1053	2168	1026	5716	
	(17.5%)	(13.4%)	(16.8%)	(13.6%)	(15.6%)	
1990/95	3276	2799	5433	2766	14,274	
1000	(39.1%)	(35.6%)	(42.0%)	(36.8%)	(38.9%)	
1996 +	2558	3423 (42 E04)	3982	2937	12,900	
Age at first	(30.3%)	(43.5%)	(30.8%)	(39.0%)	24 508	
observation (18-	(4 889)	(4 682)	(4 662)	(4 842)	(4 769)	
35)	(11003)	(11002)	(11002)	(11012)	(11/03)	
Age at leaving	27.410	27.068	28.303	27.129	27.661	
home	(4.916)	(4.277)	(4.349)	(4.392)	(4.493)	
Gender						
Male	4997	4301	6872	4272	20,442	
	(59.6%)	(54.7%)	(53.2%)	(56.8%)	(55.7%)	
Female	3388	3561	6053	3250	16,252	
N 1 C	(40.4%)	(45.3%)	(46.8%)	(43.2%)	(44.3%)	
Number of waves	2.930	2.514	2.676	2.952	2.756	
(1-4)	(0.965)	(0.935)	(0.970)	(0.907)	(0.964)	

income or on own employment status, when considered separately. Our findings reveal that, in Southern Europe, the COVID-19 pandemic produced different effects on young adults' leaving home behaviors compared to the economic recession of the previous decade, which did not substantially alter home-leaving rates (Aassve et al., 2013; Mazzotta & Parisi, 2019): the pandemic created an unprecedented situation where co-residence was not a choice, and where young adults lost part of the autonomy inside their parents' home they might have enjoyed in pre-pandemic times. In other European countries characterized by less stringent policy measures and by an earlier transition to independence, restrictions might not have substantially altered the number of leaving home events but might have triggered "boomerang moves" (see

Table 2

Discrete-time logistic regression models on the likelihood of leaving home, odds ratios

Stringency of COVID-related policy measures (ref: no measure) 1.310^{**} 1.318^{**} Low (0.120) (0.121) High 1.644^{****} 1.660^{***} Pemale (0.0604) (0.065) Age (linear) 1.941^{****} 1.880^{***} Age (squared) 0.990^{***} 0.990^{***} Birth cohort (ref: 1980/85) $1986/90$ 1.000 0.990 1986/90 1.000 0.990^{***} $0.233)$ (0.233) 1990/95 1.239 1.222 (0.233) (0.238) Country fixed effects (ref: EL) ES 1.008 1.055 ES 1.008 1.055 (0.0871) IT 1.393^{***} 1.366^{***} (0.0713) PT 0.097 1.117 (0.0491) Inactive 0.487^{***} (0.07491) Inactive 0.487^{***} (0.0713) Student/in training 0.814^{**} (0.0622) Equivalized disposable household income, withincome quintile 1.075 (0.0622) If 'income quintile $1.$		Null model	Model 1
(ref: no measure)1.310**1.318**Low1.310**1.318**Low(0.120)(0.121)High1.644***1.660***1.644***1.660***(0.105)Female1.229***1.264***(0.0604)(0.0629)(0.0629)Age (linear)1.941***1.880***(0.199)(0.195)(0.990***Age (squared)0.990***(0.00184)Birth cohort (ref: 1980/85)1.0000.9901986/901.0000.990(0.133)(0.133)(0.133)1996 +1.2651.255(0.233)(0.231)1.996 +ES1.0081.055(0.0802)(0.0871)IT1.393***1.366***(0.0918)(0.0977)PT(0.0818)(0.0892)Own employment status (ref: employed/self-employed)UnemployedUnemployed0.695***(0.0760)Student/in training1.023*(0.0760)Student/in training1.223*(0.0760)Student/in training1.075(0.0760)Student/in training1.075(0.0760)Student/in training1.075(0.0713)Sf ^h income quintile1.075(0.0713)Sf ^h income quintile1.169*(0.0713)Sf ^h income quintile1.169*(0.0713)Sf ^h income quintile1.128(0.0711)Lone parent0.746(0.7711)Lone parent0.746(0.746) <td>Stringency of COVID-related policy measures</td> <td></td> <td></td>	Stringency of COVID-related policy measures		
Low 1.310 ^{**} 1.310 ^{**} 1.318 ^{**} (0.120) (0.121) High 1.644 ^{***} 1.660 ^{***} (0.104) (0.105) Female 1.229 ^{***} 1.264 ^{***} (0.0604) (0.0629) Age (linear) 1.941 ^{***} 1.880 ^{***} (0.0199) (0.195) Age (squared) 0.990 ^{***} 0.990 ^{***} (0.199) (0.195) Birth cohort (ref: 1980/85) Birth cohort (ref: 1980/85) 1986/90 1.000 0.990 (0.133) (0.132) 1986/90 1.000 0.990 (0.133) (0.132) 1990/95 1.239 1.222 (0.233) (0.231) 1996 + 1.265 1.255 (0.030) (0.231) 1996 + 1.265 1.255 (0.0871) 17 1.265 1.255 (0.0871) 17 1.393 ^{***} 1.366 ^{***} (0.0918) (0.0907) PT 1.107 (0.0848) (0.0821) 0.097 1.117 (0.0848) (0.0892) Own employment status (ref: employed/self-employed) Unemployed 0.695 ^{***} (0.0713) Student/in training 0.645 ^{***} (0.0760) Student/in training 1.223 ^{**} 1 ^{4*} income quintile 1.223 [*] (0.0713) 5 th income quintile 1.223 [*] (0.0713) 5 th income quintile 1.128 (0.0713) 5 th income quintile 1.128 (0.0711) Lone parent 1.075 (0.281)	(ref: no measure)		
High (0.120) (0.121) High 1.644**** 1.660**** (0.104) (0.104) (0.105) Female (0.0604) (0.0629) Age (linear) 1.941*** 1.880*** (0.199) (0.199) (0.195) Age (squared) (0.0184) (0.00186) Birth cohort (ref: 1980/85) (0.133) (0.133) 1996/90 1.000 0.990 (0.0184) (0.00186) (0.231) 1990/95 1.239 1.222 (0.231) (0.231) (0.231) 1996 + 1.265 (0.238) Country fixed effects (ref: EL) I.008 (0.0971) ES 1.008 (0.0971) IT 1.393*** 1.366*** (0.0918) (0.0902) (0.0971) PT 1.097 1.117 (0.0842) (0.695*** (0.0918) (0.0971) Inactive	Low	1.310^{**}	1.318^{**}
High 1.644*** 1.660*** (0.104) (0.105) Female 1.229*** 1.264*** (0.104) (0.0629) Age (linear) 1.941*** 1.880*** (0.0504) (0.0629) Age (squared) 0.990*** 0.990*** (0.0194) (0.0183) 0.195) Birth cohort (ref: 1980/85) 1.000 0.990 1986/90 1.000 0.990 (0.133) (0.123) (0.231) 1996 + 1.265 1.255 (0.0802) (0.0871) 1.395*** ES 1.008 1.055 (0.0918) (0.0977) 1.117 (0.0802) (0.0871) T 1.097 1.117 (0.0802) (0.0872) (0.0872) Own employment status (ref: employed/self-employed) (0.0760) (0.0814)** Inactive 0.814*** (0.0602) Equivalized disposable household income, within-country quintiles (ref: 3rd quintile) 1.223* (0.013) 1** income quintile 1.223* (0.013) 2** di income qu		(0.120)	(0.121)
left1014)10.105Female (0.104) (0.105) Age (linear) 1.229^{4**} 1.264^{***} (0.0604) (0.0629) Age (squared) 0.990^{***} 0.990^{***} $Birth cohort (ref: 1980/85)$ 0.990^{***} 0.990^{***} $1986/90$ 1.000 0.990^{***} $1990/95$ 1.239 1.222 (0.233) (0.233) (0.233) $1990/95$ 1.239 1.222 (0.300) (0.298) Country fixed effects (ref: EL) 1.008 1.005 ES 1.008 1.055 (0.0802) (0.0871) 1.393^{***} 17 1.393^{***} 1.366^{***} (0.0918) (0.0907) 1.17 0.0848 (0.0892) Own employment status (ref: employed/self-employed) (0.0491) $Inactive$ 0.487^{***} (0.0602) $Student/in training$ $.53d$ (0.0802) $Student/in training$ $.53d$ (0.0760) $Student/in training$ $.123^{*}$ (0.0760) 2^{st} $.0.69^{***}$ (0.0760) $Student/in training$ $.123^{*}$ (0.0750) 2^{st} $.0.6888)$ $.0.902$ 0.002 (0.0874) $.1.59^{*}$ 0.002 (0.0713) $.1.59^{*}$ 0.002 (0.0713) $.1.128$ 0.0023 (0.0874) $.1.28$ $0.0711)$ $.0.746$ (0.128)	High	1.644***	1.660***
Female 1.229*** 1.264*** (0.0604) (0.0629) Age (linear) 1.941*** 1.86*** (0.199) 0.990*** 0.990*** Age (squared) 0.990*** 0.990*** Birth cohort (ref: 1980/85)	8-1	(0.104)	(0.105)
NameInterfInterfInterfAge (linear) (0.0604) (0.0629) Age (squared) (0.0199) (0.199) Age (squared) 0.990^{***} 0.990^{***} Birth cohort (ref: 1980/85) (0.00184) (0.00184) Birth cohort (ref: 1980/85) 1.000 0.990 (0.133) (1.32) 1.232 $1986/90$ 1.000 0.990 (0.133) (1.23) (1.23) $1990/95$ 1.239 (2.23) (0.233) (0.231) (0.298) Country fixed effects (ref: EL) (0.0802) (0.0871) IT 1.008 1.055 (0.0918) $(0.098)2$ Country fixed effects (ref: employed/self-employed) (0.0848) $Unemployed$ 0.695^{***} (0.0491) $Inactive$ 0.487^{***} (0.0760) $Student/in training$ (0.0760) $Student/in training$ 1.223^* $Country quintiles (ref: 3rd quintile)$ 1.075 (0.0888) 1^{st} income quintile 1.075 (0.0888) 4^{sh} income quintile 1.075 (0.0888) 4^{sh} income quintile 1.169^* (0.071) 5^{sh} income quintile 1.169^* (0.071) $Lone parent$ 0.746 (0.128)	Female	1.229***	1.264***
Age (linear) 1.941*** 1.880** Age (squared) 0.199 0.195) Age (squared) 0.00184) 0.900*** Birth cohort (ref: 1980/85) 1.000 0.990 1986/90 1.000 0.990 (0.133) (0.132) 1.222 (0.233) (0.231) 1.255 1996 + 1.265 1.255 (0.300) (0.288) 0.0907** Country fixed effects (ref: EL) 1.008 1.055 ES 1.008 1.055 (0.0802) (0.0827) (0.0802) IT 1.393*** 1.366*** (0.0918) (0.0907) 1.17 (0.0848) (0.0882) (0.0882) Own employment status (ref: employed/self-employed) 1.117 (0.0848) Unemployed 6.695*** (0.0491) Inactive 0.6857*** (0.0481) Inactive 0.814** (0.0602) Equivalized disposable household income, withincountry quintiles (ref: 3rd quintile) 1.223* (0.0713)	· ciliato	(0.0604)	(0.0629)
lige (untail)1.011.000Age (squared) (0.199) (0.195) Age (squared) 0.990^{***} (0.00184) (0.00186) Birth cohort (ref: 1980/85) 1.000 0.990^{***} (0.0184) (0.00186) Birth cohort (ref: 1980/85) 1.000 0.990^{***} (0.233) (0.132) $1996/95$ 1.239 1.222 (0.233) (0.231) $1996 +$ 1.265 1.255 (0.000) (0.298) Country fixed effects (ref: EL) ES 1.008 1.055 ES 1.008 1.055 (0.0902) (0.0971) IT 1.393^{***} 1.366^{***} (0.0907) PT 1.097 1.117 (0.0848) (0.0892) Own employment status (ref: employed/self-employed) $Unemployed$ 6.695^{***} (0.0491) Inactive 0.695^{***} (0.0760) $U.0750$ (0.0760) Student/in training $U.877^{***}$ (0.0760) $U.902$ Equivalized disposable household income, withincountry quintiles (ref: 3rd quintile) 1.223^{**} (0.101) 2^{rd} income quintile 1.075 (0.0713) 5^{rh} income quintile 0.0751 5^{rh} income quintile 1.169^{**} (0.0711) (0.0711) Lone parent 0.746 0.746	Age (linear)	1 941***	1 880***
Age (squared) $(0.173)^{++}{}$ $(0.173)^{++}{}$ $(0.173)^{++}{}$ Birth cohort (ref: 1980/85) (0.00184) (0.00184) (0.00186) Birth cohort (ref: 1980/85) (0.133) (0.132) 1990/95 1.239 1.222 (0.233) (0.231) 1996 + 1.265 1.255 (0.300) (0.298) Country fixed effects (ref: EL) ES 1.008 1.055 (0.0300) (0.0871) 1.393^{++} 1.366^{++} (0.0918) (0.0907) (0.0918) (0.0907) PT 1.097 1.117 (0.0848) (0.0892) Own employment status (ref: employed/self-employed) (0.0491) (0.0491) $Inactive$ 0.695^{+++} (0.0760) $Student/in training$ 0.814^{++} (0.0760) $Student/in training$ 1.223^{*} (0.101) 2^{nd} income quintile 1.223^{*} (0.0713) f^{th} income quintile 1.69^{*} (0.0713) f^{th} income quintile 1.128 (0.0711) Lone parent 0.746 0.746	rige (inical)	(0 100)	(0.195)
Ingle (squared)(0.00184)(0.00186)Birth cohort (ref: 1980/85)(0.0133)(0.132)1986/901.000(0.133)(0.132)1990/951.2391.225(0.231)1996 +1.2651.255(0.300)(0.298)Country fixed effects (ref: EL) ES 1.0081.055 ES 1.008(0.0871)1.393****1.366*** (0.0918) (0.0907) 1.17 (0.0918)(0.0907) PT 1.0971.117(0.0848)(0.0892)Own employment status (ref: employed/self-employed) $Unemployed$ 0.695^{***} (0.0491)Inactive0.695***(0.0760) 0.814^{**} (0.0760)Student/in training0.814**(0.0760) 0.814^{**} (0.0760)Student/in training1.223*(0.101) 1.075 (0.0888) 4^{th} income quintile1.075(0.0888)(0.0871) 5^{th} income quintile0.902(0.0713) 5^{th} income quintile1.128 (0.0711) 1.128(0.0711)(0.0711)(0.0711)Lone parent0.746(0.0713)	Age (squared)	0.000***	0.000***
Birth cohort (ref: 1980/85) (0.00100) 1986/90 1.000 0.990 (0.133) (0.132) 1990/95 1.239 1.222 (0.233) (0.231) 1996 1996 + (0.300) (0.298) Country fixed effects (ref: EL) (0.0802) (0.0871) IT 1.393*** 1.366*** (0.0918) (0.0907) PT IT 1.097 1.117 (0.0918) (0.0907) PT Inemployed 0.695*** (0.0491) Inactive 0.487*** (0.0491) Inactive 0.814** (0.0602) Equivalized disposable household income, within-country quintiles (ref: 3rd quintile) 1.223* (0.101) 1* st income quintile 1.075 (0.0888) (0.0713) 5 th income quintile 0.0021 (0.0713) (0.0713) 5 th income quintile 1.128 (0.0711) (0.0711) Lone parent 0.746 (0.128) (0.128)	nge (squared)	(0.00184)	(0.00186)
Initional (net. 1960/65) 1.000 0.990 1986/90 (0.133) (0.132) 1990/95 1.239 1.222 (0.233) (0.231) 1996 + (0.300) (0.298) Country fixed effects (ref: EL)	Birth cohort (ref: 1980/85)	(0.00104)	(0.00100)
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	1086/00	1 000	0.000
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$\begin{array}{cccccccccccccccccccccccccccccccccccc$	1000/05	1 220	(0.132)
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$\begin{array}{cccc} (0.0918) & (0.0907) \\ (0.0918) & (0.0907) \\ 1.097 & 1.117 \\ (0.0848) & (0.0892) \\ \end{array}$	IT	1.393	1.366
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(0.0848) (0.0892) Own employment status (ref: employed/self-employed) 0.695^{***} Unemployed 0.695^{***} (0.0491) 0.487^{***} Inactive 0.487^{***} Student/in training 0.814^{**} Equivalized disposable household income, within-country quintiles (ref: 3rd quintile) 0.692 1^{st} income quintile 1.223^{*} 0.0888 (0.0888) 4^{th} income quintile 0.902 5^{th} income quintile 1.69^{*} $0.0874)$ 0.0711 Lone parent 0.746 0.128 0.128	PT	1.097	1.117
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	Student/in training		0.814**
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$\begin{array}{cccc} 1^{st}\ income\ quintile & 1.223^{*} & (0.101) & (0.101) & (0.0888) & (0.0888) & (0.0888) & (0.0888) & (0.0888) & (0.0878) & (0.0713) & (0.0713) & (0.0713) & (0.0713) & (0.0874) & (0.0874) & (0.0874) & (0.0874) & (0.0874) & (0.0711) & (0.0711) & (0.0711) & (0.0716) & (0.128) & (0.128) & (0.128) & (0.0128) & $	country quintiles (ref: 3rd quintile)		
$\begin{array}{ccc} (0.101) \\ 1.075 \\ (0.0888) \\ 4^{th} income quintile \\ 5^{th} income quintile \\ (0.0713) \\ 5^{th} income quintile \\ (0.0874) \\ Crowding index \\ 1.128 \\ (0.0711) \\ Lone parent \\ 0.746 \\ (0.128) \end{array}$	1 st income quintile		1.223*
$\begin{array}{cccc} 2^{nd} \mbox{ income quintile} & 1.075 & & & & & & & & & & & & & & & & & & &$			(0.101)
4 th income quintile (0.0888) 4 th income quintile (0.0713) 5 th income quintile 1.169* Crowding index 1.128 (0.0711) 0.0746 Lone parent 0.746 (0.128) (0.128)	2 nd income quintile		1.075
4 th income quintile 0.902 (0.0713) 5 th income quintile 1.169* Crowding index 1.128 (0.0711) (0.0711) Lone parent 0.746 (0.128) (0.128)			(0.0888)
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5 th income quintile 1.169* (0.0874) 1.128 Crowding index 1.128 (0.0711) 0.0746 Lone parent 0.746 (0.128) 0.128)			(0.0713)
(0.0874) Crowding index 1.128 (0.0711) Lone parent 0.746 (0.128)	5 th income quintile		1.169*
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Lone parent (0.0711) 0.746 (0.128)	Crowding index		1.128
Lone parent 0.746 (0.128)			(0.0711)
(0.128)	Lone parent		0.746
			(0.128)
Observations 102175 102175	Observations	102175	102175

Exponentiated coefficients; Standard errors in parentheses * p < 0.05, ** p < 0.01, *** p < 0.001

Evandrou et al., 2021 on the United Kingdom). As suggested by descriptive results presented in the Appendix, similar trends to those of Southern Europe might be observed in countries where young adults' age at leaving home is comparatively high, such as Poland (Kajta et al., 2023).

Additionally, our study expands previous findings on the economic determinants of leaving home (Aassve et al., 2002; Iacovou, 2010) by providing an in-depth analysis of Southern Europe during a time of uncertainty. In line with existing research, we find that young adults' own employment status is an important push factor for both women and men. Differently from Western and Northern Europe (Billari et al., 2001) as well as from the United States (Mulder & Clark, 2002), being a university student does not mark a difference in the probability to leave the parental home in Italy, Spain, Greece, and Portugal. Interestingly, our findings show that, when compared to the middle quintile, the odds of leaving home are higher for the offspring of the households belonging both to the lowest and to the highest income quintile, in line with the

Table 3

Discrete-time logistic regression models on the likelihood of leaving home, odds ratios.

	Model 2	Model 3	Model 4a	Model 4b
			(no restrictions)	(flight stringency)
Stringency of COVID- related policy measures				
(ref: no measure)	1 543***	1 618*		
LOW	(0.170)	(0.313)		
High	1.820***	1.618***		
Over annalour ant status	(0.141)	(0.222)		
(ref: employed/self- employed)				
Unemployed	0.807*	0.694***	1.101	0.389**
Inactive	(0.0676) 0.510 ^{***} (0.101)	(0.0491) 0.487 ^{***} (0.0760)	(0.199) 0.806 (0.297)	(0.141) 0.645 (0.389)
Student/in training	0.867 (0.0757)	0.815 ^{**} (0.0602)	0.840	0.327 ^{**} (0.127)
Equivalized disposable	(,	(,		
household income, within-country quintiles				
(ref: 3rd quintile)	1.015*	1 000	1.040***	1 774**
1 [°] income quintue	(0.100)	(0.120)	(0.240)	(0.376)
2 nd income quintile	1.072 (0.0886)	1.071 (0.109)	1.261 (0.168)	1.176 (0.232)
4 th income quintile	0.900	0.933	0.977	0.752
5 th income quintile	1.165*	1.216*	1.040	0.677*
Stringency of policy measures #	(0.0872)	(0.113)	(0.126)	(0.124)
employment status				
Low # Unemployed	0.641			
Low # Inactive	0.103)			
Low # Student/in training	(0.383)			
	(0.165)			
High # Unemployed	0.634 (0.105)			
High # Inactive	0.974 (0.331)			
High # Student/in training	0.904 (0.134)			
Stringency of policy				
measures # household				
Low # 1^{st} income quintile		1.056		
Low # 2 nd income quintile		(0.296) 0.829		
Low # 4 th income quintile		(0.244) 0.554*		
Low # 5 th income quintile		(0.166) 0.754 (0.102)		
High # 1 st income quintile		(0.192) 1.063 (0.207)		
High # 2^{nd} income quintile		1.091 (0.211)		
High # 4 th income quintile		1.056 (0.194)		
High # 5 th income quintile		0.960		
Employment status # household income quintile				
Unemployed # 1 st income quintile			0.394***	0.682
Unemployed # 2nd in some			(0.0943)	(0.324)
quintile			0.000	1.003
			(0.142)	(0.496)

Table 3 (continued)

	Model 2	Model 3	Model 4a (no restrictions)	Model 4b (high stringency)
Unemployed # 4 th income quintile			0.868	1.941
			(0.235)	(0.972)
Unemployed # 5 th income quintile			1.218	3.184*
			(0.324)	(1.481)
Inactive # 1 st income quintile			0.189**	0.256
			(0.119)	(0.242)
Inactive # 2 nd income quintile			0.274	0.681
			(0.190)	(0.580)
Inactive # 4 th income quintile			0.667	1.051
			(0.419)	(0.894)
Inactive # 5 th income quintile			2.010	1.325
			(1.045)	(1.125)
Student/in training # 1 st income quintile			0.368***	1.040
			(0.108)	(0.535)
Student/in training # 2 nd income quintile			0.901	0.968
			(0.241)	(0.523)
Student/in training # 4 th income quintile			1.076	2.734*
			(0.287)	(1.278)
Student/in training # 5 th income quintile			2.153**	6.312***
Observations	102175	102175	(0.510) 76635	(2.709) 17912

Exponentiated coefficients; Standard errors in parentheses

* p < 0.05, ** p < 0.01, *** p < 0.001

Note: the following models include controls for: gender, age (linear and squared), birth cohort, country fixed effects, crowding index, lone parent.

mixed evidence from previous studies. When making the association between own employment status and leaving home conditional on household income, it emerges that, both in pre-pandemic and in pandemic times, the likelihood of leaving the parental home increases for young adults living in lower-income households when they are employed, while the relevance of having a job declines the wealthier the family of origin. The opposite trend is followed by students or trainees, who are more likely to leave home among wealthier households. This finding suggests that the independence effect works differently when considering respondents' and households' economic characteristics simultaneously. Because the family is the main provider of financial support and acquiring work experience while studying is not popular in Southern European countries, moving out for study reasons is an option only for young adults belonging to families with an advantaged socio-economic background. On the contrary, for those lacking parental resources, leaving home becomes possible only when employed. In sum, this paper sheds light on the interplay between achieved and ascribed financial resources in the process of gaining residential independence.

Our analyses are not without limitations. Due to the survey design, we are not able to reconstruct retrospective histories, hence we cannot distinguish first-time movers from those having "boomeranged" back to the parental home before being observed for the first time. However, the low number of events of home-returning and the late age at homeleaving observed in the dataset suggests that the bias caused by missing information on the actual time at risk is minor. We focus on the event of leaving home, and not on that of returning, as transitions back to the parental home are rare in our dataset, not allowing to obtain reliable estimates of the probability of returning home. We acknowledge that the estimate of the association between employment status and probability of leaving home might be conservative, as we do not have information on changes in this variable when the event is experienced;



Fig. 4. Predicted probability of leaving the parental home by household income quintile and young adults' employment status by levels of restrictions, with 95% C.I. Source: EU-SILC 2020 panel, Release 2, 2022. Results from Model 4a and 4b (Table 3).

particularly, we would expect leaving home events to happen in connection with transitions to employment or to the student status. In addition, we do not distinguish between the destinations of leaving home, such as cohabitation with a partner or single living, as the followup of individuals leaving the parental home is very low, as already noted by other commentators (Iacovou et al., 2012); such distinction could allow to capture gender differences, not emerged from the present analysis. Another issue of longitudinal EU-SILC data is the selective attrition from the panel based on economic characteristics of the household, which may result in a lower number of observations among low-income households at successive interviews, leading to overrepresentation of young adults from advantaged backgrounds (Jenkins & Van Kerm, 2017). Lastly, our measure of COVID-related restrictions was not available at the subnational level, ruling out the possibility of conducting analyses at a more fine-grained level despite the availability of regional-level information in EU-SILC.

Despite these shortcomings, the present paper illustrates the uniqueness of the pandemic's effects on young adults compared to the previous shocks such the 2008 economic recession: by imposing fulltime co-residence between parents and their young adult children, the pandemic has encouraged young adults in Southern Europe to transition to an independent living. Further research should establish whether leaving home rates in Southern European countries will continue to grow in the years following 2020, or will rather stagnate; in other words, whether those young adults who left the parental home in 2020 returned shortly afterwards, or rather managed to establish an independent living for a longer time period. To answer this question, together with possible effects of the pandemic on young adults coming back to the parental home, appropriate longitudinal data following the population of interest for a long time frame should be used (e.g., cohort studies). Moreover, complementing data on economic conditions with detailed information on households' members including e.g., attitudes, intentions, mental

and physical health, or affective relations, would allow to delve into the motivations underlying young adults' choice of moving out. Finegrained changes in demographic behaviors, such as those in living arrangements analyzed here, and the way these respond to external shocks, can only be observed and understood if "demographic data collection fully takes the speed of demographic change into account" (Billari, 2022, p. 24) and if interdependencies across multiple life domains are considered (Settersten et al., 2020).

CRediT authorship contribution statement

Ferraretto Valeria: Conceptualization, Data curation, Formal analysis, Writing – original draft, Writing – review & editing, Methodology, Software, Visualization. **Francesco C. Billari:** Conceptualization, Funding acquisition, Methodology, Resources, Supervision, Validation. **Vitali Agnese:** Conceptualization, Methodology, Supervision, Validation, Writing – review & editing.

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Appendix



Fig. A1. Home-leaving rates between two consecutive years (t, t + 1), by country and country groups, Source: EU-SILC 2020 panel, Release 2, 2022. Note: Home-leaving rates are calculated for each country and for each pair of consecutive years as the number of young adults leaving the parental home at t + 1, divided by the number of young adults living with their parents at t 2019/20 rates can be associated with the pandemic in the following countries only: Greece, Spain, Italy, Portugal, Luxembourg, Poland, Serbia. N = 177,814 in 2017/18, N = 293,808 in 2018/19, and N = 383,844 in 2019/20.



Fig. A2. Average Marginal Effects from the null model, by gender, Note: N = 57,189 for men, N = 44,987 for women. Results for the null model are presented in Table 2; the figure is complete of all controls.



Average Marginal Effects with 95% CIs

Fig. A3. Average Marginal Effects from Model 1, by gender, Note: N = 57,189 for men, N = 44,987 for women. Model 1 (Table 2) includes controls for age (linear and squared), birth cohort, country fixed effects, lone parent.

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