CARE INEQUALITY IN AGEING SOCIETIES
THE UNEQUAL DISTRIBUTION OF THE INTENSITY OF INFORMAL SUPPORT IN EUROPE

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Population ageing is a well-known (and some decades old) phenomenon of European societies: according to Eurostat data in 2017 older persons (i.e. aged 65 years of more) represented 19.4% of the EU-28 population, an increase of 0.2 percentage points compared with 2016 and of 2.4 percentage points compared to 1997. Even more relevant is the expected doubling of the share of population aged 80 year or more: from 5,5 in 2017 to 12,7% in 2080[1]. Although population ageing has not always and everywhere translated into an increasing number of individuals who need long term care support, a number of studies have suggested that there is not a clear trend toward a compression of morbidity, or that this trend cannot fully compensate for the progressive increase of elderly individuals (Crimmins & Beltrán-Sánchez, 2010). As a consequence, it is expected that the need for care services will significantly increase in the next decades, especially when the baby-boomer generation will hit age 70-75.
At the same time, recent social changes have strongly influenced the form and force of family ties in the West and beyond. Many and different social processes generated a growing diversity in family and household structures which, in turn, has led new patterns of relations between generations and new potential form of inequalities. Among the many and distinctive societal drivers for the re-shaping of household structures, intergenerational relations and their socio-cultural meaning, we can mention: increased female participation in the formal labor market; precariousness in the labor market including job losses, and reduced employment security as well as social protection, which are all likely to generate new inequalities among generations around access to and returns from pension funds. Increasing geographic mobility and migration of individuals and families within and beyond national boundaries also impacted on living arrangements, transforming the traditional family support network. Demographic change, particularly a specific combination of increased longevity and declining fertility, has meant a shift from a vertical to a more horizontal families structure characterized by more living generations with fewer members in each generation. At the same time as the average age of women or couples having babies has risen in European societies, the gap between generations has also widened. The current global demographic shifts mean that family support is predicted to be eroding while increased longevity and the increasing number of marital breakdowns found especially in the global North are likely to increase the need and demand for old age care. In general, in most European countries, the growing need for long term care services has not been matched by an equal increase in policies addressing these needs (Pavolini and Ranci, 2013), this suggests that the possibility (or not) of receiving informal care in later life will be an increasingly relevant dimension along which inequalities in well-being later life are structured.

Inequalities in care support – given and received – are clearly the result not only of individuals and household's situation at the moment in which care needs arises, but most importantly of their life course. Family histories – i.e. marital and parenthood careers of family members – and the characteristics and history of intergenerational family solidarity play a huge role in determining the availability of care. Next, the institutional context – broadly defined both in terms of the characteristics of the welfare and family systems in the country of residence – also dramatically influences the equal/unequal distribution of formal and informal care (Albertini & Pavolini, 2017; Albertini, 2016). The availability (and lack) of policy measures, and of different players – public, private or voluntary - supplementing care traditionally provided by family members, does influence

[1] Source: https://ec,europa,eu/eurostat/statistics-explained/index,php/Population_structure_and_ageing.

the nature and intensity of support that families (have to) provide to their older members. In this context, the development of public policy is able to dramatically transform the conventional norms and practices of family support exchanges over generations.
Previous studies have found that the largest part of informal support is provided to/received from the member of the nuclear family – i.e. grandparents, parents and children. It also been shown, however, that non-kin networks remain important sources of help in later life. Furthermore, the relevance of the distinction of kin and non-kin support networks has been put into question (Carsten 2004; Bamford and Leach 2009): anthropological studies, for instance, have found a substantial overlap between kin and non-kin networks, especially if by kinship we mean a "mutuality of being" (Sahlins, 2013). Therefore, the fact that most studies of the exchange of social support are limited to the analysis of the nuclear family may represent an increasingly relevant limitation. A further important limitation of recent empirical literature on support exchange is also that it almost exclusively focuses on social support received, and looks *separately* at support provided and received. The literature on the motivations and consequences of intergenerational relations, however, has repeatedly underlined that individual's wellbeing does not only benefit from the availability of informal support, but it is also significantly affected by the possibility for the individual to reciprocate the help received (Lee 1985; Finch and Mason 1993;).
Adopting the instruments and analytical approach typically utilized in the studies of income inequalities the present contribution aims at: first, shedding light on the level of inequality of the distribution care support (given and received) characterising different European societies, focusing in particular on ageing population; second, providing evidence of the negative association between the lack of reciprocity in social support exchange and elderly individuals' wellbeing – and thus considering the individual balance of hours of support given and received; third, assessing which are the main factors associated with the risk that an elderly person is in the situation of receiving large amounts of informal social support, both from kin and non-kin members, without being able to reciprocate.

Data, Variables & methods
The analyses presented in this article are based on data from the first two waves of the Survey of Health, Ageing and Retirement in Europe (SHARE), SHARE is a longitudinal, multidisciplinary, cross-national survey representative of the non-institutionalized population aged 50 and over in several European countries. All persons aged at least 50 in the selected households were interviewed, as well as their partners independently of their age. SHARE includes detailed information on exchange of social between respondents and individuals outside the household – both members of the nuclear family, kin and non-kin network. Furthermore, SHARE contains detailed information on the social, economic and health situation of the respondents. The interviews took place in year 2004 and 2007 and, thus, before the onset of the Great Recession.
The sample utilized in the analyses only includes respondents aged 50 years or more at the moment of the interview (i.e. eligible partners below this age are not taken into consideration). In particular, the analyses were conducted on the unbalanced panel sample of individuals included in at least one of the first two regular waves of the Survey. Data from 13 countries are utilized: Austria, Germany, Sweden, the Netherlands, Spain, Italy, France, Denmark, Greece and Belgium took part to both waves, whereas the Czech Republic, Poland and Ireland only participated in wave 2. Data from Switzerland and Israel were not included in the analyses. The unit of analysis is the respondent; the final sample includes 58,452 observations.
Our main dependent variables are those derived from a set of questions aiming at recording information on social support (i.e. help with paperwork, household chores or personal care) provided to or received from individuals living outside the respondent's household. In particular, respondents were asked to report if they provided and/or received social support in the 12 months previous to the interview, and if they looked after their grandchildren. Moreover, in the first two waves of the SHARE

respondents were also asked to report about the intensity of support exchanges (i.e. number of hours of support given/received).
Differently from much of previous research on the topic, our analyses will focus specifically on the intensity of support provided/received and its (un)equal distribution. The intensity of support exchanged will be expressed in terms of average hours per year. Amounts of support given/provided have been top-coded at the 99 percentile, in order to reduce the influence of a few extreme outliers on our results, We distinguish three main variables: (i) overall amount of support given by the respondent, (ii) overall amount of support received by the respondent and (iii) the balance between the time given and received. We included in the analyses also those individuals who have reported not to have given or received any social support in the 12 months previous to the interview (non-exchangers).
Since we are primarily concerned with analysing the inequality of the distribution of informal care across different European societies, the analyses will utilize the typical instruments of studies of income inequality. Therefore, we will employ the Gini index as a measure of inequality of care amounts provided/received by the respondents. Next, we will focus on individuals located in the different quintiles of the distribution of the informal support balance.

The unequal distribution of informal care
As already noted in previous analyses (Albertini 2016) the percentage of SHARE respondents who report having provided or received social support is the highest in Nordic European countries and the lowest in Mediterranean ones. The intensity of support, however, follows an opposite gradient: Southern Europeans tend to report significantly higher amounts of support donated/received to/from others than individuals living in other countries. At the same time, the prevalence of households in which there is at least one co-residing individual beside the conjugal couple – and thus a potential source/beneficiary of support within the household - is markedly higher in Southern Europe and Poland, than in other Continental and Scandinavian European countries.
Our main interest, however, is not in (re-)assessing European patterns of support exchange, but rather that of exploring the extent to which informal support availability and obligations are (un)equally distributed in the population. Figure 1 reports the value of the Gini index in the distribution of time of (i) social support received; (ii) social support given and (iii) time devoted to looking after grandchildren. In several countries support received is the most unequally distributed, attribute, while time devoted to grand parenting tends to be the least unequally distributed. The latter result is probably due to the high level of normativity characterising support to grandchildren (Glaser & Hank, 2018). Also, it is worth noting that the level of inequality characterising the distribution of informal support is much higher than that of household income and wealth. Next, it emerges that those countries with the lowest prevalence and the higher intensity of support are also those in which the distribution of care time is more equally distributed: Greece, Italy and Spain. At the same time, these are also the countries where the number of people reporting no exchange of support in the previous 12 months is the highest (figure 2).

[Figures 1 & 2 about here]

… and so what

As mentioned above, previous studies have provided abundant evidence that social isolation and, more specifically, the exclusion from informal support networks has significant negative implications for individual's wellbeing. This is confirmed by the analysis of the SHARE data. For instance, the average level of life satisfaction (measured with a standard 0-10 scale) of respondents who had not reported any exchange of social support in the previous 12 months is significantly lower than that registered for other respondents: i.e. -0.13 (p-value 0.02). What is more, the negative association remains statistically significant also after controlling for individual's sex, age, self-perceived health status, limitations with the activities of daily living, having (or not) children and grandchildren, income, marital status and engagement in social activities - such as participating to voluntary, charity or religious organizations: -0.12 (p-value 0.02).

Adding to previous studies, however, our analyses indicate that it is not only the exclusion from informal support exchange that is negatively associated with individual's wellbeing, but also being involved in an unbalanced exchange. In particular, the results of our analyses suggest that those individuals who are located in the two bottom quintiles of the distribution of support balance have a significantly lower life satisfaction than those in the middle of the distribution. These are individuals who receive much more hours of support than they give, or that have a very small positive balance (a balance of +10 hours on average for those located in the second quintile). Interestingly, also those respondents who are at the top of the distribution, i.e. net givers of large amounts of support – report lower levels of life satisfaction than individuals in the middle of the distribution. This result suggests that it may be the case that "too much of a good thing" (i.e. providing support) can be detrimental for one's wellbeing.

As for what concerns the cross country variation of the relation between the balance of support given/provided and life satisfaction, the results reported in table 1 indicate that, irrespective of the prevailing welfare regime and family system, all across Europe being a net receiver of informal support – i.e. being in the 1st or 2nd quintile - is associated with lower levels of wellbeing in later life. The negative association appears to be stronger in Mediterranean countries than in Nordic European ones.[2]

[Table 1 about here]

The risk factors

The unequal distribution of care can have important negative consequences on elderly people wellbeing. In particular, we have shown that *ceteris paribus* being located in the bottom quintile of the distribution of the balance of care provided/received – i.e. receiving large amounts of support without the ability/possibility of reciprocating it – is significantly correlated with lower levels of individual's life satisfaction. Thus, it becomes clear that one relevant task to better address this important dimension of social inequality is that of exploring which are the main determinants of the risk of being located at the bottom of the informal care distribution.

Table 2 reports the results of a linear probability model shedding light on the factors that are associated with the individual's risk of being located in the bottom quintile of the distribution of the balance of care. The analysis is first performed on the overall sample and then fitted separately on the data from six countries representative of the different European welfare and transfer regimes.

[2] When considering the social significance of this association, it is worth noting the small size of the coefficients reported in table 1. On the other hand, it should be noted that although the life satisfaction scale ranges theoretically from 0 to 10, most respondents report high values: in our sample, about 80% of respondents report a value between 6 and 10. The relative size of the coefficients is also important: having at least one limitation with daily living activities, a very powerful indicator of health status and lack of autonomy, is associated with less than a half a point decrease in the level of life satisfaction.

Older age, bad health and the presence of limitations in carrying out daily living activities are strongly and positively correlated with the probability of having a large "care deficit". On the opposite, having children and grandchildren, as well as being in a partnership, represent important factors protecting individuals from the risk of being in the bottom quintile of the care balance distribution. It is also worth noting that active engagement in the life of the community, trough participation into the activities of charity, religious or political organizations is also a relevant protective factor. Looking at between-countries variations probably the most striking feature is the similarity of the role of the different demographic and socio-economic factors in affecting the likelihood of being located in the bottom quintile of care balance distribution.

[Table 2 about here]

Conclusions

Previous studies have consistently documented that European societies are characterised by quite different patterns of informal social support exchange, with a negative North-South gradient in the likelihood of receiving/providing support and an opposite gradient in the amount of help provided. In the present paper, we have documented that the prevalence of "non exchangers" varies considerably across Europe and, what is more relevant, that there is a very high level of inequality in the distribution of informal care. The level of inequality characterising the distribution of care provided or received is significantly higher than that registered for income or wealth.

Our analyses shown that receiving large amounts of informal social support without being able to reciprocate is associated with significantly lower levels of individual's wellbeing. Furthermore, it emerges that besides respondents' socio-economic characteristics, what matters in determining the risk of experiencing large care deficits is the location of the individual within family and community networks. In other words, having a partner, children, grandchildren and being actively involved in the life of the community is important in order not to be located at the bottom of the care balance distribution. Finally, we have shown that these factors have a similar role across very different European countries. Thus, it seems possible to argue that the relevance of reciprocity for the wellbeing of the individual and its dependence on the fact of being embedded in rich family and community network goes well beyond the specific institutional and welfare context in which individuals live.

In this research we discover the emergence of a new form of inequality which is worth to be strongly highlighted. It's not a form constituted by the sheer amount of individually received or given support: on the contrary, it consists of the actual imbalance between giving and receiving and its consequences on the perceived well-being of the elderly. This new imbalance in informal support: 1) is much more unequally distributed in the case of the elderly related support than in case of income; 2) nevertheless it has a huge impact on the well-being of individuals. Generally speaking, those who have a very unbalanced budget - whether they receive or give support in an unbalanced way – scored less satisfaction and well-being.

The innovative result, which really makes the difference, is not that the imbalance is related to individual variables and personal social context, already highlighted in other research (in a nutshell: a negative correlation with being older, being in poor health, being unable to perform daily tasks; a positive correlation with having children, grandchildren, a partner and being active in community life). The point to underline is rather that these correlations apply both to those who receive too much and also to those who give too much. Here is the novelty, also with regard to the theme of new inequalities. It is the "intrinsic quality" of support, understood as the fair-equilibrium between being able to give and being able to receive, that makes the difference. It can, therefore, be assumed that we face peculiar norms of justice which people adopt to give meaning to the practices of care and support. We can speculate that caring generates individual well-being, only if it is based on a fair balance between giving and receiving and not, as we might suppose, simply on giving or receiving. If caring is imbalanced (both in receiving or giving), the perception of well-being is dramatically

reduced. This seems to reinforce Godbout's theory of a "positive debt": inter-generational and intra-generational exchanges generate well-being and personal satisfaction only where the right balance can be found between being able to receive and being able to reciprocate over time. The matter is "the meaning" of caring and not the sheer amount of giving and receiving.
Another result worth to be verified by further research concerns the fact that this imbalance is not strictly related to the famous European welfare regimes. This evidence seems to confirm a very important insight already observed by other research. Despite the transformation of population and family structures, families have maintained their capacities in delivering help and support, through patterns of reciprocity and kin networks, although the norms underpinning intergenerational reciprocity may have been challenged by social change. In this context, what looks like new patterns, in fact, could be the re-discovery or emphasis of existing relationships. It could also be an adaptation of culturally and institutionally ascribed norms of family relations.
What does this all mean in terms of social policies capable of facilitating informal care practices? Is it possible to intervene in order to support this balance - or to flatten the imbalance – or is it only possible to map these informal arrangements as a matter of fact? First of all, the clear persistence (or renewal) of informal support – mainly managed on a family basis, but also by the quasi-kinship networks – suggests to offer and manage policies based both on public services supply and on the strengthening of informal and community networks. Support for caregivers should be designed and delivered simultaneously through public policies and supporting informal networks. Secondly, new attention should be paid to innovative policies capable of building informal support networks. These policies should be implemented in order to develop a new form of communities empowering social generosity, opening new opportunities to be included in vital and vibrant networks, implementing policies that help people to be donors and not only receivers. We could talk about a new field of social policy, namely policies of "regenerating social bonds".

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TABLES & FIGURES

Table 1: Relation between individual's position in the distribution of support balance and life satisfaction, linear regression model. Overall sample and selected countries.

	Full sample	Germany	Sweden	Italy	France	Denmark	Poland
Quintile (ref. 3rd)							
1st	-0.18***	-0.28**	-0.23*	-0.46***	-0.42**	-0.18*	-0.50***
	(-0.27 - -0.10)	(-0.55 - -0.00)	(-0.46 - 0.00)	(-0.76 - -0.17)	(-0.75 - -0.09)	(-0.39 - 0.03)	(-0.88 - -0.12)
2nd	-0.09**	-0.08	-0.12	0.07	-0.06	-0.08	-0.35**
	(-0.16 - -0.02)	(-0.31 - 0.16)	(-0.32 - 0.08)	(-0.19 - 0.33)	(-0.33 - 0.21)	(-0.27 - 0.10)	(-0.69 - -0.00)
4th	-0.02	0.03	-0.13	-0.28**	-0.05	0.05	-0.22
	(-0.10 - 0.05)	(-0.21 - 0.27)	(-0.34 - 0.07)	(-0.55 - -0.02)	(-0.31 - 0.21)	(-0.14 - 0.24)	(-0.55 - 0.11)
5th	-0.05	-0.10	-0.15	-0.10	-0.11	-0.07	-0.08
	(-0.12 - 0.03)	(-0.35 - 0.16)	(-0.36 - 0.06)	(-0.38 - 0.18)	(-0.37 - 0.16)	(-0.26 - 0.12)	(-0.41 - 0.25)
Observations	19,079	1,556	1,883	1,512	1,614	1,851	1,354
R-squared	0.17	0.18	0.11	0.21	0.12	0.13	0.16

Notes: c.i. in parentheses; *** p<0.01, ** p<0.05, * p<0.1; coefficients for controlling variables are omitted; full model presented in table A2.

Table 2: linear probability model on the likelihood of being located in the bottom quintile of care balance.

	Full sample	Germany	Sweden	Italy	France	Denmark	Poland
Woman (ref. Man)	-0.006	0.031**	-0.009	-0.042***	-0.005	0.018	0.005
	(-0.014 - 0.002)	(0.006 - 0.055)	(-0.032 - 0.014)	(-0.072 - - 0.012)	(-0.028 - 0.019)	(-0.009 - 0.044)	(-0.034 - 0.043)
Age (centered on the mean)	0.010***	0.010***	0.011***	0.009***	0.011***	0.009***	0.015***
	(0.009 - 0.010)	(0.008 - 0.012)	(0.009 - 0.012)	(0.007 - 0.012)	(0.010 - 0.013)	(0.007 - 0.011)	(0.013 - 0.018)
Self perceived health status: less than good (ref. Good or better)	0.049***	0.053***	0.052***	0.048***	0.082***	0.053***	0.035*
	(0.040 - 0.058)	(0.026 - 0.080)	(0.021 - 0.084)	(0.019 - 0.077)	(0.055 - 0.110)	(0.017 - 0.089)	(-0.002 - 0.072)
Has at least one ADL limitation	0.109***	0.108***	0.128***	0.131***	0.075***	0.122***	0.143***
	(0.093 - 0.125)	(0.052 - 0.165)	(0.081 - 0.176)	(0.065 - 0.197)	(0.028 - 0.122)	(0.060 - 0.185)	(0.084 - 0.202)
Has at least one IADL limitation	0.175***	0.173***	0.201***	0.235***	0.247***	0.206***	0.096***
	(0.161 - 0.189)	(0.124 - 0.222)	(0.158 - 0.244)	(0.185 - 0.286)	(0.199 - 0.294)	(0.153 - 0.260)	(0.038 - 0.154)
Has at least one child	-0.024***	-0.021	-0.039***	-0.031**	-0.021*	-0.004	-0.015
	(-0.032 - - 0.016)	(-0.045 - 0.004)	(-0.064 - - 0.015)	(-0.061 - - 0.001)	(-0.044 - 0.002)	(-0.031 - 0.023)	(-0.056 - 0.027)
Has at least one grandchild	-0.109***	-0.051***	-0.145***	-0.137***	-0.102***	-0.110***	-0.146***
	(-0.119 - - 0.100)	(-0.078 - - 0.024)	(-0.176 - - 0.114)	(-0.171 - - 0.103)	(-0.130 - - 0.075)	(-0.144 - - 0.076)	(-0.212 - - 0.080)
Household income (in 10000 euros)	0.001*	0.000	-0.001	-0.002	-0.004***	-0.000	0.000
	(-0.000 - 0.001)	(-0.002 - 0.003)	(-0.004 - 0.002)	(-0.006 - 0.001)	(-0.007 - - 0.001)	(-0.005 - 0.004)	(-0.047 - 0.047)
Marital status (ref. Married/in registere partnership)							
Never married	0.292***	0.274***	0.243***	0.408***	0.166***	0.270***	0.347***
	(0.266 - 0.317)	(0.197 - 0.350)	(0.167 - 0.320)	(0.316 - 0.499)	(0.103 - 0.229)	(0.193 - 0.347)	(0.212 - 0.483)
Separated/divorced	0.182***	0.206***	0.235***	0.152**	0.074***	0.155***	0.154***
	(0.164 - 0.199)	(0.146 - 0.267)	(0.179 - 0.291)	(0.027 - 0.278)	(0.035 - 0.113)	(0.110 - 0.200)	(0.068 - 0.241)
Widowed/er	0.246***	0.302***	0.268***	0.165***	0.205***	0.213***	0.113***
	(0.231 - 0.261)	(0.248 - 0.356)	(0.215 - 0.322)	(0.112 - 0.218)	(0.160 - 0.249)	(0.162 - 0.264)	(0.051 - 0.175)
Participate to social activity (charity, voluntary, political, religious or community organizations)	-0.045***	-0.016	-0.029**	-0.017	-0.055***	-0.034**	-0.072***
	(-0.053 - - 0.037)	(-0.042 - 0.011)	(-0.053 - - 0.005)	(-0.055 - 0.021)	(-0.078 - - 0.031)	(-0.062 - - 0.006)	(-0.122 - - 0.023)
Constant	0.190***	0.118***	0.251***	0.236***	0.190***	0.181***	0.249***
	(0.178 - 0.201)	(0.085 - 0.152)	(0.211 - 0.291)	(0.193 - 0.279)	(0.155 - 0.225)	(0.134 - 0.227)	(0.161 - 0.336)
Observations	34,936	3,369	3,916	2,697	3,392	3,047	1,353
R-squared	0.286	0.287	0.296	0.272	0.407	0.265	0.313

Notes: c.i. in parentheses; *** p<0.01, ** p<0.05, * p<0.1.

Figure 1. Inequality in the distribution of social support provided or received, Gini index. [to be edited]

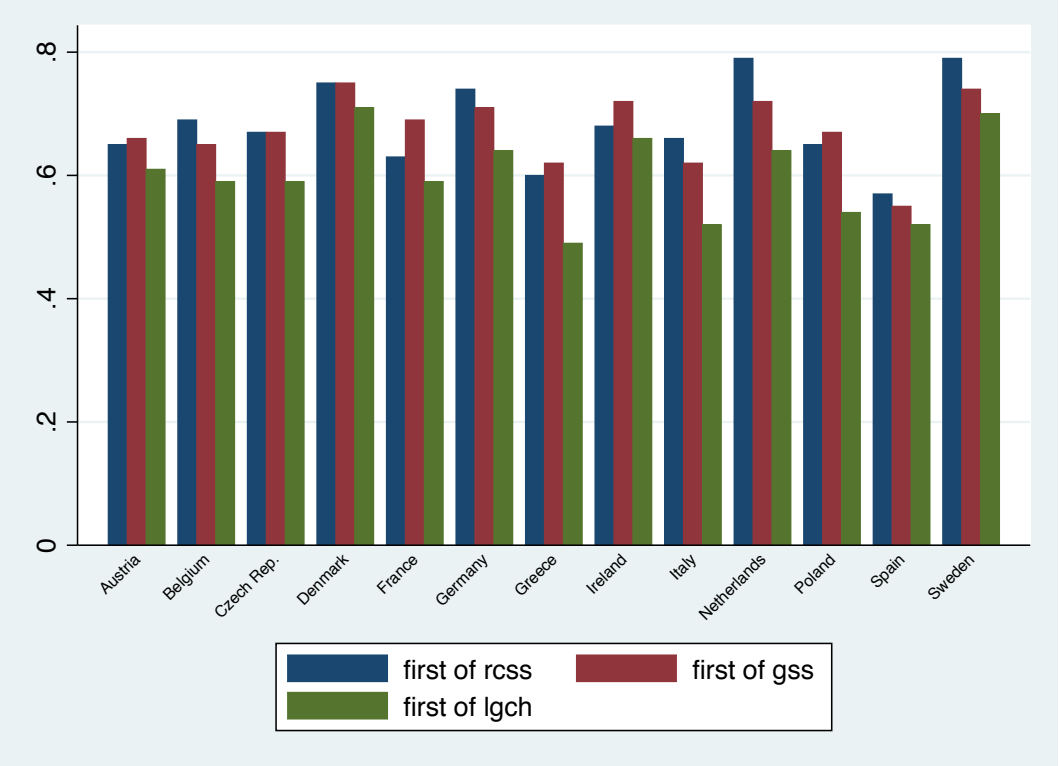

Figure 2. Percentage of respondents who report no exchange of social support [to be edited]