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**Working Paper**

## She's leaving home: A large sample investigation of the empty nest syndrome

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# She's leaving home: a large sample investigation of the empty nest syndrome

Alan Piper and Ian Jackson

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# **She's leaving home: a large sample investigation of the empty nest syndrome**

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## **Abstract**

This study considers life satisfaction in relation to the empty nest syndrome, which is a situation where there are feelings of loss or loneliness for mothers and/or fathers following the departure of the last child from the parental home. In particular, the investigation considers the significance of Identity Economics when applied to parents experiencing a reduction in well-being following an extended period of child-rearing. The origins of the empty nest syndrome are first considered briefly before conducting an economic analysis of life satisfaction using the German Socio-Economic Panel. Our particular focus is the change in the subjective well-being of the individuals who become empty nesters, taking advantage of the richness of this dataset. As a result, this is the first large sample economic analysis of its kind to use identity to evaluate the effects of becoming “empty nest” parents in a systematic way.

## **JEL Codes**

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## **Date**

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## 1. Introduction

“Standing alone at the top of the stairs;  
She breaks down and cries to her husband  
Daddy, our baby’s gone.”  
She’s Leaving Home, *The Beatles* (1967)<sup>1</sup>

“Since she was born, I’ve wanted my daughter to have everything I didn’t have – a happy, stable family, access to books and art, a good education, a beautiful home – but this quest has become my whole world. I get upset if she’s had a bad day at school. *Last week I broke down and cried at the thought of her leaving home when she’s eighteen. That’s eleven years away.*”

Clothes, Clothes, Clothes. Music, Music, Music. Boys, Boys, Boys. *Viv Albertine* (2014: p319, emphasis added)

Fifty years ago, The Beatles sang movingly about what has since been termed the “Empty Nest Syndrome” (ENS); that is the phenomenon of a parent or parents who, having raised children, find themselves bereft when the last or only child leaves home. The subject of many newspaper articles, magazine features, blog posts as well as being discussed elsewhere in popular culture (for example Albertine, 2014 and Godber, 2016), ENS was a term first discussed in relation to families during the 1960s and thereafter it has entered common usage in the English language (Dodd, 2011). Over the last generation or so it has been applied loosely to the feelings of loss and loneliness experienced by mothers and/or fathers when grown-up children leave the parental home, whether this is potentially temporary, for instance to attend university or possibly permanently, to establish a separate home.

To our knowledge, the notion of the ENS has not been studied previously in the specific context of economic inquiry. If we accept Marshall’s broad definition of economics as being about “the study of men as they live and move and think in the ordinary business of life” (1890, p 773) then the ENS is a worthwhile area of economic study. This is because becoming an empty-nester may well have profound effects on the lives of such individuals both economically and emotionally. Indeed, this aspect of the parenting life-cycle has been a focus of medical and sociological studies, where the difficulties of this transition from a health and societal perspective have been discussed (Hiedemann et al. 1998). However, this literature often relies on small-scale regional primary data samples (for example, an inland mountainous area of China) (Liu and Guo 2008), or is qualitative with a commensurate small sample size (Spence and Lonner 1971). In contrast, this investigation is, to our knowledge,

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<sup>1</sup> “She’s Leaving Home” (1967) by the Beatles is a poignant song made all the more powerful by its layered narrative and complex harmonies that evoke loss and isolation, respectively for parent and child. The underlying message of the song is that parenting brings both joy and sorrow but that the parental relationship with a child is by definition both unequal and asymmetric that furthermore alters towards maturity. An equally powerful poem was written a decade earlier by the Poet Laureate Cecil Day-Lewis (1956) about his son going to school, “like a winged seed loosened from its parent stem.”

the first large sample investigation of the phenomena taking advantage of thirty-one consecutive years of a nationally representative dataset, the German Socio-Economic Panel (SOEP). Our particular focus is the change in the subjective well-being of the individuals who become empty nesters. As a result, while ENS has no specific medical diagnosis, there can be a meaningful economic analysis of empty-nesters in terms of the effects on life satisfaction using parental identity as the basis for the investigation.

This paper is structured as follows. The current academic literature is discussed in section 2 taking in a consideration of the relevant economic theory, including the concept of identity (Akerlof and Kranton 2010). A related brief discussion of the biological origins of ENS is found in Appendix 1. Section 3 describes the data and methodology. Section 4 presents the results. Section 5 contains a discussion of the results, as well as highlighting the limitations of the investigation and presenting suggestions for future research. Finally, section 6 offers concluding remarks.

## **2. The Empty Nest Syndrome literature and theoretical discussion**

This section has two distinctive elements. Firstly, a general economics approach, which explains why an analysis of ENS is valid within this sphere of enquiry. Secondly, a specific focus on the economics of identity. This section is complemented by a discussion of the biological origins of the empty nest syndrome, suggesting a “natural”, primal sadness common to humans. In other words, there may be possible biological reasons for reduced well-being following the departure of the last child from the parental home (see Appendix 1).

### **2.1 The Empty Nest Syndrome literature: extensions in economics**

The antecedents of the ENS in a human context are rooted in the evolving organisational structure of households as well as societal priorities in relation to the allocation of scarce economic resources (see Zahidi, 2012 for a discussion on ENS in relation to women and aging). In particular, as life expectancy increases and the birth rate declines, principally in developed countries, then the incidence of ENS may become more prevalent since humans can live significantly beyond reproductive age, especially post-menopausal women (see Silverstein and Sayre, 2009).

At a macroeconomic level, aggregate economic activity rates of the workforce is viewed as important, especially in China where the infamous “one child policy” means the parents can return to work post-family much sooner than countries with larger family units containing more children (China Development Research Foundation 2014) and hence there is a policy imperative to study the labour force in early middle-age rather than at other times such as closer to retirement. Nevertheless, more importantly for our well-being investigation is the microeconomic context.

However, it should be emphasized that ENS<sup>2</sup> is not a formal medical condition and in the social sciences it is often reduced to a convenient statistical label that is pre and/or post empty nest (Cooper and Gutmann, 1987). Notwithstanding, it is symptomatic of informal feelings and psychological fears ranging across a spectrum from sorrow to depression. On the one hand, any reduction in well-being may be due to profound anxiety or a morbid apprehension regarding a potential mid-life crisis. As a result, ENS forms an integral part of parental well-being albeit at a specific stage in life and hence a rich source of investigation through economic analysis. On the other hand, there may be an increase in well-being post-empty nest due to greater freedoms for the parent psychologically, financially and emotionally in full knowledge of a job well done. Thereby, becoming an empty-nester can yield potentially contradictory outcomes, which may be dependent on the identity of the parent.

The contemporary academic literature on ENS is sporadic with virtually no major research specifically related directly to economics. However, a potentially fruitful area for economic analysis is to link the whole notion tangentially to the economics of the family pioneered by Gary Becker (1981). Although Becker does not refer to ENS directly, his approach is based on the “productive complementarities” of the parents, which is why one parent may specialise in earning income and the other parent may specialise in childrearing. This methodology has been challenged more recently by Stevenson and Wolfers (2007) who claim it is “consumption complementarities” that motivate family units (and not joint production) and so households are organised to satisfy tastes and desires. Although Merrill (2010) argues that the Stevenson and Wolfers approach does not wholly replace the original Becker position, she does concede that this newer viewpoint is best applied to childless couples as well as “empty nest” family units, where the children have become adults. This outcome may imply that becoming an “empty nest” household could increase happiness, because the same economic resources are being shared between fewer people in addition to a sense of achievement once the children have grown-up all other things including emotional feeling remaining equal. This possibility is returned to in the empirical analysis below.

Additionally Merrill (2010) considers the economics of marriage using the families as household firms, any economic analysis of ENS has to look further afield. One of the earliest academic studies of the transition to the empty nest is by sociologists. Spence and Lonner (1971) use intensive case studies of 27 women and find partial evidence of unhappiness as these women are unprepared for life after children leave home. However, this study is not only small-scale in nature; it is also unrepresentative with all the women from the same homogenous grouping; namely a white, middle-class and metropolitan cohort. In

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<sup>2</sup> Nevertheless, ENS is a potentially strong indication of major change in the cycle of life. It is an indication of the passing of time, which is especially significant for humans as the young take relatively long to nurture and thereby each child consumes a substantial quantity of economic resources cumulatively. Hence, as with all economic decisions and investment opportunities, “empty nest” parents can be subject to a cost-benefit analysis. See Appendix 1 for some likely considerations.

psychology, Raup and Myers (1989, p 181) clarify the definition of ENS as "...a maladaptive response to the post-parental transition, which is stimulated by reactions to loss...". Furthermore, using correlates of ENS over the post-war period, they found qualitative evidence that full-time employed women are less susceptible to ENS and unemployed women are the most at risk. More recently, Mitchell and Lovegreen (2009) use a mixed methodological approach to assess a subsample of 316 parents from four ethnic backgrounds and found only a minority reported ENS.

Fundamentally, while there is negligible analysis of the empty nest syndrome within the wider economics literature, the effect of the change in circumstances on life satisfaction such as becoming unemployed may offer close parallels. Becoming an empty nester can be seen as similar to entering unemployment, because there is a profound change in life of the affected person. For example Winkelmann and Winkelmann (1998), using the same dataset as we do, famously demonstrated that non-pecuniary factors are far more important in explaining the loss of well-being associated with becoming unemployed than any effects from a reduction in income. Non-pecuniary effects matter, and Winkelmann and Winkelmann consider the loss in well-being from unemployment being related to a loss of self-esteem, the loss of social relationships and the change of identity within society. These reasons put forward for the loss of well-being experienced by the newly unemployed are likely to be similar to any losses experienced by the new empty nesters. The next subsection discusses the related change in identity of new empty nesters.

## **2.2 The Empty Nest Syndrome literature: identity economics**

Given the broader mainly economic analysis discussed previously, ENS can be linked to identity economics as developed by Akerlof and Kranton (2000). Being a full-time parent (both mother and father) may be a choice of identity and an important economic decision even though it may not always be made consciously (i.e. there is a natural, in-built instinct to reproduce and care for children, Dawkins, 1978 p. 107).

The approach of identity can help to model the change from the pre and post-empty-nest, which is a switch to a new status from a parent *with* dependent children to a parent *of* grown-up independent children. To capture the well-being of the parental role, the utility function should include the identity benefits gained from belonging to a group with similar objectives. Hence, if ENS has any basis in life satisfaction then transitioning from a parent with caring responsibilities for dependent children to an empty-nester will reduce a person's well-being. Following the pioneering work of Hetschko et al. (2014) on the identity of the unemployed entering retirement, then the method involves labelling parents in a social category before becoming empty nesters (Pre-EN) and afterwards (Post-EN). This means there is a potentially strong identity with the parenting role and that any change viewed from the perspective of identity means that the resultant sadness, melancholy or even depression is logical and understandable. Thus any alternation in well-being is assumed to reflect the change in identity. Hence, if a person identifies strongly with being a parent (Pre-EN state) and subsequently the child or children leaves home (Post-EN state) then the



subjective well-being will be reduced irrespective of any financial gain that may accrue. One potential reason for this reduction may come from the change in identity that affects social relationships. In such a situation, the new empty nester may no longer have current membership benefits previously derived from being a part of a network of other people with children. In other words, a person may have a long-term and deeply-held affiliation with the social category of being a parent of dependent children; an affiliation which is suddenly no longer valid. As a result, identity-based behaviour and preferences will change for the “empty-nester”. This is just one example highlighting how the change in identity could have wide-ranging implications for an individual’s life and well-being once the identity is internalized (Akerlof and Kranton 2000). Other closely related examples may include the bereavement effects of becoming widowed and the life changing effects of being diagnosed with illnesses such as diabetes or alcoholism.

In essence, the concept of identity directs individual behaviour and helps to explain economic outcomes. In turn, this outcome determines the amount of resources a person is prepared to invest in being a parent; and ultimately it can also adversely affect parental identity when a person becomes an empty nester. In other words, for some people, the loss of identity as a parent once becoming an “empty-nester” can have profound effects leading to a reduction in well-being. Notwithstanding, for others it may be that the opposite effect as newfound freedom (and more economic resources) may increase well-being. This potentially contradictory outcome has implications for this research, not least as “empty-nest” parents adjust to their revised economic situation, especially in the short term.

For most family units, there is little or no choice regarding the nest becoming empty; hence the outcome can be viewed as binary and a function of time. That is, a family unit is formed and children enter (classification one) and then they subsequently depart at a later date (classification zero). Hence, becoming an “empty nester” is an example of low frequency change (Akerlof and Kranton, 2010, p 126) as well as helping to understand the non-pecuniary explanations of economic behaviour (Akerlof and Kranton 2000, p 749).

Hence, the extent of the ENS may depend on the determinants of identity such as the commitment to parenting a child, although the outcome is largely self-identified (Fox and Bruce, 2001, p 396). In general, those people that identify themselves most as a full-time parent (or as a main carer of children) may be more susceptible to ENS within a group identification; those people that individually identify themselves most as a working parent (for instance where a career or a vocation is equally or more important than child-raising) may be less susceptible to ENS or not susceptible at all. In terms of recent economic theory, the latter category (i.e. individuals who identify themselves as working parents) is closer to the ideas of Stevenson and Wolfers that family units are based more on “consumption complementarities”; and the former category (i.e. self-identification as a full-time parent) is closer to the Becker ideas of “production complementarities”. In other words, modern parent-children relationships are developing to be more about maximising the benefits of sharing services such as childcare through common interests; and not only about minimising the costs of producing the childcare through the division of labour. For our subsequent

analysis this means that there might be differences in the effect of entering the empty-nest on life satisfaction by labour force status. This view is examined below.

Furthermore, while traditional economic theory suggests a purely monetary-based approach to the life-cycle of the family, the notion of identity can provide additional insightful aspects because it focuses on the various outcomes created through social differences in economic behaviour (Akerlof and Kranton 2000, p 748). Empirical analysis can investigate whether mothers are affected more than fathers (i.e. role of gender); introduce whether the parents are employed or unemployed (i.e. income levels); account for technology such as lower cost communication (i.e. long term effects) and even test to see if becoming an empty-nester gives the parent a new lease of life and therefore establish if the last child leaving has a positive effect.

In summary, ENS can be developed primarily from the situation of the identity and the status of the parent or parents. For example, the low-income and unemployed may be differently affected by ENS than the employed and financially well-off, given the potential reduction of a liquidity constraint and the actual and/or potential household income (i.e. work-force status); widowed, divorced and separated parents may be more affected by ENS, if they are the primary child-care provider, as there is a potential loss of purpose (marital status); better health and well-being of the parent or parents could mean that they withstand any adverse effects of children leaving home (health status); and finally much improved and almost costless communication may well reduce ENS as parents can keep in touch with their children, even if the offspring may have moved further away from the parental home. All these areas contain potentially testable hypotheses with respect of assessing ENS through life satisfaction. Thus, the empirical analysis below investigates the representative sample as a whole, and then focuses on sub-samples of individuals.

### **3. Data and Methodology**

This empirical investigation of the empty nest syndrome makes use of thirty-one consecutive years of the German Socio Economic Panel survey, a rich longitudinal data set replete with much individual socioeconomic information. A detailed description of this survey is given by Wagner et al. (2007). The panel structure enables the identification of empty nesters, which we define as individuals (either the head of the household, or the partner of the head of the household) whose children have left the household within the last year. Thus the investigated empty nesters are new empty-nesters, having become so since the previous annual wave. As mentioned above, this enables the investigation of the change in identity from a parent back to a partner (or, more generally, from a parent with dependent children to a parent without dependent children) and may not have given empty nesters the chance to get used to their new situation. In the dataset there are approximately 1,806 such observations. As a result, the comparator group is the pre-empty nesters who still have children in the household. Importantly, and in accordance with our focus on identity change, individuals who have never had children or whose last child (or children) has left the household more than a year previously are not in the sample.

Consequently, we have identified (new) empty nesters and pre-empty nesters Table 1 compares the two groups under comparison in the later empirical analysis.

**Table 1** descriptive statistics: recent empty nesters compared with pre-empty nesters, SOEP 1985-2014.

	Empty Nesters		Non Empty Nesters	
	Mean	Std. Dev	Mean	Std. Dev.
Real Annual Income	25.81	27.29	24.47	28.20
Real Annual Household Income	49.05	37.13	49.47	36.96
Employed	0.59	0.49	0.60	0.49
Self-employed	0.10	0.30	0.07	0.26
Apprentice	0.00	0.06	0.00	0.07
Government employed	0.04	0.20	0.05	0.21
Unemployed	0.10	0.30	0.07	0.25
Not employed	0.07	0.26	0.15	0.36
Retired	0.07	0.26	0.02	0.12
In education	0.00	0.07	0.01	0.09
Married	0.46	0.50	0.84	0.37
Separated	0.28	0.45	0.02	0.13
Divorced	0.14	0.34	0.06	0.24
Widowed	0.03	0.18	0.01	0.10
Single	0.09	0.28	0.07	0.25
Male	0.62	0.49	0.46	0.50
Education: High School	0.62	0.48	0.62	0.49
Education: more than HS	0.16	0.37	0.20	0.40
Education: less than HS	0.21	0.41	0.19	0.39
Health: Very Good	0.08	0.27	0.10	0.30
Health: Good	0.41	0.49	0.49	0.50
Health: Satisfactory	0.32	0.47	0.29	0.46
Health: Less than Satisfactory	0.19	0.39	0.11	0.32
Age	45.63	9.75	39.71	7.92

Note: Apart from age (years) and the two income measures (thousands of euros, deflated by the CPI), all of the variables are dummy variables. SOEP data used: Socio-Economic Panel (SOEP), data for years 1984-2014, version 31, SOEP, 2016, doi: 10.5684/soepv31.

In many respects, and perhaps unsurprisingly, the recent empty nesters and pre-empty nesters are somewhat alike. Both average real individual income and average real household income, and many of the labour market status variables reveal similar patterns. However, those not employed (but also neither unemployed nor retired) are more prevalent

in the pre-empty nest group, presumably reflecting the need to stay at home and care for children. In contrast, the retired and unemployed are more prevalent in the new empty nesters group. Our empty nesters are seemingly less healthy than the pre-empty nested. Similarly, the age difference is noteworthy (and expected) with empty nesters being, on average, five years older than those with children still in the household. The new empty nesters are also more likely to report a marital status of separated or divorced than the nested. This is potentially important for our empirical results and returned to in the next section.

The SOEP survey offers another way of looking at differences between these two groups. Since 1984, the survey has contained an open question asking individuals about their worries and responses to question can also be used to highlight potential differences between groups. A detailed discussion about using such questions for social science investigations is provided by Rohrer et al. (2017).<sup>3</sup> With our two groups, it is notable that the empty nesters worry considerably more about personal problems than non-empty nesters. Further, there is evidence that empty nesters report more frequent worries about unemployment (both in general, and own unemployment) but not youth unemployment. Proportionally more pre-empty nesters report worrying about the health of relatives (including children) than empty nesters.

As discussed above, we investigate the empty nest syndrome through the concept of life satisfaction. Such a choice means that the impacts of becoming an empty nester can be measured. The prism of life satisfaction or, more generally, subjective well-being is a purposeful way for investigating Marshall's idea of what economics is about (see introduction), and is a currently popular area of enquiry within economics (and other disciplines including psychology and sociology). The dependent variable comes from individual responses in the SOEP to the following: 'We would like to ask you about your satisfaction with your life in general', which is coded on a scale from 0 (completely dissatisfied) to 10 (completely satisfied). Table 2 shows the distribution of responses for both groups.

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<sup>3</sup> This specific SOEP question has been recently used by Wagner (2016), who presented information demonstrating that voters for the right of centre political party Alternative for Deutschland consistently report more worries than voters for other parties or no party; a result that substantially predates that party's formation in 2013, indicating that AfD supporters have, for a substantial amount of time, often had considerably more worries than the rest of the population: an interesting finding.

**Table 2** The distribution of life satisfaction for empty nesters and pre-empty nesters SOEP 1984-2014

Life Satisfaction	Empty-Nest		Pre-empty Nest	
	Count	%	Count	%
0	19	1.05	558	0.37
1	23	1.27	485	0.32
2	54	2.99	1,587	1.04
3	108	5.98	3,687	2.42
4	100	5.54	5,011	3.29
5	297	16.45	16,985	11.16
6	261	14.45	16,424	10.79
7	376	20.82	34,304	22.54
8	374	20.71	47,129	30.97
9	121	6.70	19,018	12.50
10	73	4.04	6,992	4.59
Total	1,806	100.00	152,810	100.00

Note: Life satisfaction is positively coded with higher scores indicating higher life satisfaction. SOEP data used: Socio-Economic Panel (SOEP), data for years 1984-2014, version 31, SOEP, 2016, doi: 10.5684/soepv31.

While the patterns are typical of most investigations of life satisfaction, Table 2 does seem to show that empty-nesters report less satisfaction with life than those with a child or children in the household supporting somewhat the hypothesis developed above. The mean responses offer further support with empty nesters reporting on average 6.28 life satisfaction, and pre-empty nesters 7.07. Regression analysis will investigate this observation in more detail, controlling for socio-economic factors often found to be important for life satisfaction (marriage, unemployment, health and so on). The descriptive statistics above in table 1 highlight the importance of controlling for these variables, given the differences between the two groups. The following section presents, and discusses, results from multivariate regressions. In the regression analysis, the focus will be on the whole sample, initially, and then subsamples where there are some interesting results. Our main interest is on the coefficients obtained for the empty nest dummy variable, which indicates (any) difference between the empty nesters and the pre-empty nesters.

These regressions are undertaken with both pooled ordinary least squares (OLS) and fixed effects (FE) estimation techniques<sup>4</sup>. Here, particularly with the subsamples, there is occasionally not enough ‘within’ variation for precise estimation with fixed effects estimation and pooled OLS is often more informative with these smaller subsamples. Generally, fixed effects estimation is preferred because of its well-known ability to control for individual heterogeneity often important for life satisfaction. However, it is not ideal because the coefficients obtained, which come from ‘within’ change of the particular

<sup>4</sup> Random effects estimation, another possibility, is rarely supported in a well-being context; a Hausman test confirms this with the particular equations estimated in this investigation. The fixed effects themselves are statistically significant. A further possibility may have been difference and system GMM estimation, which can both control for fixed effects and employ both between and within variation for estimation, though given our main variable of interest and how these techniques’ generate internal instruments for coefficient estimation purposes seems somewhat inappropriate.

individuals, should not be generalised to the wider population. Hence we report the coefficients for both estimation techniques throughout.

## 4. Results

This section presents results from multivariate regression analysis, starting with the full sample (table 3) before investigating the well-being effect of becoming an empty-nester on specific subsamples (tables 4-6), in line with the above discussion of the literature and theory. Thus, table 3 presents the overall full sample results. The first two columns include both genders together, and are distinguished by the method used to obtain the coefficients (i.e. pooled OLS and FE). The next two columns are coefficients for males only and the last two for females only.

**Table 3** Multivariate regression results for the life satisfaction of empty-nesters. SOEP 1985-2015  
Dependent variable: Life Satisfaction (positively coded from 0 to 10)

VARIABLES	(1) OLS All	(2) FE All	(3) OLS Male	(4) FE Male	(5) OLS Female	(6) FE Female
<b>Empty Nest</b>	<b>-0.36***</b> <b>(0.041)</b>	<b>-0.21***</b> <b>(0.037)</b>	<b>-0.45***</b> <b>(0.054)</b>	<b>-0.25***</b> <b>(0.049)</b>	<b>-0.22***</b> <b>(0.066)</b>	<b>-0.06</b> <b>(0.060)</b>
Real Income ('000s)	0.004*** (0.000)	0.003*** (0.000)	0.005*** (0.000)	0.003*** (0.000)	0.004*** (0.000)	0.003*** (0.001)
Self-employed	-0.01 (0.016)	-0.03 (0.026)	-0.11*** (0.020)	-0.08** (0.037)	0.12*** (0.026)	0.00 (0.037)
Government employed	0.18*** (0.021)	-0.05 (0.053)	0.20*** (0.026)	-0.04 (0.082)	0.16*** (0.034)	-0.05 (0.070)
Not in labour Market	0.06*** (0.014)	-0.06*** (0.017)	-0.55*** (0.059)	-0.61*** (0.065)	0.10*** (0.016)	-0.01 (0.019)
In education	0.01 (0.048)	-0.07 (0.049)	-0.07 (0.093)	-0.20** (0.094)	0.05 (0.057)	-0.01 (0.059)
Unemployed	-0.76*** (0.017)	-0.56*** (0.019)	-0.98*** (0.027)	-0.80*** (0.029)	-0.62*** (0.023)	-0.41*** (0.025)
Retired	-0.12*** (0.038)	-0.04 (0.055)	-0.12** (0.052)	-0.08 (0.071)	-0.15*** (0.056)	-0.07 (0.084)
Military/Community	-0.58 (0.471)	-0.65 (0.495)	0.15 (0.723)	-0.02 (0.677)	-1.09* (0.620)	-1.10 (0.718)
Apprentice	-0.25*** (0.058)	-0.05 (0.058)	-0.31*** (0.103)	-0.12 (0.102)	-0.21*** (0.070)	-0.01 (0.071)
Male	-0.21*** (0.010)					
Age	-0.05*** (0.004)	0.005 (0.007)	-0.05*** (0.006)	0.01 (0.011)	-0.05*** (0.006)	0.001 (0.010)
Age-squared	0.0005*** (0.000)	-0.0003*** (0.000)	0.0005*** (0.000)	-0.0004*** (0.000)	0.0005*** (0.000)	-0.0002** (0.000)
Married	0.31*** (0.017)	0.16*** (0.038)	0.10*** (0.028)	0.02 (0.056)	0.42*** (0.021)	0.25*** (0.051)
Widowed	-0.05 (0.047)	-0.25*** (0.092)	-0.25*** (0.092)	-0.40** (0.165)	0.05 (0.056)	-0.13 (0.114)

**Table 3** continued

VARIABLES	(1)	(2)	(3)	(4)	(5)	(6)
	OLS All	FE All	OLS Male	FE Male	OLS Female	FE Female
Divorced	-0.08*** (0.023)	0.06 (0.047)	-0.18*** (0.043)	-0.12 (0.079)	-0.02 (0.027)	0.18*** (0.060)
Separated	-0.28*** (0.032)	-0.18*** (0.048)	-0.50*** (0.063)	-0.46*** (0.080)	-0.18*** (0.038)	-0.03 (0.062)
Edu: High school	0.08*** (0.013)	-0.02 (0.032)	0.01 (0.020)	-0.16*** (0.049)	0.11*** (0.016)	0.08* (0.042)
Educ: Above high sch.	0.19*** (0.016)	0.05 (0.042)	0.08*** (0.024)	-0.02 (0.068)	0.26*** (0.021)	0.09* (0.054)
Very good health	2.34*** (0.019)	1.32*** (0.021)	2.37*** (0.028)	1.32*** (0.031)	2.30*** (0.025)	1.32*** (0.028)
Good health	1.72*** (0.014)	1.03*** (0.016)	1.78*** (0.021)	1.06*** (0.024)	1.65*** (0.019)	1.00*** (0.021)
Satisfactory health	0.96*** (0.015)	0.63*** (0.015)	1.01*** (0.022)	0.67*** (0.022)	0.90*** (0.020)	0.60*** (0.020)
Constant	6.44*** (0.103)	6.20*** (0.372)	6.42*** (0.152)	5.81*** (0.471)	6.50*** (0.136)	6.97*** (0.624)
Regional controls	Yes	Yes	Yes	Yes	Yes	Yes
Wave controls	Yes	Yes	Yes	Yes	Yes	Yes
Observations	123,050	123,050	55,523	55,523	67,527	67,527
R-squared	0.240	0.075	0.262	0.090	0.228	0.068
Number of people		24,988		11,268		13,720

Standard errors in parentheses \*\*\* p<0.01, \*\* p<0.05, \* p<0.1. Reference categories: single, employed, poor health, less than high school education. SOEP data used: Socio-Economic Panel (SOEP), data for years 1984-2014, version 31, SOEP, 2016, doi: 10.5684/soepv31.

Table 3 demonstrates that becoming an empty-nester is associated with a considerable reduction in life satisfaction, when compared to individuals who still have children in the household. A finding that occurs after controlling for the standard variables employed by most investigations within the ‘economics of life satisfaction’ area of inquiry: real individual income, labour force status, marital status, age, health and education.<sup>5</sup> The region (one of 16 Länder) and year, not shown in the table, are also included as controls. Interestingly, males appear to be affected more than females, the size of the coefficient is greater and statistically different from zero with both OLS and FE. For females, only OLS estimation results in a negative and statistically significant coefficient for the new empty-nesters. One possibility for this finding for gender is that women have better innate coping skills (Tamres et al. 2002).

Briefly, the other coefficients are in line with expectations formed by previous investigations in the literature: unemployment is statistically significant, and negatively associated with life satisfaction (Clark and Oswald 1994, Winkelmann and Winkelmann 1998) marriage is

<sup>5</sup> Furthermore, all the results in the table are robust to using real household income, rather than individual income.

positively associated with life satisfaction (Frey and Stutzer 2006, Qari 2014); and age and age-squared generate the well-known U-shape between age and life satisfaction when OLS is used but not fixed effects (not an unusual result when the ‘within’ movement of age and wave is the same, see Piper (2015) for more information and a solution, and Blanchflower and Oswald (2008) regarding age and life satisfaction more generally). Health is positively and strongly associated with subjective well-being: a near regularity in the wider literature (Dolan et al. 2008, Downward and Dawson 2016).

These overall coefficients demonstrate that becoming an empty-nester is a strongly negative experience, with the overall coefficients about half that of being unemployed (compared to the base category of being employed), which itself (as mentioned above) is a well-known and understood negative phenomena in terms of life satisfaction. The results in table 3 are general and, as suggested by the theoretical discussion previously, becoming an empty-nester may be less, or more, impactful for certain groups. The precise reasons for these subsample choices reflect the economic literature discussion above. However, a specific discussion of these reasons will also briefly take place within the context of the coefficients obtained for the empty nest variable for different subsamples. Standard controls have been used in each case (including wave and region dummy variables), but are not shown for brevity. Thus the only coefficients shown in the subsequent tables are those for the new empty nesters. Table 4, the first subsample table, shows the coefficients for the life satisfaction of empty nesters who are employed, unemployed and retired (in the first three columns) and from empty nesters from two different time periods (last two columns).

**Table 4** Multivariate regression results for the life satisfaction of empty-nesters, labour force status and year. SOEP 1985-2015

Dependent variable: Life Satisfaction (positively coded from 0 to 10)

Empty Nest	(1) Employed	(2) Unemployed	(3) Retired	(4) Before 2000	(5) From 2000
All, OLS	-0.36*** (0.050)	-0.43*** (0.157)	-0.41** (0.183)	-0.33*** (0.083)	-0.38*** (0.046)
All, FE	-0.21*** (0.045)	-0.31* (0.174)	-0.23 (0.183)	-0.16* (0.083)	-0.20*** (0.042)
Male, OLS	-0.43*** (0.066)	-0.27 (0.225)	-0.21 (0.248)	-0.36*** (0.109)	-0.49*** (0.062)
Male, FE	-0.23*** (0.060)	-0.11 (0.257)	-0.04 (0.274)	-0.16 (0.109)	-0.24*** (0.057)
Female, OLS	-0.12 (0.085)	-0.83*** (0.238)	-0.35 (0.278)	-0.24* (0.138)	-0.21*** (0.076)
Female, FE	-0.03 (0.079)	-0.60** (0.254)	-0.26 (0.257)	-0.03 (0.140)	-0.06 (0.068)

Standard errors in parentheses \*\*\* p<0.01, \*\* p<0.05, \* p<0.1. Full controls from table 1, excepting labour force (for models 1, 2, and 3). SOEP data used: Socio-Economic Panel (SOEP), data for years 1984-2014, version 31, SOEP, 2016, doi: 10.5684/soepv31.

The subsequent results discussion focuses initially on the results from the ‘all, OLS’ (both genders together) estimation, and highlights interesting findings from both the FE analysis and the individual genders estimations. With respect to the three labour force categories



there is a (slightly) bigger impact of becoming an empty nester in the past year for the unemployed and retired than for the employed. This outcome is consistent with identity as work could be a substitute for the time spent child-caring. Furthermore, there is some evidence that females who are unemployed are particularly negatively affected by becoming empty nesters. However, caution is necessary when considering the smaller subsamples because of reduced numbers of new empty nesters (see Appendix 3 for details).

The last two columns demonstrate that becoming an empty nester seems to have a similar impact on an individual's life satisfaction before and from the year 2000. This is slightly contrary to the customary expectation (and many blog posts on the subject) which reason that, because the cost of communication has been severely reduced over time (and arguably vanished in the later period of this sample), parents would have more contact with their children helping to reduce somewhat any negative effects caused by becoming an empty nester. This is not demonstrated by the results, and we speculate that it is even possible that this decreased cost of communication change may have had a paradoxical result. When the cost of communicating was higher, both in terms of time and money it was implicitly (or explicitly) accepted that parent-child communication would not happen so often. However when the costs have dropped or disappeared, this acceptance of limited communication, may have been similarly reduced leading to a more keenly felt sense of disappointment resulting from any lack of communication, and thus contributing to the decreased life satisfaction of the new empty-nester. Similarly, the growth of social media enabling the parent to see the child in photographs and videos (but not face to face) may be a further cause for melancholia and unhappiness.<sup>6</sup>

The next subsample investigation splits the sample based upon marital status, and table 5 displays the relevant new empty nest coefficients.

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<sup>6</sup> This speculation is enhanced when the year of the split is moved to a later one to better reflect the development of communication software like Skype and social media: using before and after 2006 gives approximately equivalent results though the size of the coefficients is generally larger for the more recent time period (not shown, but available on request).

**Table 5** Multivariate regression results for the life satisfaction of empty-nesters, marital status. SOEP 1985-2015

Dependent variable: Life Satisfaction (positively coded from 0 to 10)

	(1)	(2)	(3)	(4)	(5)
Empty Nest	Married	Single	Widowed	Divorced	Separated
All, OLS	0.00 (0.059)	-0.77*** (0.133)	-0.51** (0.144)	-0.65*** (0.121)	-0.58*** (0.114)
All, FE	0.01 (0.053)	0.34*** (0.129)	0.24 (0.289)	-0.37*** (0.131)	-0.18 (0.237)
Male, OLS	0.00 (0.082)	-0.79*** (0.151)	0.27 (0.425)	-0.57*** (0.167)	-0.88*** (0.147)
Male, FE	-0.02 (0.073)	-0.29** (0.146)	0.37 (0.592)	-0.36* (0.191)	0.53 (0.378)
Female, OLS	0.03 (0.084)	-0.73*** (0.258)	-0.72** (0.306)	-0.66** (0.178)	-0.02 (0.228)
Female, FE	0.05 (0.076)	-0.47* (0.248)	0.19 (0.332)	-0.38** (0.186)	-0.43 (0.380)

Standard errors in parentheses \*\*\* p<0.01, \*\* p<0.05, \* p<0.1. SOEP data used: Socio-Economic Panel (SOEP), data for years 1984-2014, version 31, SOEP, 2016, doi: 10.5684/soepv31. Controls are income, labour force status, age, education, health, region and year.

When assessed by the all, OLS results (i.e. the first row), the coefficients are broadly in line with expectations formed by the literature discussion above (in section 2).<sup>7</sup> The empty nest syndrome has a substantial effect for those who are single, widowed, divorced and separated, perhaps supporting Raup and Myers (1989) who state that women experience becoming empty nesters differently if divorced since they have a different “identity and self-esteem”. However, again it should be noted that some of the subsamples contain few individuals. For example, in the sample generally there are few male widows, and only a very small proportion of these enter the empty nest situation (see Appendix 3). In this case – and, for similar reasons, in some others – a lack of statistically significant results is unsurprising. Perhaps surprising is that married individuals do not seem to experience the empty nest syndrome. We speculate that this is maybe because a married couple can take solace from one another when they become empty-nesters and are consequently better positioned to cope with the “new” normal such as caring for other (older) family members and pursuing other interests previously deferred when raising children (see, for example, Rubin 2008, p 51).

Finally, table 6 focuses on differences with respect to health status and income. For health status, the split is straightforward: good health and above for the first subsample; satisfactory health or worse for the second. For income, the subsamples are as follows: high earners represented by the upper quartile of individual income; less well-off individuals represented by having an income lower than half of the median income; and those with no

<sup>7</sup> An additional test was undertaken, discussed at the end of this section, where individuals were restricted to having the same marital status in both the year before and after entering the empty nest situation. The results are qualitatively the same.

income. The less than half median income subsample was chosen rather than the more symmetrical lowest quartile because many in the first (or lowest quartile) have no income. The practical import of this raises the real income threshold from 3,000 euros to 10,000 euros for our less well-off subsample.

**Table 6** Multivariate regression results for the life satisfaction of empty-nesters, health status and real individual income. SOEP 1985-2015  
Dependent variable: Life Satisfaction (positively coded from 0 to 10)

	(1)	(2)	(3)	(4)	(5)
Empty Nest	Good health or better	Satisfactory health or worse	Top quartile individual income	<half individual median income	No individual income
All, OLS	-0.37*** (0.052)	-0.39*** (0.043)	-0.41*** (0.078)	-0.32*** (0.080)	-0.29*** (0.105)
All, FE	-0.16*** (0.050)	-0.20*** (0.038)	-0.31*** (0.064)	-0.01 (0.078)	-0.06 (0.109)
Male, OLS	-0.35*** (0.053)	-0.43*** (0.050)	-0.39*** (0.079)	-0.39*** (0.153)	-0.19 (0.189)
Male, FE	-0.14*** (0.051)	-0.22*** (0.043)	-0.26*** (0.072)	-0.11 (0.162)	-0.19 (0.214)
Female, OLS	-0.32*** (0.055)	-0.38*** (0.053)	-0.01 (0.184)	-0.27*** (0.101)	-0.37*** (0.137)
Female, FE	-0.13** (0.053)	-0.19*** (0.047)	0.11 (0.175)	-0.01 (0.094)	-0.05 (0.135)

Standard errors in parentheses \*\*\* p<0.01, \*\* p<0.05, \* p<0.1. Controls for (1) and (2) are income, labour force status, marital status, age, education, region and year. Controls for (3), (4) and (5) are labour force status, marital status, health status, age, education, region and year. SOEP data used: Socio-Economic Panel (SOEP), data for years 1984-2014, version 31, SOEP, 2016, doi: 10.5684/soepv31.

The health results appear to show little difference between the two groups. Given the size of the coefficients and the prevalence of negative and statistically significant coefficients, it is conceivable that the less healthy suffer slightly more than the healthy group though the empty nest coefficients are not always statistically different. However, this is very cautious evidence at best.<sup>8</sup>

The results for income follow the trend of the previously discussed results by demonstrating that becoming an empty nester is a near universal negative experience. Whether someone's income is high or low, or if they have no individual income a substantial loss of life satisfaction is experienced by the new status of becoming empty nesters. For those who have an individual income in the top quartile, the lack of significance for females is likely due to a low sample size. Females are outnumbered in this category by nearly four to one, and of those who are new empty nesters five to one. There are 135 females in this income category who become empty nesters in our data set between 1984 and 2014. A very similar number of males who have zero income become empty nesters in this time frame, perhaps

<sup>8</sup> A subsequent check with a less healthy sample (those who report less than satisfactory health, as opposed to those to satisfactory health or even worse as in column 2) results in very similar coefficients.

leading to the lack of precision with this subsample. Income gender inequality is an interesting, and important issue but beyond the scope of this article.

The all, OLS, coefficients suggest a (slightly) lower loss of life satisfaction experienced by those with less income. One possibility is that this result is due to income dilution. Perhaps part of the sadness experienced by the less well-off is compensated by having somewhat reduced financial constraints. This can be tested by controlling for household income, meaning that household income has no direct impact on the subsequently obtained coefficients for new empty nesters. The results containing household income as a control are qualitatively the same as those in table 6, thus income dilution does not appear to explain the results obtained for the different income subsamples. This outcome offers support for the arguments that households are more organized around consumption complementarities rather than production complementarities, because any reduction in necessary expenditures has no impact on well-being (see section 2.1).

As the preceding discussion highlights, some alternative tests were undertaken (for time, health, and income). Here a further alternative is discussed. The descriptive statistics of table 1 demonstrates that it is important to thoroughly consider marital status. For this reason estimations were undertaken equivalent to those of table 3 above, where an individual's marital status is the same in the year before becoming an empty nester and when a new empty nester. The coefficients for the empty nest dummy variable are sometimes a little lower, but support the above empirical analysis. Becoming an empty nester seems to be near-universally negative for an individual's well-being.

## **5. Discussion including limitations and suggestions for future research**

This investigation, a large sample investigation of a phenomenon complementing the studies that make use of qualitative data and small samples, found a substantial overall negative effect of becoming an empty nester. However, a further result was that, for some groups, the empty nest syndrome is an especially large problem. For example, unemployed females appear particularly at risk from a large reduction in well-being following the departure of the last child (or children). Similarly, individuals who are not married experience becoming an empty-nester with a force approaching that of how people experience unemployment (when judged by the obtained regression coefficients). Medical research often discusses risk factors for various problems, for example heart disease, stroke, suicide (Lutz et al. 2016; Lee et al. 2017). For these particular groups, the substantial drop in subjective well-being suggests that becoming an empty nester may be a risk factor for clinical depression, perhaps akin to the severe drop in well-being experienced by some parents in the immediate post-natal phase. Post-natal depression has received much attention from academics, healthcare professionals and other policy makers. Though the potential impacts on others regarding ENS are likely lower, the size of the coefficients suggest that the empty nest syndrome should also be of concern to a variety of academics (from different fields), health professionals and policy makers.

One limitation is the possibility that these life satisfaction results, as substantial as they are, may actually be undervaluing the negative effect of becoming an empty nester. As a more cognitive measure of well-being, it may not capture the full sadness of the last child leaving the parental home. Alternative use of more affect-based measures of well-being such as happiness (or sadness) may result in a larger coefficient being obtained for the empty nest. With the SOEP this possibility is not testable, but other datasets may enable such a comparison: a worthy avenue for future research. Further information about comparisons of different well-being measures is provided by Clark and Senik (2011) and Clark (2016).

A note about causality: even though we look at the difference in annual life satisfaction before and after becoming an empty nester, we make no claims about causality. It is plausible that other, non-included, factors might be driving the result of this study. It is possible that unhappy parents per se might be causing the empty nest situation; and that the departure of the last child simply serves to highlight a deteriorating relationship between the parents. Further research can investigate the issue of causality. Further research can also investigate the possibility of adaptation: do empty nesters get used to the new situation? Equivalent adaptation regarding unemployment, divorce and marriage (among other life changes) has been carried out (Clark and Georgellis 2013, Qari 2014), and the anticipation of, and adaptation to, the empty nest situation is an issue worthy of analysis.

A final recommendation focuses on the human aspects relating to the effects of the ENS. Given the empirical results above, we suggest that if individuals know of someone who has recently become, or is about to become an empty-nester in their neighbourhood or social circle they should involve them in activities and try to make them feel less lonely. The strong findings for the non-married in particular indicate that these individuals are particularly in need of support and inclusion; and that these groups would benefit from social interaction to overcome the feelings of isolation and loneliness; (not unlike elderly people who become bereaved late in life). These acts of personal kindness, while not a replacement for more systematic policy interventions, would be ultra-low cost and potentially an effective way to dispel somewhat the adverse feelings experienced by empty-nester.

## **6. Conclusions**

The term Empty Nest Syndrome has existed for about 50 years and the widespread use of the phrase has persisted in spite of no universally accepted medical diagnosis nor any extensive proof in social science research. The evidence available on its existence is either anecdotal or at best based on relatively small scale samples. In contrast this economic investigation considers, with a large nationally representative sample, life satisfaction in relation to the Empty Nest Syndrome. It draws upon an appropriately wide cross-section of the relevant literature to complement an understanding of the theory of Identity Economics.

Superficially, the empty nest syndrome may be viewed as melodramatic and/or an extreme overreaction to the family life cycle that occurs naturally when children leave home. The range of symptoms experienced by some empty nest parents from a loss of confidence about the future to forms of depression are apparently irrational if seen in primarily financial and economic terms because an absence of children at home could mean more disposable income for the parents derived from the residual household budget (though financial support may continue nevertheless). However, the results from this paper suggest that ENS is more rational than considered previously especially when viewed through the lens of Identity Economics which takes into account non-pecuniary aspects of parenting such as situation and status.

The multivariate regression results show a substantial reduction in life satisfaction of empty-nesters when compared to pre-empty nesters; even when controlling for the standard life satisfaction variables of income, labour force status, marital status, age, health and education. Furthermore, the size of the coefficients for the new empty nesters, particularly for some subsamples, indicates that empty nest syndrome is a serious issue, being a substantial and negative phenomenon for individual well-being.

## Appendix 1: The Empty Nest Syndrome literature: origins in biology

The term empty nest has its origins in ornithology. The concept in its earliest application is used to describe the end of the breeding season for any given pair of nesting birds; or the time in the life-cycle when the young chicks have ceased being fledglings and departed as independent adults. More recently, ENS has been applied to a human condition where parents feel a sense of melancholy or deprivation and even mortality usually following an extended period of child-rearing. Indeed, ENS has been defined primarily as a psychological condition, but it does not have an actual clinical diagnosis unlike for instance the menopause<sup>9</sup>, which coincidentally often happens at a broadly similar time for women (Keshishian et al., 2016).

In the biology setting, Richard Dawkins (1976) implicitly discusses the concept of the ENS in the animal kingdom in terms of what he describes as the “Battle of the Generations”. In particular, this notion explains the behaviour of animals as “machines programmed to do everything in its power to propagate copies of the genes which ride inside it” (Dawkins, 1976, p 123). For example, this approach to evolutionary biology highlights the survival instinct in nesting birds to deal with the cost of parental foraging and the risk of predation by having a large clutch size and sometimes more than one nesting season per calendar year, (Lima, 1987, p 1063). Relatedly, it may help to explain indirectly why some people experience ENS because once the nest (that is, home) is emptied then the primary purpose of the parent is partially diminished, (Fox and Bruce, 2001, p 396). Of course, this is especially true in humans where the young take many years of intense upbringing.

Dawkins based his views on gene survival in part by using the work by Trivers (1972) who developed the notion of Parental Investment (PI), which has its origins in social biology. In the absence of a cost-benefit analysis for most animals, this concept considers the advantages of any investment by a parent in an off-spring that increases the chance of survival and thereby “reproductive success”. Hence, PI is used where monetary values are difficult to quantify and in particular for non-human female parents:

“...represents the sum of all the food she can gather or manufacture in a lifetime of work, all the risks she is prepared to take, and all the energy and effort that she is able to put into the welfare of children.” (Dawkins, 1976 p 124)

In addition, this concept of PI can be extended to a novel study of human behaviour because many monetary aspects of child-rearing are actually very difficult to value such as the joy gained from seeing a child take its first steps or the satisfaction derived from attending its wedding. However, these stages (and others) in the development of a child’s life are in

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<sup>9</sup> The menopause is an indicator of a life change as it is the sudden end of female reproduction often but not always in mid-life. The phenomenon of the menopause is extremely rare in other animal species and a potentially important way to view the ENS. From an economic perspective, the menopause may help to explain the issues facing (female) middle-age parents. That is, given the non-trivial amount of economic resources, energy and time invested in children plus the related matter of a relatively small number of human births per female, the menopause may be a genetic tactic with an economic genesis.

reality indicators of continued existence; or in other words, these are signs that the probability of gene survival are relatively high or increasing over time or across generations. Hence, the amount of resources invested in an off-spring is an acceptable cost to make in order to increase the probability of gene survival, even if this is not a conscious decision emotionally or economically. Furthermore, this compulsion may be part of a trade-off between current consumption by the parent and the longer term future of the child. Therefore, not only is gene survival based on fundamental principles of economics such as consumption and production but likewise the feeling of ENS may also be based in these primeval instincts (see Wilson 1978 for a discussion on the origins of socio-biology).

However, given the non-clinical nature of the ENS, any meaningful analysis is perhaps best understood in a much wider context beyond biology. As a result, Identity Economics (or a sense of self-being) is well-placed and occupies a central role in this investigation as it includes the related areas of sociology and psychology, (Akerlof and Kranton, 2000, p 748). As a result, attention in the main body of the text is given to the economics literature, since the concept of the “empty nester” is clearly applicable in this discipline, too due to considerations of resource allocation.



## **Appendix 2: A Cost-Benefit Analysis Framework of ENS**

Negative effects from ENS (COSTS), especially for full-time parents and careers

1. Loss of short-term purpose
2. Loneliness in the long-term
3. Reduction in social interaction e.g. other parents
4. No longer having influence in the child's destiny

Positive effects from ENS (BENEFITS), especially for working parents and careers

1. Gain of independence from depend children
2. More financial autonomy
3. Sense of achievement and pride in the destinations of the children
4. No longer having to defer gratification and/or make self-sacrifice i.e. holidays, cars

ENS CBA is complicated by

1. Boomerang children; post-university/training and after divorce or relationship breakdowns
2. Housing costs especially the relatively high cost house buying in certain areas of the country
3. Grandparent responsibilities due to high child-care costs such as nursery, after-school clubs
4. Women living sometimes half their lives after the menopause

The Correlates of ENS

1. Menopause (co-incidence i.e. function of age)
2. Divorce (correlated positively)
3. Historical setting
4. Age of mother at birth of last child
5. Career opportunities including female employment rates
6. The gender pay gap

### Appendix 3: Empty-nesters and pre-empty nesters, observations in the subsamples (tables 4-6)

**Table A1: Both genders**

	(1) New Empty Nesters	(2) Pre-empty nesters	Total
<i>Labour Force Status</i>			
Employed	1090	94067	95157
Unemployed	180	10808	10988
Retired	129	2426	2555
<i>Time</i>			
Before 2000	732	59336	60068
From 2000	1111	98687	99808
<i>Marital Status</i>			
Married	819	127776	128595
Single	154	10551	10705
Widowed	62	1521	1583
Divorced	245	9370	9615
Separated	506	2822	3328
<i>Health</i>			
Good health (and better)	730	73084	73814
Satisfactory and below	751	50543	51294
<i>Income</i>			
Top quartile	488	39600	40088
Less than half median	563	57113	57676
Zero income	353	30781	31134

**Table A2: Males**

	(1) New Empty Nesters	(2) Pre-empty nesters	Total
<i>Labour Force Status</i>			
Employed	715	50458	51173
Unemployed	104	4093	4197
Retired	70	1256	1326
<i>Time</i>			
Before 2000	446	28343	28789
From 2000	690	44699	45389
<i>Marital Status</i>			
Married	412	62993	63405
Single	111	3357	3468
Widowed	19	337	356
Divorced	132	1907	2039
Separated	427	497	924
<i>Health</i>			
Good health (and better)	489	32982	33471
Satisfactory and below	440	22440	22880
<i>Income</i>			
Top quartile	426	34128	34554
Less than half median	205	1964	8169
Zero income	137	3918	4055

**Table A3: Females**

	(1) New Empty Nesters	(2) Pre-empty nesters	Total
<i>Labour Force Status</i>			
Employed	375	43609	43984
Unemployed	76	6715	6791
Retired	59	1170	1229
<i>Time</i>			
Before 2000	286	30993	31279
From 2000	421	53998	54419
<i>Marital Status</i>			
Married	407	64783	65190
Single	43	7194	7237
Widowed	43	1184	1227
Divorced	113	7463	7576
Separated	79	2325	2404
<i>Health</i>			
Good health (and better)	241	40102	40343
Satisfactory and below	311	28103	28414
<i>Income</i>			
Top quartile	62	5472	5534
Less than half median	358	49149	49507
Zero income	216	26863	27079

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