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Measuring social exclusion: strengths and limits of the European indicator AROPE

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Measuring social exclusion: strengths and limits of the European indicator AROPE

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Abstract

Since the end of the 1970s, the concept of social exclusion has been defined and measured in several different ways (Lenoir, 1974; Silver, 1994; de Haan, 1998; Burchardt et al., 1999; Hills et al., 2002; Levitas et al., 2007). Developed to describe the new forms of marginalization and poverty, over time the concept has broadened to cover more excluded groups and conditions. Within this perspective, the European Commission initially delineated it as the result of "mechanisms whereby individuals and groups are excluded from taking part in the social exchanges, from the component practices and rights of social integration and of identity. Social exclusion does not only mean insufficient income, and it even goes beyond participation in working life: it is felt and shown in the fields of housing, education, health and access to service" (COM, 1992 - 542: 8). Since then, social exclusion became an essential and inherent element of the European Union policies through the Lisbon Strategy (2000), Europe 2020 Strategy (2010), and the current Europe 2030 targets (2020). In order to monitor these achievements, Eurostat calculates social exclusion through the 'at risk of poverty or social exclusion' indicator (AROPE). According to Eurostat, it refers to those who fall into one or more of three measures: "At the risk of poverty after social transfer", "Severely materially and socially deprived", and "Living in a household with a very low work intensity". This indicator is provided by the European Union Statistics on Income and Living Conditions survey (EU-SILC) every year. As with every dataset and indicator, EU-SILC and AROPE have strengths and limitations.
Therefore, this working paper aim is twofold. Firstly, it intends to present the measure adopted by the European Union to investigate and monitor social exclusion. Secondly, it attempts to point out its strengths and limits. The article is divided into three parts. The first one introduces a literature review on how social exclusion has been defined and calculated over time. The second section portrays the dataset EU-SILC through which social exclusion is quantified in the European Union and the AROPE indicator. The third passage is the discussion part, where this working paper highlights the advantages and assets of the AROPE indicator and, at the same time, spotlights what could be improved.

INTRODUCTION

The term "social exclusion" is a contested concept, as it has not an agreed and univocal definition. Commonly, it is described as a dynamic and multidimensional process by which certain groups or individuals are systematically disadvantaged and, wholly or partially, excluded from any social, economic, political, and cultural system. Nevertheless, since the 1990s, social exclusion has become an essential and embedded element in the European Union policies, thanks to its capability to encompass different nuances of disparity. Within this perspective, fighting social exclusion was one of the goals of the Lisbon and Europe 2020 Strategies, and it is one of Europe 2030 targets. In order

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to monitor these achievements, Eurostat calculates social exclusion through the 'at risk of poverty or social exclusion' indicator (AROPE).

Due to its relevance in the implementation of programmes, there is a need for a proper definition and measure of social exclusion, able to consider and capture the several shades of disparity existing in Europe. Therefore, this working paper aim is twofold. Firstly, it intends to present the measure adopted by the European Union to investigate and monitor social exclusion. Secondly, it attempts to point out its strengths and limits.

The article is structured into three parts. The first one introduces a literature review on how social exclusion has been defined, framed, and measured. The second section portrays how the European Union defines and calculates social exclusion. Thus, it presents the evolution of this concept, the AROPE indicator and the dataset EU-SILC through which it is quantified. The third passage is the discussion part, where this working paper highlights the advantages and limits of the AROPE indicator and, at the same time, spotlights what could be improved.

1. LITERATURE REVIEW

1.1 Defining social exclusion

Defining social exclusion is a difficult task as it has a breadth of meanings and groups to refer to, and as it overlaps and interrelates with other social phenomena, such as poverty, vulnerability, and inequality (Tuorto, 2017). It implies being out from something, but it does not specify what. Thus, the main questions to respond to have a definition are "exclusion from what?" and "exclusion of what?". To these inquiries, the answers and the focal spaces can be as many as the theories and approaches used to study social exclusion. Hence, generally, it is conceptualized in terms of exclusion from different social, economic, political, and cultural systems.

For this reason, the definition of social exclusion is not unique and agreed upon. Hence, it has changed and broadened over time to cover more demeaned groups and embrace different conditions. When it first appeared in the 1970s in France, social exclusion described those not covered by the social security system (Lenoir, 1974). Within this frame, it referred to a process of social disqualification (Paugam, 1993) or social disaffiliation (Castel, 1995) that lead to a breakdown of the relationship between society and the individuals. Hence, in this perspective, the inadequacy of the traditional welfare system and social protection caused exclusion, marginalisation, and deprivation. Then, in the 1980s, social exclusion's definition expanded, including the "pariahs of the nation". It referred to various categories of socially disadvantaged individuals and the new social problems that rose, such as unemployment, ghettoization, and fundamental changes in family life (Cannan, 1997). Lately, in the 1990s, it encompassed the issue of the peripherical suburbs, which gave rise to combating 'urban exclusion' (Silver, 1994).

Consequentially, the massive usage, mis-usage, and clash of descriptions of social exclusion resulted in the need for an extensive semantic definition. Within this perspective, Hilary Silver (1994) and Ruth Levitas (1998) developed two different frameworks to understand the ideological and political roots of the several uses of social exclusion and spotlight the implications for policy and action.

Specifically, Hilary Silver provided her framework in the essay "Social exclusion and social solidary: Three paradigms" (1994). She stressed the polysemy of social exclusion, arguing that "the different meaning of social exclusion and the uses to which the term is put are embedded in conflicting social science paradigms and political ideologies" (Silver, 1994: 536). To overcome these political, ideological, and national differences in describing this concept, Silver proposed a threefold typology of the multiple meanings of social exclusion. She provided three frameworks for understanding social exclusion: the solidarity, specialization, and monopoly paradigms. Each of these assigns to exclusion a different cause, political philosophy, and multiple forms of social disadvantages.
Differently, Levitas focused on how ideological underpinnings for concepts of social exclusion change over time and how these are translated into different policies. According to her, the term has been applied to describe three different aspects of disadvantage that require diverse solutions (Bak, 2018; Watt, Jacobs, 2000). She argued that three separate discourses deployed social exclusion: the redistributionist one, the moral underclass one, and the social integrationist one (1998). They have profoundly different implications for politics and social policy, especially concerning housing and urban areas (Watt, Jacobs, 2000).

Therefore, over the last decades, several authors tried to define social exclusion, individuating its domains and delimitating its borders (Silver, 1994; Cannan, 1997; Walker and Walker, 1997; Somerville, 1998; de Haan, 1998; Burchardt et al., 1999; Social Exclusion Unit and Cabinet Office, 2001; Hills et al., 2002; Levitas et al., 2007; Popay et al., 2008). According to Popay (2010), there are two main methods to describe social exclusion. The former, the shopping list approach, tends to define it through a never-ending list of dimensions or situations from which specific groups are excluded. This approach frames exclusion in economic, psychological, social, and cultural terms, but it presents it only as a dichotomy between individuals considered as included or excluded. Differently, the second method, the relational approach, focuses on the processes that produce social exclusion at different levels. In adopting it, the emphasis is placed on the drivers of exclusion rather than the conditions experienced by excluded groups.

Even though the several definitions developed did not converge in an ultimate description and meaning, they spotlighted the seven main attributes that mark social exclusion:

1. multidimensionality, because it encompasses different dimensions (Farrigton, 2018; Bak, 2018; Mathieson et al., 2008);
2. dynamism and procedurality, focusing on the processes and drivers that draw individuals into poverty and exclusion and what brings them out (Bak, 2018; Abrams et al., 2007). The procedural dimension allows framing exclusion in terms of what it consists of or where it comes from (Castel, 1995; Tuorto, 2017);
3. relationality, as unequal power relations in social interactions produce social exclusion (Madanipour et al., 2015; Silver, 1994; Abrams et al., 2007; Farrigton, 2018);
4. relationality with the agency, stressing the role of institutions and governments in reducing or acerbating the level of exclusion and the number of individuals or communities left out (Abrams et al., 2007; Farrigton, 2018);
5. non-participation, implying that exclusion affects to what extent individuals or groups can participate in the key activities of societies (Bak, 2018; Abrams et al., 2007);

6. multi-level, because social exclusion operates and manifests on many levels, such as individual, household, community, and institutional ones (Bak, 2018; Taket et al., 2009);
7. relativity, as people are not excluded in absolute terms, but concerning the reference groups, the contexts, or the society in which one lives (Tuorto, 2017).

Therefore, owing to its ambiguous nature, the use of the term "social exclusion" in research has advantages as well as disadvantages. de Haan and Maxwell (1998) affirmed that this concept is a threefold asset. First, social exclusion focuses on institutional processes that exclude individuals and not only on their plight. Second, it allows a re-discovery of poverty in the North, offering new opportunities to put traditional concerns onto the international agenda. Third, it captures the dynamic and multi-dimensional nature of social divisions in the post-Fordist world (Horsell, 2006). On the other hand, the main criticism of social exclusion is its ambiguous definition and measurement (Farrigton, 2018). Consequentially, social exclusion risks being confused with other terms, such as poverty, deprivation, or marginalization (Abrahamson, 1995). Another limit is the heterogeneity of the group that social exclusion encompasses and describes. It results in further difficulties in reflecting on the trajectories of exclusion and finding proper interventions and actions to handle it (Castel, 1996).

1.2 Framing sociologically social exclusion

Although social exclusion is a recent term, it is inherently related to sociology. It has been intrinsic in the functionalist (Durkheim, 1893; Parsons, 1965; Luhmann, 2005), conflictual (Weber, 1922; Marx, 1867; Parkin, 1979), and interactionist (Simmel, 1893; First School of Chicago; Goffman, 1963) perspective. Indeed, the functionalists interpreted exclusion as the absence of social bonds and collective conscience, which injures the stability and cohesion of a society. Differently, the conflictual theories have discussed exclusion as the procedures adopted by members of powerful social groups to maintain or secure their privileged position and dominance over another group. Diversely, the interactionists saw social exclusion as a relational process, through which groups or institutions may, explicitly or unintentionally, convey the message to "get out," "stay in," or "keep out".

Nevertheless, in the literature, the main approaches to social exclusion are the Anglo-Saxon and French schools. The former focuses on the economic dimension of the phenomenon, and it defines exclusion as a problem of distribution and allocation of resources among the population. Differently, the French school stresses the socio-cultural dimension of the phenomenon, and it describes exclusion as insufficient social and cultural integration, isolation, and low participation (Tuorto, 2017). Notwithstanding this theoretical division, on the field, these approaches are interrelated as the lack of economic resources and social isolation constitute the same vicious circle that deteriorates the living conditions of people.

Moreover, in the last decades, the rise of severer shades and processes of exclusion required new viewpoints able to capture and explain these dynamics. Within these perspectives, the theories of Loïc Wacquant and Boaventura de Sousa Santos have been able to deepen and describe these transformations and processes. Specifically, Loïc Wacquant spotlighted new regimes of marginality in the cities (1996, 2007, 2008), defining these new forms as "advanced marginality". He described

it as “the novel regime of socio-spatial relegation and exclusionary closure (in Max Weber’s sense) that has crystallized in the post-Fordist city as a result of the uneven development of the capitalist economies and the recoiling of welfare states, according to modalities that vary with the ways in which these two forces bear upon the segments of the working class and the ethno-racial categories dwelling in the nether regions of social and physical space” (Wacquant, 2008: 2-3). Hence, this term defines and captures the struggles that marginalized neighbourhoods are suffering and experiencing. Differently, Boaventura de Sousa Santos (2017) introduced the concept of “abyssal exclusion” to define the extreme shades of marginalization present in the European context. According to him, it is a specific form of exclusion, rooted and constituted during colonialism, where the excluded are not conceived as fully human. It is produced and reproduced by processes of invisibilization and inferiorization of the subaltern social groups.

These theories are relevant as they allow a more profound knowledge and analysis of exclusion. Specifically, the perspective of Wacquant allows framing exclusion within the dynamics of neighbourhoods and considering the several socio-spatial demarcations that exist and persist in the cities. Differently, the theory of Santos permits to dive into the extreme shades of exclusion, which are often unrecognized and unexplored, and pursue emancipatory actions and policies.

1.3 Measuring social exclusion

Regarding its measurement, researchers have adopted both quantitative and qualitative approaches. Within the formers, for a long time, the main measures to capture exclusion were the income distribution and the PIL, as they should have been able to measure and represent the quality of life of a country. Since the 1990s, several authors have demonstrated that these indicators are insufficient to comprehend and capture the relevant elements of a good life by proposing alternative perspectives, such as the utilitarian, resources, human rights, and capabilities approach (Nussbaum, 2011; Sen, 1992). Among these, the latter contributed to comprehending and rethinking the measuring of inequality and social exclusion. Indeed, it claims that the freedom to achieve well-being is of primary moral importance, and it affirms that well-being should be understood in terms of people’s capabilities and functionings. Within this perspective, it concerns social injustice, freedom of choice, and human dignity. Moreover, the capabilities approach is the theoretical framework adopted by the United Nations of Development Programme to develop the Human Development Index (HDI).

Thus, since then, there has been a consensus that social exclusion results from the cumulative overlapping of various dimensions, but the measures developed differ in terms of elements and theoretical frameworks (Abrams et al., 2007; Madanipour, Weck, 2015). For this reason, the European Union developed the “at risk of poverty or social exclusion” indicator (AROPE), while the studies conducted by CASE (Burchardt et al., 2002), the PSE survey (Bradshaw 2004; Pantazis et al., 2006), and the Bristol Social Exclusion Matrix (Levitas et al., 2007) produced three different measures. Quantitative approaches are an asset because they permit investigating social exclusion over time and comparing its presence in different contexts. On the other hand, quantitative approaches suffer from several limitations. They are related to the lack of a shared definition and consensus on the domains, the failure to include people belonging to certain groups or social identities, the under-representation of forms of inequality, and the differential availability of data across countries and global regions (Mathieson et al., 2018).

On the other hand, the qualitative approaches study social exclusion through interviews, study cases, focus groups and ethnographical studies. Although they cannot provide a universal indicator, they allow researchers to deepen these dynamics and experiences. Within this perspective, they are an asset for two reasons. First, they can dive into the causes, consequences, and experiences of the excluded individuals. Second, they can gather more information on the dynamics of social exclusion that, lately, could be used to develop more precise and suitable indicators.

2. THE EUROPEAN INDICATOR AROPE

2.1 The EU framework

In the European Union, the term "social exclusion" came to prominence during the Presidency of Jacques Delors (1985-1992/3). The advantage of using this concept was twofold. Firstly, it was a "shiny and new" definition for branding the controversial Poverty Programmes of the EU and for avoiding the stigma of the terms "deprivation" and "poverty" (Peace, 2001). Secondly, it permitted the development of policies and strategies that trespassed the Member State competencies on social policy (Peace, 2001; Atkinson, Davoudi, 2000).

Thus, since the 1970s, the European Commission documented a growth of new forms of poverty and marginalization, characterized by the rise of unemployment and social exclusion, that needed to be handled. Since then, there was a "frequent reference to the decline in social cohesion and social solidarity, and the need to reintegrate/insert the socially excluded into mainstream society (Commission, 1992, 1993c, 1995b, 1998b)" (Atkinson, Davoudi, 2000: 428). Within this perspective, the Commission of the European Communities initially delineated social exclusion as the result of "mechanisms whereby individuals and groups are excluded from taking part in the social exchanges, from the component practices and rights of social integration and of identity. The social exclusion does not only mean insufficient income, and it even goes beyond participation in working life: it is felt and shown in the fields of housing, education, health and access to service" (COM, 1992 - 542: 8). After 1993, the European Union supported the need to contrast social exclusion because "it threatened economic growth and competitiveness and undermined core elements of the European social model by placing unsustainable financial strains on the social protection system" (Atkison, Davoudi, 2000: 431). With the new Millennium, the need to monitor and combat social exclusion has resulted in the promotion of strategies and the adoption of common indicators and targets. The first one was the Lisbon Strategy in 2000, a plan focused on strengthening employment, economic reform, and social cohesion. Then, in 2010, the European Commission promoted the Europe 2020 strategy. Its aim was twofold. Firstly, it intended to reinforce economic and social progress. Secondly, it planned to turn the European Union into a smart, sustainable, and inclusive economy. To fulfil these priorities, the European Commission proposed five quantitative targets:

1. "75 % of the population aged 20-64 should be employed;
2. 3% of the EU's GDP should be invested in R&D;
3. the "20/20/20" climate/energy targets should be met (including an increase to 30% of emissions reduction if the conditions are right);
4. the share of early school leavers should be under 10% and at least 40% of the younger generation should have a tertiary degree;
5. 20 million fewer people should be at risk of poverty" (European Commission, 2010: 3).

To monitor the latter target, the European Union adopted the "at risk of poverty or social exclusion" indicator (AROPE). Moreover, in 2017, the European Parliament, the Council and the Commission promoted the European Pillar of Social Rights. It aimed at serving as a guide towards efficient employment and social outcomes in response to the challenges that Europe was facing. The European Pillar of Social Rights set out twenty principles divided into three main areas: equal opportunities and access to the labour market; fair working conditions; and social protection and inclusion. In 2021, the twenty principles of the European Pillar of Social Rights have become the “social rulebook” for the EU targets for 2030.

2.2 The EU-SILC database

Before describing the AROPE indicator, it is necessary to present the survey through which it is calculated.
The European Union gathers the data on social exclusion from the EU-SILC survey - the EU Survey on Statistics on Income and Living Conditions. It collects information every year through the cooperation between Eurostat and the National Statistical Institutes, and it aims at providing comparable data on income, poverty, social exclusion, and living conditions.
Succeeded to the ECHP – European Community Household Panel, the EU-SILC was launched for the first time in 2003 through a "gentlemen's agreement" in six Member States (Belgium, Denmark, Greece, Ireland, Luxembourg, and Austria) and Norway. It entered into force in 2004 and, currently, it covers all the Member States, Iceland, Norway, Switzerland, and other countries who opt-in voluntarily. Compared to ECHP, EU-SILC is output-harmonised. It means that “instead of being based on harmonised questionnaires, the procedure involves the specification of a set of social and economic indicators which should be provided by the new data set, but it is up to each of the member states to decide how these are to be collected” (Iacovou et al., 2012: 1).

EU-SILC provides two types of data: cross-sectional data and longitudinal data. The former concerns a given time with variables on income, poverty, social exclusion, and other living conditions. The latter regards individual-level changes over time, observed periodically over four years. The longitudinal data aims at identifying the incidence and dynamic processes of the persistence of poverty and social exclusion among subgroups in the population. The data about social exclusion and housing conditions is collected mainly at the household level.
Usually, the information is collected through Pen-and-Paper Personal Interviews (PAPI) and Computer-Assisted Personal Interviews (CAPI). Due to the Covid-19 pandemic, the data are now gathered through Computer-assisted telephone interviewing (CATI) or Computer-assisted web interviewing (CAWI) modes.
According to the Commission Regulation on sampling and tracing rules, “the cross-sectional and longitudinal one shall be based on a nationally representative probability sample of the population residing in private households within the country, irrespective of language, nationality or legal residence status. All private households and all persons aged 16 and over within the household are eligible for the operation. Representative probability samples shall be achieved both for households, which form the basic units of sampling, data collection and data analysis, and for individual persons in the target population. The sampling frame and methods of sample selection shall ensure that every individual and household in the target population is assigned a known and non-zero probability of

selection." (Eurostat, 2019: 23). Thus, the minimum effective sample sizes to be achieved are defined (Annex A).

As mentioned, EU-SILC provides comparable data on income, poverty, social exclusion, and living conditions. Thus, it gathers socio-economic background information and data about the employment situation of the interviewees. Furthermore, it supplies variables able to give a better understanding of these dynamics and the connected issues (Annex B). These variables are essential to understand the living, contextual, and sanitarian conditions and the collateral difficulties that people at risk of poverty or social exclusion experience.

As with every dataset, the EU-SILC has strengths and limitations. The main asset is that it is a unique and advantageous resource to capture and compare living conditions in Europe. Its standardised methodology, variables, and indicators allow measuring and setting shared targets (Iacovu et al., 2012; Dewilde, 2015). These characteristics are a distinctive and singular advantage of EU-SILC. Hence, this peculiarity permits meaningful and informative research on housing and living conditions. Secondly, the rich portfolio of socio-economic information available makes it possible to comprehend disparities at a much more granular level than most other datasets. Thirdly, EU-SILC longitudinal data allows an opportunity to track time-varying trends (Arora et al., 2015).
On the other hand, it has some limitations as well. According to Iacovou et al. (2012), the main shortcomings are the sampling and design, the household dynamics, and the incomes. Regarding the sample and design, they underlined that the data need to be collected using probability sampling. It is relevant to ensure comparable data of population characteristics. Even though appropriate procedures take place in most countries, few follow different protocols. Thus, each country can choose how to collect the data but must present them following a standard template and common outcomes (Arora et al., 2015). Hence, to obtain correct estimates from a dataset, analysts must take complex sample designs into account. Three pieces of information are relevant for an appropriate estimation: stratum indicator, cluster indicator and weights. Hence, based on these, sampling frames vary from country to country. To overcome this issue, Eurostat identified a minimum sample size for cross-sectional and longitudinal components (Arora et al., 2015). Secondly, regarding the household dynamics, Iacovou et al. denounced the lack of a household grid and the consequential impossibility to establish the nature of some relationship. They affirmed that "because most households consist of a single person or a group of people all related by partnership and/or parenthood, it is only in a minority of households that we cannot identify all the relationships properly" (Iacovou, 2012: 8). Lastly, regarding income, they highlighted three issues. The former is income aggregation. Although it provides harmonised and comparable information, it decreases the level of details. The second problem is the reference period mismatch between income and non-income information, which is a typical problem of many large-scale data sets. The last issue is that there is no uniformity across the country in collecting income components either in gross or net of taxes.
In addition, Caroline Dewilde (2015) affirmed that the cost of housing and tenure is another weakness of the EU-SILC. Moreover, the last limit of EU-SILC is concerned with its precision to measure phenomena at the regional and urban levels. Indeed, its indicators and variables are more suitable for national-level analysis rather than regional or urban (Verma et al., 2017; Diaz Dapena et al., 2020). It is due to the smallness of the regional sample and the issues in estimating sampling error at this level.

2.3 The AROPE indicator

In 2001, the European Council held at Laeken adopted a set of commonly agreed indicators to monitor the performance of the Member States and promote social inclusion. Hence, since 2008, social exclusion has been calculated and observed through the 'at risk of poverty or social exclusion' indicator (AROPE). Even though it has been defined as an indicator, it is an index as it is a collection of compound or composite indicators. Indeed, AROPE refers to those who fall into one or more of three indicators:

1. "At the risk of poverty after social transfer", referring to the individuals with a disposable income below 60 % of the national median equivalised disposable income;
2. "Severely materially deprived", including people unable to afford at least four of the following deprivation items: i) to pay rent or utility bills, ii) keep home adequately warm, iii) face unexpected expenses, iv) eat meat, fish or a protein equivalent every second day, v) a week holiday away from home, vi) a car, vii) a washing machine, viii) a colour TV, or ix) a telephone;
3. "Living in a household with a very low work intensity", corresponding to those aged 0-59 living in households where the adults (aged 18-59) worked 20% or less of their total work potential during the past year.

Moreover, in 2021, according to the new EU 2030 targets, the indicator has been modified[1]. The severe material deprivation component has been adjusted by adding six items (Having an internet connection; replacing worn-out clothes with some new ones; having two pairs of properly fitting shoes; spending a small amount of money each week on him/herself; having regular leisure activities; getting together with friends/family for a drink/meal at least once a month). According to this new definition, an individual is considered as severely materially and socially deprived when unable to afford at least seven out of thirteen items. Furthermore, the (quasi)-jobless household indicator has been defined as people from 0-64 years living in households where the adults worked less than 20% of their total combined work-time potential during the previous 12 months.

However, the AROPE indicator is a statistical asset in monitoring and combating poverty and social exclusion. Within this perspective, it is a unique and advantageous resource. It does not only focus on the economic situation but also considers working conditions. Thus, its measurement goes beyond the simple economic disparity or the level of poverty. Furthermore, as one of its components is "the risk of poverty after social transfers", AROPE can simultaneously capture the presence of inequality and social exclusion among and within European countries. As pointed out by Darvas, "conceptually, the definition of the "at risk of poverty" indicator and the explanation provided in the Eurostat glossary resemble an indicator of income inequality. In more equal societies, more people have incomes closer to the median income and consequently, the share of people with income below 60 per cent of the median income is low" (Darvas, 2017: 6).
On the other hand, it has some limitations as well. The first issue is that mixing different forms of poverty indicators may result in a combined index that is difficult to interpret (Carmo et al., 2018). A second issue is the questionable use of the household jobless/low work intensity as a criterion and the need to implement the deprivation index because it does not consider the differences among the

[1] https://ec.europa.eu/eurostat/statistics-explained/index.php?title=Glossary:At_risk_of_poverty_or_social_exclusion_(AROPE).

European countries and societies (Nolan, Whelan, 2011). A third critic, moved by Ramón Peña-Casas (2011), is that this index has been developed from a political consensus rather than a methodological base or consultation of other parties. Hence, he individuated the theoretical perspective in the assumption that promoting economic growth and increasing labour market participation is sufficient to reduce material deprivation or the number of jobless households. According to Peña-Casas, this vision might be incomplete. The last shortcoming is that AROPE misses considering the political, rights, and services dimensions of exclusion.

3. DISCUSSION

3.1 Strengths of AROPE

The AROPE indicator has several assets related to the EU-SILC dataset and its composition. On the one hand, EU-SILC provides a standardized definition and methodology of social exclusion that guarantees comparison among and within countries. Within this perspective, AROPE is a unique measure because the other indicators of social exclusion either are specific to a country and region or have a contradictory definition and calculation (Economic Commission for Europe, 2018). Secondly, EU-SILC gathers cross-sectional and longitudinal data. Thus, it is possible to track the improvements or retrogressions of social exclusion in each country over time. Furthermore, EU-SILC includes several variables concerned with living, working, and health conditions. They allow a deeper analysis of who is experiencing social exclusion in Europe and which issues are related to it.

On the other hand, regarding its composition, the AROPE indicator is a singular measure because it goes beyond poverty or economic inequality. As mentioned, it results from the combination of three indicators: being at risk of poverty after social transfers, being severely materially deprived, and living in a household with a very low work intensity. Thus, the latter two indexes consider deprivation and working conditions of people as part of the exclusionary process. In doing so, they permit the development of a broader and more exhaustive indicator than others.

3.2 Limitations of AROPE

Like its strengths, the AROPE's weaknesses are due to the EU-SILC dataset and its composition. On the one hand, the differences among countries in the data sampling and gathering represent an issue of representativeness. Indeed, even though they must present data following a standard template and outcomes, each country can choose how to collect them and set the target (Arora et al., 2015; Ramón Peña-Casas, 2011). This is even more relevant in the study of exclusion as it fails to capture the most disadvantaged groups - e.g., homeless people, refugees, people exploited. Another limit related to EU-SILC is its inability to dive into regional and urban level analyses, as the mechanisms of exclusion and poverty may be adjusted through averages at the national level. It is also due to the lack of reliable local data and difficulties in accessing data at a small spatial scale (Diaz Dapena et al., 2020). It is particularly relevant as specific thematic like exclusion needs to be studied at a regional and urban level rather than a national for having a clearer picture and for comprehending its dynamics. Lastly, EU-SILC provides several variables to understand the circumstances of these disparities. Albeit that, in some cases, they are too narrow and general to comprehend the phenomena connected to social exclusion. For instance, several studies have pointed out that those experiencing social exclusion are more exposed to organized crime, exploitation, and environmental problems (Perone, 2018;

Schwuchow, 2019; Chancel, 2020). Though, in the EU-SILC survey, there are no targeted questions about these issues.

On the other hand, some limitations are strictly inherent to the composition of the AROPE indicator. Firstly, even though in 2021 it has been modified, it still misses the social, services, political, and rights exclusion that certain groups are experiencing. Moreover, the current components should be improved and ameliorated according to the differences among the European countries and societies (Nolan, Whelan, 2011). Secondly, as whoever falls into one of its three components is considered at risk of poverty or social exclusion, there is not a distinction in the degree of this disparity. As a result, it might be difficult to interpret. Thirdly, it seems developed from a political consensus rather than a methodological base (Ramón Peña-Casas, 2011).

3.3 What could be improved

Summing up, the AROPE indicator is a valuable and remarkable measure thanks to its shared definition and methodology among European states. The ability to compare the level of social exclusion among and within countries and to track trends over time makes it one of the leading measures worldwide. Furthermore, as AROPE includes poverty as well as deprivation and working conditions, it can portray a better picture of social exclusion. Despite these extraordinary advantages, it could be improved in several aspects.

To begin with, the EU-SILC database should better standardize the gathering and sampling of the involved interviewees. Thus, the institution of a unique protocol to collect data for all the Member States might help to have major representativeness. However, it will be still arduous to capture the conditions of those not included in the registers. Secondly, the EU-SILC database should improve the data at regional and urban levels to guarantee and allow deeper analyses. It is particularly relevant as "the real social divides within Europe are more often within states rather than between that is, between regions belonging to the same country" (Ballas et al., 2017: 176). Moreover, as these phenomena tend to manifest in the cities, it should provide information at the neighbourhood level. Thirdly, the variables offered by EU-SILC are insufficient to comprehend the collateral phenomena of exclusion. In addition to the several variables on living conditions, it should include more specific questions related, for instance, to the exposure to organized crime, addictions, segregation, or discrimination. Fourth, notwithstanding the already advanced composition, the AROPE indicator could be enriched with political, services, and social aspects of social exclusion. Moreover, the deprivation index and the criterion about jobless households should be reconsidered and adjusted to the societal differences among European countries. Currently, the political assumption that promoting economic growth and labour market participation is sufficient to reduce material deprivation or the number of jobless households might be incomplete. It might omit or underestimate other aspects of social exclusion. Lastly, the AROPE indicator cannot define the degree of exclusion that individuals are experiencing, as everyone who falls in one of its components is considered excluded. Thus, it might be advantageous to differentiate the degree of exclusion to grasp the different types and levels of segregation among and within European countries.

CONCLUSION

Social exclusion represents a nodal concept and an indispensable instrument for the development of European policies. Studying and acknowledging it is essential for political, social, economic, and ethical reasons. From a political point of view, it affects the political processes by mistrusting institutions and growing unrest (Warwick-Booth, 2013), by putting at risk democracy, diminishing human dignity, and straining freedom (Stiglitz, 2013; Bauman, 2013). Differently, from a social perspective, social exclusion limits upward mobility, inclusiveness, and social cohesion. Hence, it might reinforce vicious circles of precariousness (Paugam, 1996). Besides, from an economic framework, the rise of social exclusion results in slower economic growth (Warwick-Booth, 2013). Lastly, from an ethical perspective, social exclusion is strictly connected with social justice and human rights.

In conclusion, due to its relevance, it requires a rigorous tool to capture its dynamics and processes, to monitor it, and to coordinate its fighting through strategies. Thus, this work aimed to present and discuss the measured developed by the European Union to pursue so: the indicator AROPE. Within this perspective, the paper reported that it refers to those who fall into one or more of three measures: "At the risk of poverty after social transfer", "Severely materially and socially deprived", and "Living in a household with a very low work intensity". It has remarkable assets as well as some limits. It is a unique and advanced indicator, thanks to its ability to go beyond poverty and income inequality and its standardized definition and methodology that allows comparison among and within countries. However, this paper spotlights elements that could be improved by better standardizing the sampling, by meliorating the data at the regional and urban level, by adding new variables to comprehend the phenomena related to exclusion, enriching the indicator with social, services and political aspects, and defining different degrees of exclusion.

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Annex A

Minimum effective sample size for countries (based on the use of a sample of households/addresses) (Eurostat, 2019: 28).

EU-Member States	Households		Persons aged 16 or over to be interviewed	
	Cross-sectional	**Longitudinal**	**Cross-sectional**	**Longitudinal**
Belgium	4 750	3 500	8 750	6 500
Bulgaria	4 500	3 500	10 000	7 500
Czech Republic	4 750	3 500	10 000	7 500
Denmark	4 250	3 250	7 250	5 500
Germany	8 250	6 000	14 500	10 500
Estonia	3 500	2 750	7 750	5 750
Ireland	3 750	2 750	8 000	6 000
Greece	4 750	3 500	10 000	7 250
Spain	6 500	5 000	16 000	12 250
France	7 250	5 500	13 500	10 250
Croatia	4 250	3 250	9 250	7 000
Italy	7 250	5 500	15 500	11 750
Cyprus	3 250	2 500	7 500	5 500
Latvia	3 750	2 750	7 650	5 600
Lithuania	4 000	3 000	9 000	6 750
Luxembourg	3 250	2 500	6 500	5 000
Hungary	4 750	3 500	10 250	7 750
Malta	3 000	2 250	7 000	5 250
Netherlands	5 000	3 750	8 750	6 500
Austria	4 500	3 250	8 750	6 250
Poland	6 000	4 500	15 000	11 250
Portugal	4 500	3 250	10 500	7 500
Romania	5 250	4 000	12 750	9 500
Slovenia	3 750	2 750	9 000	6 750
Slovakia	4 250	3 250	11 000	8 250
Finland	4 000	3 000	6 750	5 000
Sweden	4 500	3 500	7 500	5 750
United Kingdom	7 500	5 750	13 750	10 500
Total of EU Member States	135 000	101 500	282 150	210 850

Annex B

EU-SILC variables regarding living conditions and wellbeing (Eurostat, 2019)

Subject matter	Variable	Unit	Question
Living conditions and wellbeing	Ability to make ends meet	Household	*A household may have different sources of income and more than one household member may contribute to it. Thinking of your household's total income, is your household able to make ends meet, namely, to pay for its usual necessary expenses?*
	General health	Individual	*How is your health in general?*
	Unmet need for medical examination or treatment	Individual	*Was there any time during the past 12 months when you really needed medical examination or treatment (excluding dental) for yourself?*
	Unmet need for dental examination or treatment	Individual	*Was there any time during the past 12 months when you really needed dental examination or treatment for yourself?*
	Leaking roof, damp walls/floors/foundation, or rot in window frames or floor	Household	*Do you have any of the following problems with your dwelling/accommodation?* *A leaking roof* *Damp walls/floors/foundation* *Rot in window frames or floor*
	Bath or shower in dwelling	Household	*Is there a shower unit or a bathtub in your dwelling?*
	Indoor flushing toilet for sole use of household	Household	*Is there an indoor flushing toilet in your dwelling?*
Neighbourhood problems and exposure to crime and violence	Crime, violence or vandalism in the area	Household	*Do you have any of the following problems related to the place where you live: crime, violence and vandalism in the local area?*
	Problems with the dwelling: too dark, not enough light	Household	*Is your dwelling too dark, meaning is there not enough day-light coming through the windows?*
	Noise from neighbours or from the street	Household	*Do you have any of the following problems related to the place where you live: too much noise in your dwelling from neighbours or from outside (traffic, business, factory, etc.)?*
Exposure to environmental problems	Pollution, grime or other	Household	*Do you have any of the following problems related to the place where you live: pollution, grime or other environmental problems in the*

	environment problems		*local area such as: smoke, dust, unpleasant smells or polluted water?*