



Access to Essential Services: Evidence from EU Member States

Final Synthesis Report

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Abstract

This study expands on previous efforts to map access to six essential services mentioned in Principle 20 of the European Pillar of Social Rights (EPSR) in EU Member States: water, sanitation, energy, transport, financial services and digital communications. It has drawn from two main sources of evidence: qualitative analysis through national reports carried out by national experts, and quantitative analysis using microdata in the form of EU-SILC, requested from Eurostat. Additional quantitative evidence has been gathered from publicly available sources where microdata lacked sufficient variables for analysis.

The research considered, in turn, policy developments since the proclamation of the EPSR in 2017; the legal and policy framework in place to support access; current levels of access; barriers to accessing essential services, and drivers of increased access; policy measures which support access; and good practices in place in Member States. Additionally, the findings of the study have been subject to peer review by five senior thematic experts. Based on the findings, conclusions and recommendations for further action are presented.

Résumé (FR)

Cette étude s'inscrit dans le prolongement des efforts précédents visant à cartographier l'accès à six services essentiels mentionnés dans le principe 20 du Socle européen des droits sociaux dans les États membres de l'UE : eau, assainissement, énergie, transport, services financiers et communications numériques. Elle s'est appuyée sur deux sources principales de données : une analyse qualitative à travers des rapports nationaux réalisés par des experts nationaux, et une analyse quantitative utilisant des microdonnées sous la forme d'EU-SILC, demandées à Eurostat. Des données quantitatives supplémentaires ont été recueillies auprès de sources publiques lorsque les microdonnées ne comportaient pas suffisamment de variables pour l'analyse.

La recherche a examiné, tour à tour, les développements politiques depuis la proclamation du PEDS en 2017 ; le cadre juridique et politique en place pour soutenir l'accès ; les niveaux d'accès actuels ; les obstacles à l'accès aux services essentiels, et les moteurs d'un accès accru ; les mesures politiques qui soutiennent l'accès ; et les bonnes pratiques en place dans les États membres. En outre, les résultats de l'étude ont fait l'objet d'un examen par les pairs de cinq experts thématiques de haut niveau. Sur la base de ces résultats, des conclusions et des recommandations pour des actions futures sont présentées.

Les informations et les points de vue exposés dans cette étude sont ceux de l'auteur ou des auteurs et ne reflètent pas nécessairement l'opinion officielle de la Commission. La Commission ne garantit pas l'exactitude des données incluses dans cette étude. Ni la Commission ni aucune personne agissant au nom de la Commission ne peuvent être tenues responsables de l'utilisation qui pourrait être faite des informations qu'elle contient.

Abbreviations

AROP	Households at risk of poverty
AROPE	Households at risk of poverty or social exclusion
CSO	Civil society organisations
DESI	The Digital Economy and Society Index
DG EMPL	European Commission Directorate-General Employment, Social Affairs & Inclusion
EPOV	European Energy Poverty Observatory
EPSR	European Pillar of Social Rights
ESPN	European Social Policy Network
EU	The European Union in its current configuration of 27 Member States
EU-SILC	European Union statistics on income and living conditions dataset
FEANTSA	European Federation of National Organisations Working with the Homeless
HBS	Household Budget Survey
ICT survey	Survey on Information and Communications Technologies usage by Households and Individuals
PAD	Payment Accounts Directive

Country abbreviations of EU Member States

BE	Belgium	LT	Lithuania
BG	Bulgaria	LU	Luxembourg
CZ	Czechia	HU	Hungary
DK	Denmark	MT	Malta
DE	Germany	NL	The Netherlands
EE	Estonia	AT	Austria
IE	Ireland	PL	Poland
EL	Greece	PT	Portugal
ES	Spain	RO	Romania
FR	France	SI	Slovenia
HR	Croatia	SK	Slovakia
IT	Italy	FI	Finland
CY	Cyprus	SE	Sweden
LV	Latvia	EU	EU-27 (average or aggregate)

Executive Summary

Background

Principle 20 of the European Pillar of Social Rights (EPSR), proclaimed in 2017, states that **'everyone has the right to access essential services of good quality'**, including water, sanitation, energy, transport, financial services, and digital communications', and that 'support for access to such services shall be available for those in need'.

This study is part of an effort to expand the knowledge base on essential services in the EU, both regarding the type and nature of services provided to citizens, the barriers citizens face in accessing these services, and the policy measures in place to improve or ascertain access. In doing so, it builds on a previous effort by the European Social Policy Network (ESPN), which mapped the policy measures in place in EU Member States¹. This work contributes to the realisation of the European Commission's **Action Plan to Implement the European Pillar of Social Rights**², according to which a report on access to essential services will be produced by the Commission in 2022.

Defining the problem

Citizens may experience a range of barriers to accessing the essential services they require to go about their daily life and maintain an adequate living standard. Broadly, these barriers can be summarised as relating to quality, accessibility, availability, and affordability:

- **Quality** relates to the standard of the service and whether it responds to the needs of the user. For instance, in the case of water, whether the water provided is of sufficient quality.
- **Accessibility** concerns whether the service can be reached or obtained easily, and whether it is easy to understand and use. This can apply, for instance, to older persons and persons with disabilities (e.g. in cases of poor physical accessibility of transport services).
- **Availability** concerns either whether the service is conveniently and closely located to users, or whether equipment is required to access it. Examples of the first instance would be the distance one needs to travel to access a public transport stop; in the second case, whether a household is connected to infrastructure such as broadband, water mains or other connections required to access services.
- Finally, **affordability** relates to whether the household is able to access and pay for the service without experiencing financial hardship. Except for the rare cases where a service is provided free of charge, this dimension applies to all the essential services discussed in this study.

While the four concepts are interlinked, the focus of this study is on affordability. Affordability concerns affect all six essential services to various degrees and can be of particular concern to households that are at risk of poverty.

¹ Baptista and Marlier (2020), 'Access to essential services for people on low incomes in Europe: An analysis of policies in 35 countries', European Social Policy Network (ESPN), Brussels, European Commission.

² Communication COM/2021/102 final from the Commission on the European Pillar of Social Rights Action Plan, p. 4; European Commission (2021c), 'European Pillar of Social Rights Action Plan', European Commission, Brussels.

Research methodology and process

The study builds on two main approaches: a qualitative approach based on desk research and national reports written by national experts, and a quantitative approach based on a combination of microdata requested from Eurostat, and – where available – publicly available data from other sources.

Qualitative research

Literature review

To support the research and ensure that the investigation proceeded on a sound research basis, a wide-ranging **literature review** was carried out at the start of the project. Three key questions guided this process:

- What action at EU level has been carried out to support access to essential services?
- What are the barriers to access and drivers of greater access currently identified in literature?
- What are the key populations vulnerable to non-access for each service?

The literature review was carried out by the research team with the support of senior thematic experts, who each delivered a two-page note summarising the state of research, key issues to be mindful of, and advice on how to conceptualise affordability to services. To ensure that a wide range of evidence was used to inform the literature review, a combination of academic reports, grey literature (e.g. publications from EU bodies, NGOs and think tanks) and statistics were used.

National reports

The other, more substantial, part of the qualitative research builds on **national reports** produced by national experts. To facilitate this process national experts were given extensive training at the beginning of the research project. Comparability of research and findings was ensured through the use of a national report template delivered by the core research team, based on the findings of the literature review and additional feedback from DG EMPL.

The national report was structured in a few core sections to ensure that all key questions of the projects were responded to:

- **Main policy developments since 2017:** intended to cover the measures, strategies or other relevant changes in Member States since the proclamation of the EPSR in 2017.
- **Main influencing stakeholders**, including both national, regional and local political units, other public actors, NGOs, or any other relevant stakeholder.
- An elaboration on **the right to access essential services** in each Member State. This built on three sub-sections: one on **governance** which focused on the legal framework underpinning the right, and any strategies or other documents; and two on the **definitions of ‘essential services’ and ‘affordability’** in the Member State. This intended to identify both explicit legal definitions where available, and ‘de facto’ definitions where service access may be guaranteed even if there is no formal definition in place.
- A summary of the **policy measures supporting access to essential services**, including their characteristics, target groups, eligibility requirements, and any monitoring mechanisms in place. **Good practices** among Member States were also highlighted.

- A summary of the **barriers to access** and **drivers to greater access**. The section on barriers discussed both individual characteristics of those lacking access (e.g. low income, rural household, disability, etc.) and structural factors such as the organisation of the support system or other macro variables. The drivers were analysed to identify measures or factors which have improved access over time.

Individual sections were furthermore accompanied by extensive written instructions to guide experts, and a dialogue was kept between national experts and the research team throughout the project. Prior to submission to DG EMPL for a final round of review, the core research team carried out a structured quality assurance review. Generally, two to three rounds of review were carried out per national report.

Quantitative research

A core aim of the study was to expand the **quantitative evidence** of (non-)access to essential services in EU Member States. The inception report therefore reviewed the publicly available data from institutions such as Eurostat, the OECD, the World Bank, and other sources. It was established early on that there are generally few indicators available which specifically address the affordability of essential services. There are indicators which capture other aspects of access, but measuring affordability requires extensive information on a household's circumstances, their costs in accessing a certain service, and the need they have for the service. This last aspect is important to identify if a household is under-consuming a service: i.e. whether they are using less of a service than they need, in order to keep costs down.

Microdata from Eurostat were submitted to address some of these data constraints. The EU Survey of Income and Living Conditions (EU-SILC) dataset³ contains some variables relating to service provision, even if this is not always in relation to expenditure and affordability. While not all aspects of access can be studied in this manner (only some of the variables have affordability components, most notably) it was agreed that this was the most useful data source to analyse in the study. Note that no EU-SILC variables were identified for financial services.

Table 1 – Main EU-SILC variables relative to essential services access and affordability

Essential service	Variable(s)	Comment
Digital communications	Do you have an internet connection for personal use at home? (PD080)	Response options include 'No – cannot afford it', directly addressing affordability.
Energy	Ability to keep home adequately warm (HH050) Arrears on utility bills in the past 12 months (HS021)	Arrears on utility bills implies affordability issues, although it is not disaggregated between services.
Transport	Spending on public transport (HC030) Spending on public transport (HC040)	The variables capture monthly expenditures on train, bus, tram, plane, taxi etc. (for public transport) and on fuel, charging, insurance, maintenance and repair, parking permit, taxes etc. (for private transport). Note that

³ Eurostat (2022b), *European Union Statistics on Income and Living Conditions (EU-SILC)* [Online]. Luxembourg: European Commission. Available online: <https://ec.europa.eu/eurostat/web/microdata/european-union-statistics-on-income-and-living-conditions> [Accessed 28 July 2022].

Essential service	Variable(s)	Comment
		spending variables are only available in 2020 as an ad hoc module.
Water and sanitation	Bath or shower in dwelling (HH081) Indoor flushing toilet for sole use of household (HH091) Arrears on utility bills in the past 12 months (HS021)	Arrears on utility bills implies affordability issues, although it is not disaggregated between services.

Source: Milieu elaboration.

Upon delivery of the Eurostat data in early June, two stages of analysis commenced:

- **Descriptive analysis** presenting the distribution of the services among various risk groups, which were identified based on the literature review.
- **Multivariate analysis** including various forms of regression, to investigate the determinants of access to services more thoroughly. This analysis aimed to further inform, not just which factors influence the likelihood of a household lacking access, but also which factors were most important in relation to each other.

Findings were discussed and reviewed with the assistance of an external expert with expertise in econometric analysis to ensure robustness of methodology and findings.

Main findings

Policy developments since 2017

- The **COVID-19 pandemic** – and more recently, the ramifications of the Russian war of aggression in Ukraine – **led to the implementation of support measures in many Member States**. This has mostly related to compensation schemes and tax rebates to curtail the increased energy costs, the purchase of equipment required to study from home (in the case of schoolchildren), and the reduction in transport fares, for instance for essential workers.
- Based on the national reports and assessments of national experts, it appears that **the EPSR has been implemented to some extent in Member States by a combination of legislative and policy initiatives at lower levels of governance**, although reference to the EPSR is not always explicit given its overarching nature.

The right to access essential services

- **Definitions on what constitutes an ‘essential service’ or what counts as ‘affordable’ are generally not in place in Member States**. This means that the nature of the essential services and the support provided can vary significantly between Member States, and that Member States may not provide support to access all services. It can also complicate cross-country comparison.
- Additionally, **the six services mentioned in the EPSR are not generally considered together in Member State policy-making**. This does not entail that the six services are not considered at all, since they are often addressed by specific legislative and policy initiatives.

Barriers to access

- According to the quantitative analysis, **energy-related indicators** (i.e. having arrears on utility bills and not being able to adequately heat the home) **are the ones that show more issues of access**; around 7 % of households are unable to adequately heat their homes and the same is true for those with arrears on utility bills, whereas the share of households unable to afford internet or shower/toilet for sole use is around 3 percentage points lower.
- **Access issues overlap across services.** The quantitative analysis shows that around 9.4 % of the sample population cannot afford one service only (either internet, adequate heating or shower for sole use) and only 2 % cannot afford two or three services simultaneously. Therefore, overlaps of access issues across services are not so significant according to the quantitative analysis. They are instead more evident from the qualitative analysis; e.g. low digital skills, and to some extent a lack of the necessary equipment, may entail limited access to financial or transport services as providers are increasingly using digital interfaces and apps.
- **Being at risk of poverty was identified as a strong barrier to access essential services** both from a quantitative and a qualitative perspective. Except for the rare instances where a service is provided free of charge, this is a risk that applies to all services. The quantitative analysis also reveals that very low work intensity is another key factor restricting access across all services.
- **Not all households at risk of poverty lack access to essential services:** generally, access to e.g. digital communications and sanitation is high across the population in most Member States. Conversely, **not all households that lack access to essential services are at risk of poverty.** Indeed, the data show that among those that lack access to only one essential service, around 30 % are at risk of poverty. This entails that other aspects come into play when it comes to access, such as limited availability due to poor infrastructure or equipment. Being at risk of poverty becomes more relevant when considering people lacking access to multiple services at the same time (almost 80 % of those not able to afford internet, adequate heating and a shower for sole use are also at risk of poverty).
- **Affordability is not always the most significant barrier to access**
 - For **financial services** – where access to basic accounts is enshrined in the Payment Accounts Directive – affordability is a secondary concern to **financial literacy**, and knowing what products are available.
 - For **transport**, access is complex to assess and depends on *inter alia* **prices, transport availability and infrastructure**, distance to the service, whether one has access to alternative means of transport, transport need, etc.
 - For **digital communications**, concerns about data protection, **low digital skills** or digital interfaces that were not designed to be fully inclusive (e.g. excluding people with visual or auditory conditions) act as possible exclusionary factors.
 - Finally, a **lack of the required public infrastructure** may also prevent access to good quality **water and sanitation** facilities.
- **Rural households face a number of barriers to access**, including higher transport costs, lower transport availability, and in some cases may struggle to connect to public infrastructure, such as high-speed broadband and municipal water mains. Indeed, the quantitative analysis confirms that households located in rural locations tend to spend less on public transport, and this is even more true for those who are also at risk of poverty.

Drivers of greater access

- **Systematic monitoring of policies** in some Member States means that there are annual reports available on expenditure, the number of recipients, and whether the government's strategic goals are being met. While not a driver of greater access in itself, such monitoring allows for a regular follow-up of policies' effectiveness and whether they are meeting their intended goals, without which effective policymaking is hampered. Systematic monitoring was only identified in some Member States (e.g. Czechia, Finland, France and Sweden); in many other cases, monitoring efforts did not tend to go beyond the collection of statistics on e.g. the number of users.
- Member States (such as Denmark, Italy, France and Malta) that **allocate benefits automatically**, without the need for the eligible households to apply, appear to have higher take-up rates and therefore ensure availability to more people.
- **Measures to increase awareness and literacy** in relation to the different services and the assistance available to citizens has served to improve access in some Member States (such as Belgium, the Netherlands, Sweden, Slovakia, Denmark and Finland). This is especially true for digital communications and financial services.
- **Banning or discouraging disconnection from supply in case of non-payment** entails a last-resort measure to avoid a household losing access to energy, water or sanitation (this measure is in place for all or vulnerable households in several Member States, including Austria, Belgium, France, Germany, Hungary and Poland and Romania for energy, and Belgium and Portugal for water). These measures have become more common in the wake of the COVID-19 pandemic and the 2021-2022 increase in energy prices.
- **Price caps** are used in some cases to ensure that households are not forced into hardship as a result of high service bills. This is, for example, legally regulated in Bulgaria and Lithuania for digital communications, energy and water, in Cyprus for digital communications and energy, and in Greece for water. This is also linked with the concept of 'protected consumers' who qualify for a lower tariff based on vulnerable status, a concept in place for various services in Belgian Flanders, France, Hungary and Portugal.

Policy measures supporting access

There is significant variation in the support available in different Member States. Broadly, three main clusters can be identified:

- In some Member States (e.g. Nordic countries, some Balkans countries, Germany, Belgium, Czechia), the main means of providing support is via general **minimum income or social assistance benefits**, which may or may not include references to costs relating to essential services;
- Other Member States (e.g. Italy, the Netherlands, Portugal) rely more on **service-specific measures**, either provided universally to at-risk groups (e.g. free or subsidised public transport passes for old-age pensioners), or through means-testing based on personal circumstances or income;
- Lastly, several Member States (e.g. Spain, France, Greece, some Central and Eastern European countries and some of the Baltic countries) have in place a more **mixed approach**, whereby both general social assistance and service-specific measures play an important role in providing support.

Suggested future research

Suggested topics for future research include:

- **Analysis on the level of implementation of the EPSR Principle 20** across Member States. Particularly in terms of (i) the extent of shared political commitment and responsibility, (ii) the appropriate policy mix of policy measures required to deliver on Principle 20, and (iii) the monitoring and evaluation of individual policy measures to better understand their effectiveness and efficiency.
- **Service-specific research** on (i) expanding the concept, understanding and measurement of vulnerable transport users and the relative causes and implications and (ii) studying the impact of the recent energy spikes on vulnerable groups.
- **Lack of data** constraints the analysis on the access to essential services. New indicators should be explored and more diversification in data collection is needed to allow a deeper investigation.

Résumé exécutif (FR)

Contexte

Le principe 20 du Pilier européen des droits sociaux (PEDS), proclamé en 2017, stipule que **"toute personne a le droit d'accéder à des services essentiels de bonne qualité**, notamment l'eau, l'assainissement, l'énergie, les transports, les services financiers et les communications numériques", et que "l'aide à l'accès à ces services doit être disponible pour ceux qui en ont besoin".

Cette étude s'inscrit dans le cadre d'un effort visant à élargir la base de connaissances sur les services essentiels dans l'UE, tant en ce qui concerne le type et la nature des services fournis aux citoyens, les obstacles auxquels ils sont confrontés pour accéder à ces services, que les mesures politiques en place pour améliorer ou vérifier l'accès. Ce faisant, il s'appuie sur un effort antérieur du Réseau européen de politique sociale (ESPN), qui a dressé la carte des mesures politiques en place dans les États membres de l'UE⁴. Ce travail contribue à la réalisation du **plan d'action** de la Commission européenne **pour la mise en œuvre des droits sociaux**⁵, selon lequel un rapport sur l'accès aux services essentiels sera produit par la Commission européenne en 2022.

Définir le problème

Les citoyens peuvent rencontrer toute une série d'obstacles pour accéder aux services essentiels dont ils ont besoin pour mener leur vie quotidienne et maintenir un niveau de vie adéquat. De manière générale, ces obstacles peuvent être résumés comme étant liés à la qualité, l'accès, la disponibilité et l'abordabilité (ou accessibilité financière):

- **La qualité** est liée au niveau du service et au fait qu'il réponde aux besoins de l'utilisateur. Par exemple, dans le cas de l'eau, il s'agit de savoir si l'eau fournie est de qualité suffisante.
- **L'accessibilité** consiste à savoir si le service peut être atteint ou obtenu facilement, et s'il est facile à comprendre et à utiliser. Cela peut s'appliquer, par exemple, aux personnes âgées et aux personnes handicapées (par exemple en cas de mauvaise accessibilité physique des services de transport).
- **La disponibilité** s'agit de savoir si le service est commodément et étroitement situé pour les utilisateurs, ou si un équipement est nécessaire pour y accéder. Dans le premier cas, il s'agit par exemple de la distance à parcourir pour accéder à un arrêt de transport public ; dans le second, il s'agit de savoir si un ménage est relié à des infrastructures telles que le haut débit, les canalisations d'eau ou d'autres connexions nécessaires pour accéder aux services.
- Enfin, **l'abordabilité** indique si le ménage est en mesure d'accéder au service et de le payer sans éprouver de difficultés financières. A l'exception des rares cas où un service est fourni gratuitement, cette dimension s'applique à tous les services essentiels abordés dans cette étude.

Bien que ces quatre concepts soient liés entre eux, la présente étude se concentre sur l'abordabilité. Les problèmes d'abordabilité affectent les six services essentiels à des

⁴ Baptista and Marlier (2020), 'Access to essential services for people on low incomes in Europe: An analysis of policies in 35 countries', European Social Policy Network (ESPN), Brussels, European Commission.

⁵ Communication COM/2021/102 final from the Commission on the European Pillar of Social Rights Action Plan, p. 4; European Commission (2021c), 'European Pillar of Social Rights Action Plan', European Commission, Brussels.

degrés divers, et peuvent être particulièrement préoccupants pour les ménages exposés au risque de pauvreté.

Méthodologie et processus de recherche

L'étude s'appuie sur deux approches principales : une approche qualitative basée sur des recherches documentaires et des rapports nationaux rédigés par des experts nationaux, et une approche quantitative basée sur une combinaison de microdonnées demandées à Eurostat, et - lorsqu'elles sont disponibles - de données publiques provenant d'autres sources.

Recherche qualitative

Revue de la littérature

Pour soutenir la recherche et s'assurer que l'enquête se déroule sur une base de recherche solide, une vaste **analyse documentaire a été réalisée** au début du projet. Trois questions clés ont guidé ce processus :

- Quelles actions ont été menées au niveau de l'UE pour soutenir l'accès aux services essentiels ?
- Quels sont les obstacles à l'accès et les moteurs d'un meilleur accès actuellement identifiés dans la littérature ?
- Quelles sont les populations clés vulnérables au non-accès pour chaque service ?

L'analyse documentaire a été réalisée par l'équipe de recherche avec le soutien d'experts thématiques chevronnés, qui ont chacun remis une note de deux pages résumant l'état de la recherche, les questions clés dont il faut tenir compte et des conseils sur la manière de conceptualiser l'abordabilité des services. Afin de garantir qu'un large éventail de preuves soit utilisé pour informer l'analyse documentaire, une combinaison de rapports universitaires, de littérature grise (par exemple, des publications d'organes de l'UE, d'ONG et de groupes de réflexion) et de statistiques a été utilisée.

Rapports nationaux

L'autre partie, plus substantielle, de la recherche qualitative s'appuie sur les **rapports nationaux** produits par les experts nationaux. Pour faciliter ce processus, les experts nationaux ont reçu une formation approfondie au début du projet de recherche. La comparabilité de la recherche et des résultats a été assurée par l'utilisation d'un modèle de rapport national fourni par l'équipe de recherche principale, sur la base des résultats de l'analyse documentaire et des commentaires supplémentaires de la DG EMPL.

Le rapport national a été structuré en quelques sections principales afin de garantir que toutes les questions clés des projets soient traitées :

- **Principales évolutions des politiques depuis 2017** : Il s'agit de couvrir les mesures, stratégies ou autres changements pertinents dans les États membres depuis la proclamation du RPEP en 2017.
- **Principales parties prenantes influentes**, y compris les unités politiques nationales, régionales et locales, les autres acteurs publics, les ONG, ou toute autre partie prenante digne de ce nom.
- Une élaboration sur **le droit d'accès aux services essentiels** dans chaque Etat membre. Elle s'articule autour de trois sous-sections : la première, consacrée à la **gouvernance**, se concentre sur le cadre juridique qui sous-tend ce droit, ainsi que

sur les stratégies ou autres documents, et la seconde porte sur les **définitions des "services essentiels" et du "caractère abordable"** dans l'État membre. L'objectif était d'identifier à la fois les définitions légales explicites, lorsqu'elles existent, et les définitions "de facto", lorsque l'accès aux services peut être garanti même en l'absence de définition formelle.

- Un résumé des **mesures politiques favorisant l'accès aux services essentiels**, y compris leurs caractéristiques, les groupes cibles, les conditions d'éligibilité et tout mécanisme de suivi en place. Les **bonnes pratiques** des États membres ont également été mises en évidence.
- Un résumé des **obstacles à l'accès** et des **moteurs d'un meilleur accès**. La section sur les obstacles a abordé à la fois les caractéristiques individuelles des personnes privées d'accès (par exemple, faible revenu, ménage rural, handicap, etc.) et les facteurs structurels tels que l'organisation du système de soutien ou d'autres variables macroéconomiques. Les moteurs ont été analysés afin d'identifier les mesures ou les facteurs qui ont amélioré l'accès au fil du temps.

Les sections individuelles étaient en outre accompagnées d'instructions écrites détaillées pour guider les experts, et un dialogue a été maintenu entre les experts nationaux et l'équipe de recherche tout au long du projet. Avant de soumettre le rapport à la DG EMPL pour un examen final, l'équipe de recherche a procédé à un examen structuré d'assurance qualité. En général, deux à trois cycles d'examen ont été effectués par rapport national.

Recherche quantitative

L'un des principaux objectifs de l'étude a été d'élargir les **preuves quantitatives** de l'accès (ou du non-accès) aux services essentiels dans les États membres de l'UE. Le rapport initial a donc passé en revue les données publiques disponibles auprès d'institutions telles qu'Eurostat, l'OCDE, la Banque mondiale et d'autres sources. Il a été établi dès le départ qu'il y a généralement peu d'indicateurs disponibles qui traitent spécifiquement du caractère abordable des services essentiels. Certains indicateurs permettent de saisir d'autres aspects de l'accès, mais la mesure de l'abordabilité nécessite des informations détaillées sur la situation d'un ménage, les coûts qu'il doit supporter pour accéder à un certain service et le besoin qu'il a de ce service. Ce dernier aspect est important pour déterminer si un ménage est sous-consommateur d'un service, c'est-à-dire s'il utilise moins d'un service qu'il n'en a besoin, afin de limiter les coûts.

Les microdonnées d'Eurostat ont été soumises pour pallier certaines de ces contraintes. L'ensemble de données EU-SILC (EU Survey of Income and Living Conditions)⁶ contient certaines variables relatives à la fourniture de services, même si ce n'est pas toujours en rapport avec les dépenses et l'abordabilité. Bien que tous les aspects de l'accessibilité ne puissent pas être étudiés de cette manière (seules certaines des variables ont des composantes d'abordabilité, notamment), il a été convenu que cette source de données était la plus utile à analyser dans le cadre de l'étude. Notez qu'aucune variable EU-SILC n'a été identifiée pour les services financiers.

⁶ Eurostat (2022b), *European Union Statistics on Income and Living Conditions (EU-SILC)* [Online]. Luxembourg: European Commission. Available online: <https://ec.europa.eu/eurostat/web/microdata/european-union-statistics-on-income-and-living-conditions> [Accessed 28 July 2022].

Tableau 2 - Principales variables EU-SILC relatives à l'accès aux services essentiels et à leur caractère abordable

Service essentiel	Variable(s)	Commentaire
Communications numériques	Disposez-vous d'une connexion Internet pour votre usage personnel à la maison ? (PD080)	Les options de réponse comprennent "Non - je ne peux pas me le permettre", ce qui aborde directement la question de l'abordabilité.
Énergie	Capacité à garder la maison suffisamment chaude (HH050) Arriérés de factures de services publics au cours des 12 derniers mois (HS021)	Les arriérés sur les factures de services publics impliquent des problèmes d'abordabilité, bien qu'ils ne soient pas ventilés entre les services.
Transport	Dépenses pour les transports publics (HC030) Dépenses pour les transports publics (HC040)	Les variables saisissent les dépenses mensuelles en train, bus, tramway, avion, taxi, etc. (pour les transports publics) et en carburant, redevance, assurance, entretien et réparation, permis de stationnement, taxes, etc. Notez que les variables relatives aux dépenses ne sont disponibles qu'en 2020 sous la forme d'un module ad hoc.
Eau et assainissement	Bain ou douche dans le logement (HH081) Toilettes intérieures à chasse d'eau pour l'usage exclusif du ménage (HH091) Arriérés de factures de services publics au cours des 12 derniers mois (HS021)	Les arriérés sur les factures de services publics impliquent des problèmes d'abordabilité, bien qu'ils ne soient pas ventilés entre les services.

Source: Élaboration du milieu.

Dès la livraison des données d'Eurostat au début du mois de juin, deux étapes d'analyse ont commencé :

- **Analyse descriptive** présentant la répartition des services entre les différents groupes de risques, qui ont été identifiés sur la base de l'analyse documentaire.
- **Analyse multivariée** comprenant diverses formes de régression, afin d'étudier de manière plus approfondie les déterminants de l'accès aux services. Cette analyse visait à déterminer non seulement les facteurs qui influencent la probabilité qu'un ménage n'ait pas accès aux services, mais aussi les facteurs les plus importants les uns par rapport aux autres.

Les résultats ont été discutés et examinés avec l'aide d'un expert externe spécialisé dans l'analyse économétrique afin de garantir la robustesse de la méthodologie et des résultats.

Principales conclusions

Développements politiques depuis 2017

- La **pandémie de COVID-19** - et plus récemment, les ramifications de la guerre d'agression russe en Ukraine - ont conduit à la **mise en œuvre de mesures de**

soutien dans de nombreux États membres. Il s'agit principalement de régimes de compensation et d'abattements fiscaux pour limiter l'augmentation des coûts énergétiques, de l'achat d'équipements nécessaires pour étudier à domicile, dans le cas des écoliers, et de la réduction des tarifs de transport, par exemple pour les travailleurs essentiels.

- Sur la base des rapports nationaux et des évaluations des experts nationaux, il semble que **le EPSR ait été mis en œuvre dans une certaine mesure dans les États membres par une combinaison d'initiatives législatives et politiques à des niveaux inférieurs de gouvernance**, bien que la référence au EPSR ne soit pas toujours explicite étant donné sa nature globale.

Le droit d'accéder aux services essentiels

- Les États membres ne définissent généralement pas ce qui constitue un "service essentiel" ou ce qui est considéré comme "abordable". Cela signifie que la nature des services essentiels et l'aide fournie peuvent varier considérablement d'un État membre à l'autre, et que les États membres peuvent ne pas fournir d'aide pour accéder à tous les services. Cela peut également compliquer les comparaisons entre pays.
- En outre, les six services mentionnés dans le RPEP ne sont généralement pas considérés ensemble dans l'élaboration des politiques des États membres. Cela n'implique pas que les six services ne soient pas du tout pris en compte, puisqu'ils font souvent l'objet d'initiatives législatives et politiques spécifiques.

Obstacles à l'accès

- D'après l'analyse quantitative, les **indicateurs liés à l'énergie** (c'est-à-dire le fait d'avoir des arriérés de paiement et de ne pas pouvoir chauffer correctement son logement) **sont ceux qui posent le plus de problèmes d'accès** ; environ 7 % des ménages ne peuvent pas chauffer correctement leur logement et il en va de même pour ceux qui ont des arriérés de paiement, alors que le pourcentage de ménages qui ne peuvent pas s'offrir l'internet ou une douche/des toilettes à usage unique est inférieur d'environ 3 points de pourcentage.
- **Les problèmes d'accès se recoupent entre les services.** L'analyse quantitative montre qu'environ 9.4 % de la population ne peuvent pas se permettre un seul service (soit internet, un chauffage adéquat, ou de ne pas avoir de douche à usage unique) et seulement 2 % ne peuvent pas se permettre deux ou trois services simultanément. Par conséquent, les chevauchements des problèmes d'accès entre les services ne sont pas si importants selon l'analyse quantitative. Ils sont plus évidents à partir de l'analyse qualitative; par exemple, de faibles compétences numériques, et dans une certaine mesure un manque d'équipement nécessaire, peuvent entraîner un accès limité aux services financiers ou de transport, car les prestataires utilisent de plus en plus des interfaces numériques et des applications.
- **Le risque de pauvreté a été identifié comme un obstacle majeur à l'accès aux services essentiels**, tant d'un point de vue quantitatif que qualitatif. À l'exception des rares cas où un service est fourni gratuitement, il s'agit d'un risque qui s'applique à tous les services. L'analyse quantitative révèle également qu'une très faible intensité de travail est un autre facteur clé limitant l'accessibilité de tous les services.
- **Tous les ménages exposés au risque de pauvreté n'ont pas accès aux services essentiels**: en général, l'accès aux communications numériques et à l'assainissement, par exemple, est élevé dans la population de la plupart des États membres. Inversement, **tous les ménages qui n'ont pas accès aux services essentiels ne sont pas exposés au risque de pauvreté**. En effet, les données

montrent que parmi les ménages qui n'ont accès qu'à un seul service essentiel, environ 30 % sont menacés de pauvreté. Cela implique que d'autres aspects entrent en jeu lorsqu'il s'agit d'accès, comme une disponibilité limitée en raison d'infrastructures ou d'équipements médiocres. Le risque de pauvreté devient plus pertinent si l'on considère les personnes n'ayant pas accès à plusieurs services en même temps (près de 80 % de ceux qui n'ont pas les moyens d'accéder à Internet, à un chauffage adéquat et à une douche à usage unique sont également menacés de pauvreté).

- L'accessibilité n'est pas toujours le principal obstacle à l'accès.
 - Pour les **services financiers** - où l'accès aux comptes de base est inscrit dans la directive sur les comptes de paiement - l'abordabilité est une préoccupation secondaire par rapport à l'**éducation financière** et à la connaissance des produits disponibles.
 - En ce qui concerne les **transports**, l'accessibilité est complexe à évaluer et dépend *notamment* des **prix, de la disponibilité et des infrastructures des transports**, de la distance au service, de l'accès à d'autres moyens de transport, des besoins en matière de transport, etc.
 - En ce qui concerne les **communications numériques**, les préoccupations relatives à la protection des données, les **faibles compétences numériques** ou les interfaces numériques qui n'ont pas été conçues pour être totalement inclusives (par exemple, exclure les personnes souffrant de troubles visuels ou auditifs) constituent des facteurs d'exclusion possibles.
 - Enfin, l'**absence des infrastructures publiques nécessaires** peut également empêcher l'accès à une **eau et à des installations sanitaires** de bonne qualité.
- **Les ménages ruraux sont confrontés à un certain nombre d'obstacles à l'accès**, notamment des coûts de transport plus élevés, une moindre disponibilité des transports, et dans certains cas, ils peuvent avoir du mal à se connecter aux infrastructures publiques telles que le haut débit et les conduites d'eau municipales. En effet, l'analyse quantitative confirme que les ménages situés en milieu rural ont tendance à dépenser moins pour les transports publics, et cela est encore plus vrai pour ceux qui sont également exposés au risque de pauvreté.

Les moteurs d'un meilleur accès

- **Le suivi systématique des politiques** dans certains États membres signifie qu'il existe des rapports annuels sur les dépenses, le nombre de bénéficiaires et la réalisation des objectifs stratégiques du gouvernement. Bien qu'il ne s'agisse pas d'un facteur d'amélioration de l'accès en soi, ce suivi permet de contrôler régulièrement l'efficacité des politiques et de vérifier si elles atteignent les objectifs fixés, sans quoi l'élaboration de politiques efficaces est entravée. Un suivi systématique n'a été identifié que dans certains États membres (par exemple, la République tchèque, la Finlande, la France et la Suède) ; dans de nombreux autres cas, les efforts de suivi n'ont pas eu tendance à aller au-delà de la collecte de statistiques sur, par exemple, le nombre d'utilisateurs.
- Les États membres (tels que le Danemark, l'Italie, la France et Malte) qui **allouent les prestations automatiquement**, sans que les ménages éligibles aient à en faire la demande, semblent avoir des taux d'utilisation plus élevés et assurent donc la disponibilité à un plus grand nombre de personnes.
- **Les mesures visant à accroître la sensibilisation et l'alphabétisation par rapport aux** différents services et à l'assistance disponible pour les citoyens ont permis d'améliorer l'accès dans certains États membres (comme la Belgique, les

Pays-Bas, la Suède, la Slovaquie, le Danemark et la Finlande). Cela vaut en particulier pour les communications numériques et les services financiers.

- **Interdire ou décourager la coupure de l'approvisionnement en cas de non-paiement** constitue une mesure de dernier recours pour éviter qu'un ménage ne perde l'accès à l'énergie, à l'eau ou à l'assainissement (cette mesure est en place pour tous les ménages ou les ménages vulnérables dans plusieurs États membres, dont l'Autriche, la Belgique, la France, l'Allemagne, la Hongrie et la Pologne et la Roumanie pour l'énergie, et la Belgique et le Portugal pour l'eau). Ces mesures sont devenues plus courantes à la suite de la pandémie de Covid-19 et de la hausse des prix de l'énergie prévue pour 2021-2022.
- **Des plafonds de prix** sont utilisés dans certains cas pour s'assurer que les ménages ne sont pas contraints à la précarité en raison de factures de services élevées. Cette pratique est, par exemple, légalement réglementée en Bulgarie et en Lituanie pour les communications numériques, l'énergie et l'eau, à Chypre pour les communications numériques et l'énergie, et en Grèce pour l'eau. Cet aspect est également lié au concept de "consommateurs protégés" qui peuvent bénéficier d'un tarif plus bas en raison de leur vulnérabilité, un concept en place pour divers services en Flandre belge, en France, en Hongrie et au Portugal.

Mesures politiques favorisant l'accès

L'aide disponible dans les différents États membres varie considérablement. De manière générale, trois grands groupes peuvent être identifiés:

- Dans certains États membres (par exemple, les pays nordiques, certains pays des Balkans, l'Allemagne, la Belgique, la République tchèque), le principal moyen de fournir une aide est le **revenu minimum général ou les prestations d'aide sociale**, qui peuvent ou non inclure des références aux coûts liés aux services essentiels ;
- D'autres États membres (par exemple l'Italie, les Pays-Bas, le Portugal) s'appuient davantage sur des **mesures spécifiques aux services**, soit fournies de manière universelle aux groupes à risque (par exemple des abonnements gratuits ou subventionnés aux transports publics pour les retraités), soit sous condition de ressources en fonction de la situation personnelle ou des revenus ;

Enfin, plusieurs États membres (par exemple, l'Espagne, la France, la Grèce, certains pays d'Europe centrale et orientale et certains pays baltes) ont mis en place une **approche plus mixte**, dans laquelle l'aide sociale générale et les mesures spécifiques aux services jouent un rôle important.

Suggestions de recherches futures

Les sujets suggérés pour les recherches futures incluent :

- **Analyse du niveau de mise en œuvre du Principe 20 de l'EPSR** dans les États membres. En particulier en ce qui concerne (i) l'étendue de l'engagement et de la responsabilité politiques partagés, (ii) le dosage (*policy-mix*) approprié des mesures politiques requises pour mettre en œuvre le principe 20, et (iii) le suivi et l'évaluation des mesures politiques individuelles pour mieux comprendre leur efficacité et leur efficience.
- **Recherche spécifique au service** sur (i) l'élargissement du concept, de la compréhension et de la mesure de la pauvreté dans les transports, de ses causes et de ses implications, et (ii) l'étude de l'impact des récents pics d'énergie sur les groupes vulnérables.

- **Le manque de données** limite l'analyse de l'accès aux services essentiels. De nouveaux indicateurs doivent être explorés et une plus grande diversification dans la collection de données est nécessaire pour permettre une enquête plus approfondie.

1. Introduction

1.1. Policy background

The European Pillar of Social Rights (EPSR) was proclaimed in 2017 at the Gothenburg Summit by the European Parliament, the European Commission, and the Council of the European Union⁷. The EPSR is organised around 20 principles divided into three chapters, with the common goal of promoting a ‘social Europe that is fair, inclusive and full of opportunity’:

- **Chapter I:** Equal opportunities and access to the labour market;
- **Chapter II:** Fair working conditions; and
- **Chapter III:** Social protection and inclusion.

This report locates itself in the context of Chapter III on social protection and inclusion, more specifically in relation to Principle 20 which states that **‘Everyone has the right to access essential services of good quality, including water, sanitation, energy, transport, financial services and digital communications’, and that ‘[s]upport for access to such services shall be available for those in need’.**

This complements the other principles of Chapter III which stipulates that all have a right to childcare and support to children (Principle 11); adequate social protection (12), unemployment benefits (13), minimum income (14) and old age income and pensions (15); affordable and preventative health care of good quality (16); inclusion of people with disabilities, including necessary adaptations of work environment (17); affordable long-term care services of good quality (18); and housing and assistance for the homeless (19).

The goals and ambitions contained in the EPSR have been operationalised through the EPSR Action Plan, communicated by the European Commission in 2021⁸. This plan sets out a range of initiatives to support the implementation of the EPSR and ensure progress towards common social goals. In 2021, actions relating to Chapter III and Principle 20 on essential services included⁹:

- Proposals on an **EU Strategy on the Rights of the Child**¹⁰ and for a Council Recommendation establishing the **European Child Guarantee**¹¹ to ensure that children at risk of poverty and social exclusion have effective access to key services such as healthcare and education;
- Launching the **Affordable Housing Initiative** which pilots 100 housing renovation districts with goals including increased energy efficiency¹²;

⁷ Communication COM(2017) 250 final from the Commission on Establishing a European Pillar of Social Rights.

⁸ Communication COM/2021/102 final.

⁹ Ibid.

¹⁰ Communication COM/2021/142 final from the Commission on an EU strategy on the rights of the child.

¹¹ Proposal COM/2021/137 final for a Council Recommendation Establishing a European Child Guarantee.

¹² European Commission (2021a), *Affordable housing initiative* [Online]. Brussels: European Commission (DG GROW). Available online: https://ec.europa.eu/growth/sectors/proximity-and-social-economy/social-economy-eu/affordable-housing-initiative_en [Accessed 1 August 2022]. While mainly related to Principle 19 of the EPSR, regarding housing and assistance for the homeless, higher housing standards can improve energy efficiency and therefore also have an impact on access to essential services insofar as costs may decrease.

- Launching the **European Platform on Combating Homelessness** to support Member States, cities and service providers in sharing best practices and identifying efficient and innovative approaches in homelessness prevention¹³; and
- Present in Q2 2021 **Guidance Notices on Public Procurement of Innovation and on Socially Responsible Public Procurement**¹⁴.

Action in 2022 includes a planned proposal for a **Council Recommendation on minimum income** to support and complement Member State policies. Additionally, the current project supports a **Commission report on access to essential services** scheduled for publication in the second half of 2022.

1.2. Purpose of the report

This Synthesis Report presents the findings of the **Study on access to essential services: Evidence from Member States**. This analysis has been coordinated on behalf of the European Commission Directorate-General Employment, Social Affairs & Inclusion (DG EMPL) by Milieu Consulting SRL (Milieu) with support from Ramboll, and national research has been carried out by a network of national experts.

The purpose of the study is to expand knowledge of how access to the six essential services listed in Principle 20 of the EPSR – **water, sanitation, energy, transport, financial services and digital communications** – is ensured in EU Member States, chiefly in terms of affordability¹⁵. In the present context, this means the ability of households to pay for services at the level of consumption they require based on their circumstances, without entering economic hardship.

To this end, it maps the governance of the services in the Member States; any legal definitions in place; policy measures supporting access; barriers to access; and drivers towards increased access have been studied. The focal period of the report is from 2017, when the EPSR was proclaimed, and early 2022¹⁶. The work builds on previous efforts by the European Social Policy Network (ESPN), who released a report on measures to improve access to financial services in the EU in 2020¹⁷.

1.3. Structure of the report

The present report is structured as follows.

- **Section 2** sets out the methodological approach of the report, including an elaboration on qualitative and quantitative research. It also discusses possible

¹³ European Commission (2021d), 'European platform to combat homelessness is launched', press release of 21 June 2021. Brussels: European Commission. Available: https://ec.europa.eu/commission/presscorner/detail/en/IP_21_3044; Council of the European Union (2021), *Lisbon Declaration on the European Platform on Combatting Homelessness*, Lisbon, Portuguese Presidency of the Council of the European Union.

¹⁴ European Commission (2022c), *Social procurement: Updated guidance and awareness-raising to make socially-responsible purchases* [Online]. Brussels: European Commission. Available online: https://ec.europa.eu/info/policies/public-procurement/tools-public-buyers/social-procurement_en [Accessed 13 January 2022].

¹⁵ Note that as many measures and definitions are common for the two services, water and sanitation are presented as one joint category throughout the report in order to facilitate the reading experience.

¹⁶ The cut-off date of early 2022 was agreed upon as this was the start of qualitative research, in order to avoid a situation where national experts would have to closely follow ongoing political events and procedures. This became particularly relevant following the Russian-Ukrainian war, as this has adversely affected energy services in particular: analysing the measures in place as a consequence of this, and what it means in terms of barriers to access, requires evaluation work that stretches beyond the duration of this study.

¹⁷ Baptista and Marlier (2020).

alternative research approaches which it was not possible to include in the present study for reasons of comparability or time.

- **Section 3** presents the main policy developments surrounding access to these services, including developments in response to the COVID-19 pandemic and the growing importance and acceleration of the green and digital transitions. It also surveys EU action in the area over a longer time span. This includes for each service a section on EU-level and national developments. Member State developments focus on the post-2017 time period, after the proclamation of the EPSR.
- **Section 4** develops on the legal and policy framework shaping approaches to essential service provision in Member States. This includes a discussion of governance arrangements, and a presentation of which countries have established definitions of ‘essential services’ – collectively or individually – and what counts as ‘affordable’.
- **Section 5** describes the state of play concerning access, also in terms of overlaps across the services. The main issues of affordability and access are discussed briefly, and the access levels – based on EU-SILC data – are indicated.
- **Section 6** thereafter discusses the individual and other (e.g. structural) barriers different households experience in accessing essential services, and the drivers to greater access. A distinction is made between cross-cutting individual barriers such as poverty risk, which affect all services, and service-specific barriers.
- **Section 7** finally focuses on the policy measures put in place to support access to essential services. This also includes a discussion of the monitoring and evaluation measures that are generally in place, and any national-level good practices that could be identified in the course of research.
- **Section 8** summarises the findings of the study and presents overall conclusions and suggestions for future research.

2. Methodological approach

This section outlines the parameters of the study in terms of definitions and research methods. In order for findings to be comparable between Member States, **definitions of the services** were established and communicated to the various parts of the research team to ensure a common understanding.

Following this, the research proceeded in two main steps:

- A **qualitative part** based on national reports of the 27 Member States, completed by qualified national experts and subsequently reviewed by Milieu, Ramboll and DG EMPL; and
- A **quantitative part** utilising microdata received from Eurostat and, where relevant, additional data from national sources.

The synthesis report aims to bring together these two research streams and presents conclusions which take both into account. The remainder of this section further details the research process.

2.1. Understanding of the essential services and accessibility

While Section 3 will expand on the research underlying the construction of indicators and conceptualisation of services, the definitions of services used throughout this study should be discussed up-front. In discussion with DG EMPL and thematic experts, the following broad definitions of the essential services were established:

- **Digital communications:** While ‘digital communications’ can refer to a range of products and services in the broader telecommunications field, the focus of this report is specifically on *whether households have access to the internet*. Internet access underpins both communications’ infrastructure and an increasing number of products, including where other essential services have been pivoting towards increasingly digitised product offerings.
- **Energy:** For energy, the main issue of concern is *whether a household is at risk of, or experiencing, energy poverty*. Definitions of energy poverty are not in place in all Member States, and it is a multidimensional concept which is not amenable to straightforward measurement. The European Energy Poverty Observatory (EPOV), for instance, uses a combination of expenditure-based data and self-reported standards¹⁸. The report will therefore seek to take both aspects into account and analyse both self-reported difficulties in adequately heating one’s home (based on EU-SILC data), and macro-level issues regarding e.g. price fluctuations and problems with payment.
- **Financial services:** As an essential service, financial services here is primarily focused on *having access to a basic bank account for daily activities*. Affordable access to such accounts is established in the Payment Accounts Directive (PAD) of 2014¹⁹. The focus of the study is therefore on how countries apply the PAD, and whether there are guidelines in place to ensure that it is followed.

¹⁸ Thema and Vondung (2020), ‘EPOV Indicator Dashboard: Methodology Guidebook’, Wuppertal Institut für Klima, Umwelt, Energie GmbH, Wuppertal. Available online: https://energy-poverty.ec.europa.eu/system/files/2021-09/epov_methodology_guidebook_1.pdf.

¹⁹ Directive 2014/92/EU on the comparability of fees related to payment accounts, payment account switching and access to payment accounts with basic features (‘the Payment Accounts Directive, PAD’).

- **Transport:** Like ‘energy’, ‘transport’ is a multi-faceted concept which defies easy definition. In addition to affordability issues for transport, there is also a question of physical access, distance to public transport stops, regularity of services self-assessed and objective need, and availability of alternative travel arrangements (private or otherwise). This means that a focus on affordability alone is insufficient to capture lack of access to transport, and the analysis will seek to consider *general barriers to accessing public transport, in addition to affordability*. The definition is kept broad as necessity, in the absence of appropriate data, either on the EU or Member State-level.²⁰ As the focus of the study is on public measures, and in order to clearly define the scope of the exercise, the focus will be on transport services (e.g. bus, tram, subway) rather than the private means of transportation (e.g. private car). This also follows the delineation previously made in the ESPN report on essential services²¹.
- **Water and sanitation:** These two services are reported together due to significant overlap in both their provision, and in the support available to accessing them. Water and sanitation is understood as *access to water for consumption or cleaning, and to sanitation services*. Practically, this generally translates as access to a safe, clean water source, and sanitation services such as wastewater treatment; there is also an overlap with public infrastructure such as drinking water fountains and public toilets²².

As noted in the introduction, the main factor concerning access that will be considered is affordability; however, as ‘access’ to the services as they are understood here is sometimes more complex, other issues are also considered. This additionally facilitates analysis in cases where there is very limited quantitative data (as is the case for e.g. transport).

2.2. Qualitative research: National reports by experts

National experts have carried out national research to gather qualitative and quantitative information on the affordability of the six essential services listed in Principle 20 of the EPSR using a **template for the national reports** developed by Milieu, in collaboration with Ramboll, and agreed with DG EMPL. The template includes detailed instructions on how to conduct the national research and to report on its findings (see Annex A). National experts have collected the required information mainly through **desk research and semi-structured interviews** with key sectoral stakeholders covering the different essential services as well as horizontal stakeholders in charge of social inclusion and poverty issues.

In order to complement the information gathering exercise carried out by national experts, the study also utilised a **survey to national statistical institutes (NSI)**, asking them to indicate the data available on affordability and access to the essential services. At the conclusion of the report, 16 Member State NSIs had responded to this survey²³.

²⁰ This report focuses on vulnerable transport users, namely those individuals who have issues to access transportation means, instead of referring to the concept of transport poverty, as there is no standard definition for the latter. As noted in the Council Recommendation on ensuring a fair transition towards climate neutrality, the European Commission is working on further developing this concept and indicators to assess it.

²¹ Baptista and Marlier (2020).

²² However, as these services are generally municipally provided, they cannot be mapped in this report and are discussed only in passing where relevant sources have been identified by the core research team or national experts.

²³ The results of the survey to NSIs is presented in Table 31 in Annex B. The statistical data gathered by national experts in the course of their reports is presented in Table 42 in Annex D.

2.3. Quantitative research: Microdata and national data

Eurostat data request

In order to enable a deeper investigation of the affordability of and access to essential services in the EU, the study utilised microdata requested from Eurostat. As there are, with a few exceptions, generally no available variables which *directly* address the question of essential service affordability, the data request sought to identify variables in microdata which can act as direct or indirect indicators of access to essential services: where there are not affordability indicators, there are in most cases at least variables which directly address the question of access.

These variables are found in the EU Statistics on Income and Living Conditions dataset (EU-SILC), which contains a broad range of variables relating to individual and household characteristics as well as income and living conditions. The identified, relevant variables for this study are summarised in Table 3.

Table 3 – Main EU-SILC variables relating to essential services access and affordability

Essential service	Variable(s)	Comment
Digital communications	Do you have an internet connection for personal use at home? (PD080)	Response options include 'No – cannot afford it', directly addressing affordability.
Energy	Ability to keep home adequately warm (HH050) Arrears on utility bills in the past 12 months (HS021)	Arrears on utility bills implies affordability issues, although it is not disaggregated between services.
Financial services	<i>No variables identified.</i>	
Transport	Spending on public transport (HC030) Spending on public transport (HC040)	The variables capture monthly expenditures on train, bus, tram, plane, taxi etc. (for public transport) and on fuel, charging, insurance, maintenance and repair, parking permit, taxes etc. (for private transport). Note that spending variables are only available in 2020 as an ad hoc module ²⁴ .
Water and sanitation	Bath or shower in dwelling (HH081) Indoor flushing toilet for sole use of household (HH091) Arrears on utility bills in the past 12 months (HS021)	Arrears on utility bills implies affordability issues, although it is not disaggregated between services.

Source: Milieu elaboration.

EU-SILC indicators have been identified for all essential services except for financial services:

²⁴ A previously available variable on 'Regular use of public transport' was last recorded in 2014. As it is before the period of interest for this study, it has not been included in the data request.

- For **digital communications**, it is possible to analyse the affordability of internet access by looking at the number of individuals (and their characteristics) who answer that they do not have an internet connection for private use as they cannot afford it.
- For **energy**, whether a household is able to keep their home adequately warm acts as a proxy. While this does not directly refer to the affordability of energy, and issues such as safety of supply or energy inefficiency may also play in, it is fair to assume that a substantial number of households not able to keep their home adequately warm are facing affordability constraints.
- No EU-SILC indicators are available for **financial services**. Instead, descriptive indicators based on the World Bank Global Findex dataset are used to illustrate the proportion of the population without a bank account in Section 5.3²⁵. This cannot, however, be linked with other datasets such as EU-SILC, and is therefore presented purely for illustrative purposes.
- While there are a few variables available relating to **transport**, these are not straightforward to link with access and affordability. The most relevant variable identified concerns the expenses on public transport, available in the 2020 ad hoc module. While this variable does not capture the self-assessed need or desire for using such transport, it still allows insights on one angle of affordability. Variables on private transport (i.e. household expenditures on private transport and whether the households owns a private car or cannot afford it) are also included in the multivariate analysis²⁶.
- For **water and sanitation**, the variables on whether the household has a toilet available for its own use, and whether it has a shower or bath, mainly address issues of sanitation.
- For all **utilities** (energy, water and sanitation), the variable on whether the household has experienced arrears on household bills in the past 12 months directly addresses affordability concerns.

The data request also contained data from the ICT Survey, to investigate whether this could add valuable insights regarding access to digital communications, and the HBS, to indicate how much of their income different types of households spend on the essential services. In the end, the most valuable findings have been found in relation to the variables included in EU-SILC. The report has therefore focused on this dataset, and neither the ICT Survey nor HBS have been included in the analysis.

Approach to data analysis

Descriptive statistics

The data analysis proceeded in two steps. The first used **descriptive statistics** and the target variables identified in the previous section to illustrate the (non-)access to essential services of different vulnerable groups.

To this end, the distribution of the target variables identified in Table 3 is indicated for five at-risk populations:

²⁵ World Bank (2022), *The Global Findex Database 2021: Financial Inclusion, Digital Payments, and Resilience in the Age of COVID-19* [Online]. Washington, DC: The World Bank. Available online: <https://www.worldbank.org/en/publication/globalindex> [Accessed 28 July 2022].

²⁶ While the focus of this report remains on public transport, it is necessary to take into account the costs of private means of transportation (e.g. car) as well: in the absence of available public transport, this is likely what households turn to.

- **Households at risk of poverty**²⁷ and at the lower end of the income distribution are at the most evident risk of facing affordability issues with regard to all services, as they have fewer financial resources available to them than the average household.
- **Households in rural areas** may face issues of availability and affordability due to living outside of urban areas. This means that access to infrastructure and delivery of services is both more complex and may entail higher costs, an issue which increases in significance in larger countries with lower population density. A lack of public transport options can also lead to rural households having to own private cars, even when they are otherwise at risk of poverty²⁸.
- **Older households** where at least one member is aged 65 or older. These households are often at higher risk of poverty²⁹ and are therefore also more vulnerable to affordability barriers, but also face skills barriers in the case of digital communications. These skills barriers have spill over effects to other services as well, as both financial services and transport increasingly use digital interfaces to deliver their services.
- **Households with children** are a common concern for social policy studies as they have higher expenses than households without children, which are differentially compensated between Member States.
- Finally, **households with at least one disabled member** are also likely to face higher costs and pressures. Here there is also an access issue where dwellings may require adjustments, and transport services may not be fully adapted to their needs.

Two additional at-risk groups have been identified in the literature review and national reports, which will be discussed further in the subsequent multivariate analysis: **single-parent households**, which are, more broadly, at greater risk of hardship than households with children³⁰, and **women** overall, who have been identified as a distinct risk group for both energy³¹ and transport³². They are not included in the descriptive, bivariate analysis for different reasons: in the case of single-parent households as they represent a relatively small part of the population in many EU Member States, and breakdowns by service access is therefore not always accurate, and in the case of women, as the descriptive analysis focuses on *households* rather than *individuals*. Disentangling the possible higher risk of non-access for women therefore becomes difficult. The multivariate analysis allows this to be taken into account, and consider which variables are the strongest predictors of non-access to services.

²⁷ For the entirety of this report, this refers to the Eurostat definition of households whose equivalised median income is less than 60% of the equivalised national median income after any social transfers; cf. https://ec.europa.eu/eurostat/statistics-explained/index.php?title=Glossary:At-risk-of-poverty_rate#:~:text=The%20at%2Drisk%2Dof%2Ddisposable%20income%20after%20social%20transfers.

²⁸ See e.g. Mattioli (2017), 'Forced Car Ownership' in the UK and Germany: Socio-Spatial Patterns and Potential Economic Stress Impacts', *Social Inclusion*, 5(4), 147-160. Available online: <https://www.cogitatiopress.com/socialinclusion/article/view/1081>.

²⁹ Discussed recently in e.g. Ebbinghaus, B., Nelson, K., & Nieuwenhuis, R. (2019). Poverty in old age. In B. Greve (Ed.), *Routledge International Handbook of Poverty*. New York, NY: Routledge (pp. 257–267).

³⁰ Chzhen and Bradshaw (2012), 'Lone parents, poverty and policy in the European Union', *Journal of European Social Policy*, 22(5), 487-506; Hübgen (2018), 'Only a Husband Away from Poverty'? Lone Mothers' Poverty Risks in a European Comparison' in Bernardi and Mortelmans (eds.), *Lone Parenthood in the Life Course*, Cham, Springer.

³¹ European Parliament (2017), 'Gender perspective on access to energy in the EU: Study for the FEMM committee', PE 596.816, Brussels, European Parliament Directorate-General for Internal Policies. Available online: [https://www.europarl.europa.eu/RegData/etudes/STUD/2017/596816/IPOL_STU\(2017\)596816_EN.pdf](https://www.europarl.europa.eu/RegData/etudes/STUD/2017/596816/IPOL_STU(2017)596816_EN.pdf).

³² Criado Perez (2019), *Invisible Women: Exposing Data Bias in a World Designed for Men*, London, Vintage; Simcock, Jenkins, Lacey-Barnacle, Martiskainen, Mattioli and Hopkins (2021), 'Identifying double energy vulnerability: A systematic and narrative review of groups at-risk of energy and transport poverty in the global North', *Energy Research & Social Science*, 82(102351). Available online: <https://www.sciencedirect.com/science/article/pii/S2214629621004424?via%3Dihub>.

Multivariate analysis

The cross-sectional analysis looks at the EU-SILC household data at a single point in time (2020). The aim of the quantitative analysis is to further deepen the understanding of the factors that mostly influence the likelihood of a household lacking access to one or more essential services, also considering their relations to each other. The table below shows the choice of regression models for each proxy of essential service.

Table 4 – Depended variables and regression models, 2020

Variable	Values	Regression model
Do you have an internet connection for personal use at home? (PD080)	Yes; No, cannot afford; No, other reasons	Multinomial logit model
Ability to keep home adequately warm (HH050)	Yes; No	Binary logit model
Arrears on utility bills in the past 12 months (HS021)	Yes; No	Binary logit model
Spending on public transport (HC030) as a share of disposable income Spending on private transport (HC040) as a share of disposable income	Continuous	Tobit regression
Bath or shower in dwelling (HH081)	Yes, sole use; No or Yes, shared	Binary logit regression

Source: Milieu elaboration.

Turning to the independent variables used, Table 5 clusters them into demographic, household composition, geographic, socio-economic and country-specific information. The choice of including those variables follows the literature review and the inputs of the several thematic experts.

Table 5 – Explanatory variables included in the regression models, 2020

Category	Variable	Comment
Demographic	Sex of responsible person (derived from HB080 and RB090); Age (RX010); Country of birth (PB210); Tenure status (HX070);	The first person responsible is the one who owns or rents the accommodation. Country of birth indicates if the person is a national, European or third country national. Tenure status refers to renter vs owner.
Household composition	Household size (HX040); Household with children (derived from RX010); Single-parent household; Household with old-age person(s) (derived from RX010); Household with disabled person(s) (derived from PH030);	Household with children is disaggregated in 1, 2, and 3 or more children. Children is defined as below 18 years old, while old-age as above 65 years old.
Geographic	Household location (DB100);	Locations refer to densely populated, intermediate and thinly populated areas.

Category	Variable	Comment
Socio-economic	Education level (derived from PE040); Income quintiles (derived from HY020); Household AROP (HX080); Household with very low work intensity (RX050); Financial burden of total housing cost (HS140); Other deprivation factors (HH040); Housing expenditures as share of income (derived from HH070); Private car ownership.	Education levels are “low” (ISCED 1-2), “medium” (ISCED 3-4) and “high” (ISCED 5-8). Income quintiles go from 1 (lowest incomes) to 5 (top incomes). Households are AROP if their equivalised disposable income is below 60 % of the national median. Households have very low work intensity if working age members worked a time equal or less than 20 % of their total work-time potential. Financial burden of total housing cost is an objective assessment. Other deprivation factors include “leaking roofs, damp walls/floors/ foundation or rot in window frame/floor” (HH040).
Country - specific	Energy prices; Country-specific indicators.	To control for unobserved differences across countries, all regressions are run by including country fixed effects. The variable for energy price is included in purchasing power parity to allow comparison between countries. The dataset was downloaded from Eurostat ³³ (NRG_PC_204) and merged with the rest of EU-SILC indicators. Eurostat provides this data in the form of bi-annual data. Hence, the yearly averages were calculated and included in the analysis.

Source: Milieu elaboration.

2.4. Notes on alternative indicators

To maintain a clear scope and comparability across countries, this report focuses on using the EU-SILC dataset. However, future research on essential services – collectively or individually – may draw from additional data sources which have not been studied in this report. These are briefly outlined below for the services where useful additions have been identified, informed by discussion with senior thematic experts.

2.4.1. Digital communications

For digital communications, the Eurostat survey on Information and Communications Technologies usage by Households and Individuals (the **ICT Survey**) provides extensive information about both internet access and how it is used by households. It also benefits from being a Eurostat-managed survey which standardises findings across EU Member States and therefore has good potential to provide insights on access to digital communications in the EU. Variables from the ICT survey that may be used to investigate the affordability and/or access of digital communications are listed in Table 6. Variables on digital skills are also included, as these can entail an important individual barrier to accessing digital communications.

³³ Eurostat (2022a), *Electricity prices for household consumers - bi-annual data [NRG_PC_204]* [Online]. Available online: https://ec.europa.eu/eurostat/web/products-datasets/-/NRG_PC_204 [Accessed 7 September 2022].

Table 6 – ICT Survey variables relating to digital communications access

Access aspect	Variable(s)
Internet access at home	Households with internet access (H_IACC) Households without internet access at home due to access costs being too high (H_XACC) Households without access to internet at home due to equipment costs being too high (H_XEQU) Households without access to internet at home because access and equipment costs being too high (H_XCOST) Households without access to internet at home because of lack of skills (H_SKL) No member of household has access to internet at home (H_IACCX)
Digital skills	Above basic overall (I_DSK_AB) Basic overall (I_DSK_B) Low overall (I_DSK_L) No overall skills (I_DSK_X)
Access to other services via digital communication	Interaction with public authorities over internet in past 12 months (I_IUGOV12) Not interacting with public authorities over internet due to lack of skills (I_IGOV12RTX_SKL) Use of internet banking (I_IUBK)

Source: Milieu elaboration.

Additionally, the **Digital Economy and Society Index (DESI)**³⁴ tracks the progress of EU Member States towards digital goals since 2014, with annual national reports on areas requiring action as well as identifying progress and good practices. It should, however, be noted that this is a composite index drawing from multiple sources, and that the dataset does not investigate affordability as such. It may nevertheless be useful as a source on the broader context of digitalisation and attainment of digital skills, which can inform discussions of how digital communications' services are used in the population.

2.4.2. Energy

Energy is a multidimensional concept that has been extensively studied by several institutions, including EPOV. Broadly, there are three approaches available to aggregate data on energy poverty:

- **Expenditure-based** approaches measure the proportion of energy costs in the available income spent by households, measured against absolute or relative thresholds.
- **Consensual-based** approaches rely on self-reported assessments of living conditions such as indoor temperatures, quality of housing, and the ability to heat one's home and pay utility bills on time³⁵.

³⁴ European Commission (2022a), *The Digital Economy and Society Index (DESI)* [Online]. Brussels: European Commission (DG CONNECT). Available online: <https://digital-strategy.ec.europa.eu/en/policies/desi> [Accessed 28 July 2022].

³⁵ This is the category of variable that is used in EU-SILC.

- **Direct measurement** based on e.g. the level of energy services achieved in the home using technical measurements.

It is difficult to identify data sources which capture all dimensions of energy poverty, being a multidimensional concept. It is furthermore not always possible to link datasets together to enable a broader analysis. While this should be borne in mind when analysing energy poverty, there are a broad range of indicators and datasets available to study the concept further. Selected indicators, as well as notes on availability and ease of use, are presented below in Table 7. It should, however, be additionally noted that many of these examples are in place in individual Member States and may not be immediately transferable to others.

Table 7 – Alternative indicators of energy poverty

Indicator	Metric	Availability	Comments
<i>Expenditure-based approaches</i>			
>= 10% of income dedicated to energy	Originally twice national median expenditure to access all energy services. Legal definition since 2000 in UK.	UK, Ireland, often used as reference in EU Available in HBS	Easy to use and to communicate concept. Sensitive to energy prices. May misidentify highest income deciles as energy poor. Not a reasonable threshold throughout the EU due to variation.
Low income – High costs (LIHC)	Energy costs against heating costs above national average and income below poverty threshold.	France	Distinguishes between income groups, captures affordability. Less static than 10 % threshold. However, mainly identifies poorer households, and depends on consumption. Also calculated per square metre of dwelling.
Hidden energy poverty	Assessing whether share of energy expenditure is too low by comparing to other similar households.	Belgium	Captures underconsumption and allows for comparison between income groups. Captures people who may otherwise remain hidden to public authorities.
<i>Consensual-based approaches</i>			
Inability to adequately warm home	Self-reported thermal discomfort	EU via EU-SILC	Qualitative indicator – only refers to heating. Can be used as a complementary indicator. Note that income not considered, and definition of 'warm' may vary.
Arrears on utility bills	Self-reported inability to pay energy bills on time in last 12 months	EU via EU-SILC	Reflects financial difficulties. Can reveal income poverty rather than energy poverty specifically.
<i>Direct measurement</i>			
Adequate level of heating or cooling	Use of smart metering of use of energy and measurement of indoor temperature to	Mainly via experiments	Avoids subjectivity of self-reported assessment. Assesses energy poverty in both summer and winter.

Indicator	Metric	Availability	Comments
	assess whether an 'adequate' level of comfort is reached		

Source: Milieu elaboration.

In addition to this, EPOV combine a range of indicators for their dashboard on energy poverty³⁶. Four main indicators are used, based on HBS and EU-SILC:

- **High share of energy expenditure in income (2m):** Measures the part of the population whose share of energy expenditure in income is more than twice the national median share.
- **Low share of energy expenditure in income (M/2):** Measures the part of the population whose absolute energy expenditure is below half the national median. Could therefore capture under-consumption and may capture hidden energy poverty.
- **Inability to keep home adequately warm and Arrears on utility bills:** Cf. Table 3 above. Based on EU-SILC.

2.4.3. Financial services

There is no relevant data on access to financial services in EU-SILC or associated datasets. For this reason, data from the World Bank Findex dataset is instead used in this report where appropriate, to indicate **whether someone has access to a bank account or not**³⁷. The lack of an equivalent indicator in EU-SILC data means that there is a more limited scope for cross-sectional comparison and analysis.

Generally, this indicator captures most of the aspects of financial services that can be considered 'essential': access to daily banking and payment means which allows the household to go about their life. However, some additional indicators could help develop on the understanding of access to financial services further:

- **Distance to a bank branch:** While not generally needed on a daily basis, access to a bank branch is generally a prerequisite for opening a bank account³⁸. There is an overall trend in the financial services industry to close bank branches in favour of a combination of online or telephone banking and ATMs to reduce costs. This can reduce access for people who lack digital skills or otherwise require the assistance of a bank teller or other services provided in-branch only.
- **The number of bank branches within a certain distance:** This is an indicator of access under the assumption that a higher number of available options leads to higher competition, lower prices and better services for customers. This measure may be more accurate in determining access than the former measure.

It should, however, be noted that in both of the above cases, significant amounts of data would likely have to be estimated as it is not systematically collected.

³⁶ Thema and Vondung (2020).

³⁷ World Bank (2022).

³⁸ It should, however, be noted that not all of these branches may offer a 'basic' bank account in the first place. However, a granularity of data which allows for such differentiation is not available.

2.4.4. Transport

Within the European context³⁹, several indicators have been proposed to identify households (or individuals) struggling with transport affordability. Those indicators are typically based on household expenditure data, such as those included in the **HBS and EU-SILC** (as of 2020). Indeed, they can be clustered according to the type of expenditure considered:

Table 8 – Examples of indicators to capture access to transport services

Type of expenditures	Indicators
Expenditures on all transport modes	<p>Spending more than 18 % of income on transport (i.e. twice the average household expenditure on transport, including both running and fixed costs, 9-10 %) ⁴⁰;</p> <p>Spending more than twice the median share of income on transport costs ⁴¹;</p>
Car-related expenditures	<p>Spending more than 8 % of income on motor fuel for accessing essential services (i.e. twice the estimated median household expenditure) and, at the same time, falling below an income threshold (i.e. twice the median equivalised income) ⁴²;</p> <p>Spending more than 9.5 % of income on costs for running motor vehicles (i.e. twice the median household expenditure) and, at the same time, falling below an income threshold (i.e. 60 % of median income after deducting housing costs and running motor vehicle costs) ⁴³;</p>
Expenditures for certain travel purposes only	<p>Spending more than 3.9 % of their income on motor fuel for commuting (i.e. twice the median value) ⁴⁴;</p> <p>Spending more than twice the median per active person on motor fuel for commuting (in absolute terms), and at the same time, falling below an income threshold (i.e. 60 % of the median income after deducting motor fuel expenditure) ⁴⁵;</p>

³⁹ In the context of developing countries, two types of indicators have been distinguished: i) "observed affordability" metrics, which are based on the ratio between actual household expenditure on public transport and a measure of economic resources, and ii) "potential affordability" ones, which consider the amount households would need to spend on public transport to cover transport needs. Cf. also Falavigna and Hernandez (2016), 'Assessing inequalities on public transport affordability in two latin American cities: Montevideo (Uruguay) and Córdoba (Argentina)', *Transport Policy*, 45, 145-155. Available online: <https://www.sciencedirect.com/science/article/abs/pii/S0967070X15300548>.

⁴⁰ Nicolas, Vanco and Verry (2012), 'Mobilité quotidienne et vulnérabilité des ménages', *Revue d'Économie Régionale & Urbaine*, 2012/1, 19-44. Available online: <https://www.cairn.info/revue-d-economie-regionale-et-urbaine-2012-1-page-19.htm>.

⁴¹ Verry, Dy and Nicolas (2017), 'Vulnérabilité énergétique et mobilité quotidienne : quelle mesure ?' in Dussud, Lepoittevin and Riedinger (eds.), *Les ménages et la consommation d'énergie*, Paris, Ministère de l'Environnement, de l'Énergie et de la Mer.

⁴² Cochez, Durieux and Levy (2015), 'Vulnérabilité énergétique: Loin des pôles urbains, chauffage et carburant pèsent fortement dans le budget', *Institut national de la statistique et des études économiques (Insee)*, Paris. Available online: <https://www.insee.fr/fr/statistiques/fichier/version-html/1283764/ip1530.pdf>.

⁴³ Mattioli, Wadud and Lucas (2018), 'Vulnerability to fuel price increases in the UK: A household level analysis', *Transportation Research Part A: Policy and Practice*, 113, 227-242. Available online: <https://www.sciencedirect.com/science/article/pii/S0965856417304731>.

⁴⁴ Berry, Jouffe, Coulombel and Guivarch (2016), 'Investigating fuel poverty in the transport sector: Toward a composite indicator of vulnerability', *Energy Research & Social Science*, 18, 7-20. Available online: <https://www.sciencedirect.com/science/article/abs/pii/S2214629616300123>.

⁴⁵ Ibid.

Type of expenditures	Indicators
	Spending more than 10 % of income on commuting costs (i.e. same threshold as the UK official indicator of energy poverty within the home) ⁴⁶ .

Source: Milieu elaboration.

Besides the type of expenditure, these indicators differ in three other dimensions:

- Whether they consider *actual* expenditure or *modelled* expenditures (i.e. expenditure required to meet a certain level of transport needs);
- On the definition and rationale used to set an expenditure threshold;
- Whether they also include an income threshold or not.

Specifically, three indicators of access to transport services could be considered in future studies:

- **The average share of income** (or expenditure) spent on public transport;
- **The share of households spending more than twice the mean of their income** (or expenditure) on public transport;
- **The share of household spending more than twice the mean of their income** (or expenditure) on public transport and **falling below an income threshold** (e.g., the poverty line).

2.4.5. Water and sanitation

In the EU, the supply of drinking water is regulated by the 2021 recast Directive (EU) 2020/2184, which replaced Council Directive 98/83/EC and which puts a strong focus on improving access to water intended for human consumption⁴⁷. In addition, the Urban Waste Water Treatment Directive⁴⁸ regulates the collection and treatment of waste water in larger agglomerations (above 2 000 p.e.). However, compliance rate is low in several countries (e.g. Romania).

The usage of the services offered requires households to connect to the collecting and treatment systems. To further expand the analysis on access issues, one could thus look at the **connection rate of households**, as connecting charges can result in additional financial strain for already at-risk groups. Information on connection rates is available through **Eurostat**:

- Population connected to public water supply⁴⁹ (env_wat_pop)

⁴⁶ Lovelace and Philips (2014), 'The 'oil vulnerability' of commuter patterns: A case study from Yorkshire and the Humber, UK', *Geoforum*, 51, 169-182. Available online: <https://www.sciencedirect.com/science/article/abs/pii/S0016718513002480>.

⁴⁷ While the recast does not provide a clear definition of "access", it does provide more specificity on what is understood as access as part of Article 16 which includes, among others, provisions that Member States should consider, in particular, for vulnerable and marginalised groups.

⁴⁸ The Directive is currently subject to revision, but it is not expected to include "access" as an objective.

⁴⁹ Eurostat (2022d), *Population connected to public water supply [ENV_WAT_POP]* [Online]. Available online: https://ec.europa.eu/eurostat/databrowser/view/env_wat_pop/default/table?lang=en [Accessed 19 August 2022].

- Population connected to urban wastewater collecting and treatment systems, by treatment level⁵⁰ (ten0020)

Information on actual pricing of water and sanitation services is very limited and existing data points are one-offs. However, those datapoints can still lead to useful considerations. Known data sources include:

- OECD (2020): Financing Water Supply, Sanitation and Flood Protection. Challenges in EU Member States and Policy Options⁵¹; and
- EurEau (2020): The governance of water services in Europe⁵².

In this context it should be kept in mind that both of the revisions of water legislation mentioned above might lead to additional costs due to required investments from service providers, also considering that Article 9 of the Water Framework Directive (WFD)⁵³ requires EU Member States to take account of the principle of recovery of the costs of water services, including environmental and resource costs in their service pricing.

⁵⁰ Eurostat (2022e), *Population connected to urban wastewater collecting and treatment systems, by treatment level [TEN00020]* [Online]. Available online: <https://ec.europa.eu/eurostat/databrowser/view/ten00020/default/table?lang=en> [Accessed 19 August 2022].

⁵¹ OECD (2020b), 'Financing Water Supply, Sanitation and Flood Protection: Challenges in EU Member States and Policy Options', OECD, Paris. Available online: <https://www.oecd.org/environment/financing-water-supply-sanitation-and-flood-protection-6893cdac-en.htm>.

⁵² EurEau (2020), 'The governance of water services in Europe', EurEau, Brussels. Available online: <https://www.eureau.org/resources/publications/eureau-publications/5219-the-governance-of-water-services-in-europe-2020-edition>.

⁵³ Directive 2000/60/EC establishing a framework for Community action in the field of water policy (the Water Framework Directive, WFD).

3. Main policy developments

This section discusses policy developments in the area of essential services, focusing on EU Member State actions since 2017. This time frame is specified to investigate how and whether the proclamation of the EPSR has influenced Member States to expand their strategies and policies in support of essential service access, and recently implemented policy measures (also as a consequence of the COVID-19 pandemic and in response to the 2021/2022 increase in energy prices, with associated risks for increased energy poverty). Section 3.1 focuses on over-arching measures and the extent to which the EPSR is referred to. Section 3.2 then discusses service-specific developments, and includes background on previous, relevant EU-level measures.

3.1. Overarching Member State-level actions towards essential services access

3.1.1. National strategies and the EPSR

EU Member States have not generally reported significant or structural policy changes since 2017 in relation to the access to the essential services listed in Principle 20 of the EPSR, including in response to the COVID-19 pandemic and the growing importance and acceleration of the green and digital transitions. National experts indicate that **the EPSR features only sporadically in policy discussions or new pieces of legislation**. However, the limited explicit commitments by Member States to implement the EPSR at the national level is not a symptom of a lack of endorsement of the EPSR or measures towards services accessibility; it is rather **an indication of its overarching nature**. Accessibility to the different services is addressed by specific legislative and policy initiatives in several Member States, although there is no overarching strategy at the national or regional level.

Of the 27 Member States, only in Latvia, Poland, Portugal and Sweden is the EPSR referenced in concrete national policy and programming documents. In other EU Member States (Belgium, Czechia, Germany and Spain) the EPSR is also said to be referenced by policymakers, but no reference to a specific policy instrument is made. In Malta, it is mostly civil society organisations (CSOs) that reference the EPSR for their advocacy work.

In general, **the enactment of the EPSR contributed only to a limited extent to elevate the debate in the public and political sphere regarding access to essential services**. For instance, seldom do national policy development and debates on access to essential services explicitly feature the adoption of the EPSR and limited dedicated monitoring has been established to track progress in relation to the access to essential services.

Table 9 – Overview of countries that feature the EPSR in recent policy developments

MS	Description
BE	The EPSR is mentioned as the motivation for possible reforms – though not in relation to any specific reform. On the website of the FPS Foreign Affairs, Foreign Trade and Development Cooperation, it is mentioned that Belgium supports the new impetus for

MS	Description
	the implementation of the EPSR and defends an ambitious approach both in terms of social governance and social convergence between Member States ⁵⁴ .
CZ	The enactment of EPSR in 2017 did not lead to the immediate development of new policies or legislation but it increased the visibility of the issue of affordability of essential services, and it triggered discussions at various levels. The increased general social awareness has given rise to organisations supporting access to essential services.
DE	The enactment of the EPSR has not had significant effects on policy debates in Germany. Only in a few cases is the EPSR referenced by policy makers. Some CSOs reference the EPSR when advocating for the fulfilment of the rights enshrined in it.
ES	The EPSR Implementation Plan launched in Porto in March 2021, and the mainstreaming of the EPSR into the European Semester increased and elevated the political debate on access to essential services in Spain.
LV	The EPSR is not a major presence in Latvian policy debate but has been cited as the impetus for some reforms. For instance, the Guidelines for Social Protection and Labour Market Policy 2021-2027 ⁵⁵ extensively cross-refer to the EPSR as the main source of goals to be achieved by 2030 in Latvia.
MT	CSOs reference the EPSR in their advocacy work. This is true for the Anti-Poverty Forum Malta, which indicated using Principle 14 on minimum income for advocacy work, as well as for St Jeanne Antide ⁵⁶ who informed that the EPSR had been particularly helpful for advancing the case for certain vulnerable groups, particularly migrants.
PL	The Polish government expressed a reserved opinion about the EPSR, stressing that it should remain a non-binding document ⁵⁷ . The National Recovery Plan refers to the EPSR in its introductory part; however, it is not clear in what way the EPSR objectives are planned to be achieved in practice ⁵⁸ . Principal national strategic documents, such as the Strategy of Responsible Development ⁵⁹ and the Strategy of Human Capital Development ⁶⁰ , do not refer to the EPSR.
PT	The EPSR does not seem to have made a major contribution to elevating the debate in the public and political sphere in Portugal regarding access to essential services. The EPSR is mentioned in the current Government's programme (2022-2016) in connection with the green and digital transitions and regarding the implementation of a national strategy for fighting poverty ⁶¹ . It is also mentioned in Portugal's Recovery and Resilience Plan ⁶² , again regarding the green and digital transitions and the national strategy for fighting poverty; regarding atypical work, the investment in education and training, and

⁵⁴ FPS Foreign Affairs, Foreign Trade and Development Cooperation. See: <https://diplomatie.belgium.be/en/policy/coordination-european-affairs/policy-belgium-within-eu/socio-economic-and-financial-governance>.

⁵⁵ Ministru kabineta rīkojums Nr. 616 "Par Sociālās aizsardzības un darba tirgus politikas pamatnostādņēm 2021.-2027. gadam", Official Journal reference: Latvijas Vēstnesis, 171, 06.09.2021.OP numurs: 2021/171.9.

⁵⁶ See: <https://www.antidemalta.org/>.

⁵⁷ Office for Parliamentary Analyses, parliamentary briefing, [The position of the Government of the Republic of Poland on European Commission's initiative: European Pillar of Social Rights](#), 17 May 2021.

⁵⁸ Milieu, [Shifting priorities towards post-COVID sustainable reconstruction and recovery](#), a report for the European Economic and Social Committee, 31 June 2021.

⁵⁹ Ministry of Funds and Regional Policy, [Strategy of Responsible Development until 2020 with an outlook to 2030](#).

⁶⁰ Ministry of Funds and Regional Policy, [integrated strategies](#): The Strategy of Development of Human Capital adopted by the Council of Minister on 14 December 2020.

⁶¹ Governo de Portugal (2022), [Programa do XXIII Governo Constitucional 2022-2026](#).

⁶² República Portuguesa (2021a), [Plano de Recuperação e Resiliência - Recuperar Portugal, Construindo o futuro](#).

MS	Description
	the overall improvement of living conditions. The connection of the EPSR with the latter two aspects is emphasised in Portugal's 2021 National Reform Programme ⁶³ .
SE	The EPSR has not been a major presence in Swedish policy debate since 2017 but has been cited as the impetus for some reforms. This is for instance the case in the areas of fair working conditions, social security and integration, and access to the labour market (in the Swedish Recovery and Resilience Plan) ⁶⁴ , and in relation to reducing school drop-outs in the 2021 Reform programme ⁶⁵ . In other plans the EPSR is not discussed ⁶⁶ , and references to the 20 th principle on essential services have not been identified.
BG, DK, EE, EL, FI, HR, HU, IE, IT, LT, LU, NL, RO, SI, SK	The enactment of the EPSR did not contribute to elevating the debate in the public and political sphere regarding access to essential services.
AT, CY, FR	Influence of the EPSR on current policy developments is not mentioned in the national report.

Source: Milieu elaboration based on national reports.

Table 9 Legend

Colour	Definition
	The EPSR is featured in concrete policy or programme documents.
	The EPSR is said to have an influence on the policy debate, but no reference to concrete policy or programme documents is made.
	The enactment of the EPSR did not contribute to elevating the debate in the public and political sphere regarding access to essential services.
	Influence of the EPSR on current policy developments not mentioned in the national report.

3.1.2. Recent developments on national policy measures

In about half of the EU Member States, the most common support measures to (directly or indirectly) assist households with the affordability of essential services is through social assistance or minimum income benefits which seek to ensure that all households are able to access a basic living standard. Some of these countries have implemented **basic uprating of benefits**, where base values have risen in line with inflation⁶⁷.

Some **benefit reforms** also occurred, strengthening social protection systems and with it, the protection of vulnerable consumers. This was the case in:

- Belgium, where a slight upgrading of benefits and tariffs and the extension of target groups were implemented;

⁶³ República Portuguesa (2021b), [Programa Nacional de Reformas 2021](#).

⁶⁴ Government Offices of Sweden (2022a), [Sveriges återhämtningsplan](#), Stockholm, Government Offices of Sweden.

⁶⁵ Government Offices of Sweden (2021a), [Sveriges nationella reformprogram 2021](#), Stockholm, Government Offices of Sweden.

⁶⁶ E.g. Government Offices of Sweden (2021b), [Nationell strategi för hållbar regional utveckling i hela landet 2021–2030](#), Stockholm, Ministry of Enterprise.

⁶⁷ A deeper discussion of the methods by which Member States uprate their benefits systems is beyond the scope of this study, but has been treated in e.g. Frazer and Marlier (2016), 'Minimum Income Schemes in Europe: A Study of National Policies 2015', European Social Policy Network (ESPN), Brussels, European Commission (DG EMPL).

- Denmark, where a political agreement on a 'Fund for mixed cities' was adopted in 2021, aiming to provide more affordable housing and tackle homelessness, indirectly addresses the issue of accessing water, sanitation and energy services;
- Greece introduced the social solidarity income and the housing benefit in 2017 and 2019, respectively;
- Malta, where a wage supplement was put in place during the COVID-19 pandemic to protect workers in the most affected sectors;
- Italy, where a national minimum income scheme was introduced in 2018 (and subsequently revised and extended in 2019) and the conditions to access cash benefits (including for water, sanitation, electricity and gas) have been modified, to benefit a larger share of the population;
- Germany, where the housing allowance was expanded in 2021 to take into account new CO₂ pricing, in an attempt not to pass this cost on to consumers;
- Latvia, where the introduction of Regulations No 809 regarding the Assessment of the Material Situation of a Household and Receipt of Social Assistance has led to an increase in the number of housing allowance recipients;
- Slovakia adopted a new Strategy of the Slovak Republic for Integration of Roma for 2030 in 2021⁶⁸.

The **COVID-19 pandemic** required most EU Member States to expand their current essential service support measures, or to implement new ones. Such measures were generally found in relation to Digital Communications and Energy, and – to a smaller extent – Transport (see Table 10 for an overview of Member States that experienced policy developments in these fields). In general, these are ad-hoc and temporary measures, and therefore are not likely to constitute a structural change in the way access to essential services is addressed in Member States.

Table 10 – Overview of Member States that implemented policy developments relating to the following services

Digital communications	Energy	Financial services
CZ, DE, FR, IT, HU, HR, RO, MT, PT, SE	All Member States	BG, IE, HR
Transport	Water and sanitation	
DE, EE, IE, HR, MT, LU	BE, BU, IT, LT, PT	

Source: Milieu elaboration based on national reports.

Virtually all EU Member States also introduced relief measures in response to **increasing energy prices**, either during the 2021-2022 heating season or in response to energy market instability following the Russian-Ukrainian war in 2022⁶⁹. Most of the measures that were introduced were temporary or one-off emergency measures aimed

⁶⁸ Slovak Republic Ministry of the Interior (2021), *Stratégia pre rovnosť, inklúziu a participáciu Rómov do roku 2030* [Online]. Available online: <https://www.minv.sk/?strategia-pre-rovnost-inkluziu-a-participaciju-romov-do-roku-2030> [Accessed 1 September 2022].

⁶⁹ Indicated through national reports, and additionally through feedback from senior thematic expert. A relatively up-to-date summary on national policies to cushion against rising energy prices can be found in Sgaravatti, Tagliapietra and Zachmann (2022), *National policies to shield consumers from rising energy prices* [Online]. Brussels: Bruegel. Available online: <https://www.bruegel.org/dataset/national-policies-shield-consumers-rising-energy-prices> [Accessed 28 July 2022].

at ensuring access (e.g. disconnection bans) or affordability (e.g. caps on energy prices, subsidies or payment deferrals). In one case, France, two energy suppliers (Plüm Energie and EDF) decided to maintain a minimum service of energy to replace disconnections in case of bill arrears⁷⁰.

The introduction of these energy-related measures may indicate that traditional social policy programmes are insufficient in meeting price pressures in an unstable and rapidly changing energy market. This is, however, not the case in all countries – as in some cases traditional social policy programmes were sufficient to address the emergency state.

Notably, **it seems that the EPSR, given its overarching nature, has provided only a limited impetus to these reforms, which have rather been stimulated by the health emergency and political context.**

3.2. Service-specific Member State developments

3.2.1. Digital communications

EU actions to increase access

The first ground-breaking initiative that was introduced in the EU regarding digital communications was the Commission's 'Digital Agenda for Europe' in 2010, which set out ambitious goals such as increasing regular internet use to 75 % by 2015 and providing fast broadband access to all EU citizens by 2020⁷¹. Afterwards, the Commission followed this with a new strategy in 2015, which was chiefly based on 'providing better access for consumers and businesses to digital goods and services across Europe, creating the right conditions for digital networks and services to flourish, and maximising the growth potential of the digital economy'⁷².

In addition, several other policies and initiatives were put in place to help foster digital inclusion:

- The **Universal Service Directive** in 2002, which provides users universal access to certain digital communications services at an affordable price as a basic right⁷³;
- The **eEurope** action plans for 2002⁷⁴ and 2005⁷⁵ and the i2010 strategy framework⁷⁶, with the aim of making the digital and information society available to all;
- The **WiFi4EU** initiative in 2017, offering free Wi-Fi in public spaces throughout Europe⁷⁷; and

⁷⁰ EDF (2021), 'EDF will no longer request that electricity be cut off to its residential customers', press release of 12 November 2021. Paris: EDF. Available: <https://www.edf.fr/sites/groupe/files/epresspack/1927/46d73d5eefa09162d46a07a25e304eb3.pdf>.

⁷¹ Communication COM(2010) 245 final from the Commission on A Digital Agenda for Europe, pp. 40-41.

⁷² Communication COM(2015) 192 final from the Commission on A Digital Single Market Strategy for Europe, pp. 3-4.

⁷³ Directive 2002/22/EC on universal service and users' rights relating to electronic communications networks and services.

⁷⁴ Communication COM(2001) 140 final from the Commission on eEurope 2002: Impact and Priorities.

⁷⁵ Communication COM(2002) 263 final from the Commission on eEurope 2005: An information society for all.

⁷⁶ Communication COM(2005) 229 final from the Commission on i2010 – A European Information Society for growth and employment.

⁷⁷ Regulation (EU) 2017/1953 amending Regulations (EU) No 1316/2013 and (EU) No 283/2014 as regards the promotion of internet connectivity in local communities.

- The **abolition of roaming charges** in 2017, which helped lower cost barriers⁷⁸.

Member States' action since 2017

The digital communications' service area has been among those that has seen most developments since 2017. This particularly occurred as a result of the **COVID-19 pandemic**, which either highlighted existing deficiencies in support provision, or required immediate ad hoc solutions and measures. In a number of EU Member States, this led to the adoption of dedicated strategies or measures on infrastructure improvements, mostly to **improve physical access to digital communications and its quality**. In other states, such as Portugal, this led to the (temporary) provision of an uninterrupted supply of electronic communication services⁷⁹.

In a number of Member States, **access to internet or IT equipment was provided free or at a discounted rate**. In Hungary, this led to the introduction of a new support measure whereby households with children in home schooling during the state of emergency received free internet access. Some support packages were also introduced in France⁸⁰, Croatia⁸¹, Greece⁸², Romania, Italy⁸³, Latvia⁸⁴, Portugal⁸⁵, Poland⁸⁶, and Malta for this purpose. Aid for the purchase of IT equipment was mostly targeted at children enrolled in school and teachers, or to the elderly⁸⁷, while reduced tariffs for the internet or free internet was rather provided to the broader population. Reduced tariffs are most often provided by universal services' operators.

In Germany and Sweden, the **minimum acceptable internet speed** was either revised or specified in the period since the last report. In Germany, this is being carried out through the Telecommunications Modernisation Act of 2021⁸⁸ which transposed the recast Electronic Communications Directive⁸⁹. As part of a broader package of consumer protection in the digital sphere, the Act also tasks the Federal Network Agency for Electricity, Gas, Telecommunications, Post and Railways to assess whether an internet

⁷⁸ Regulation (EU) No 531/2012 on roaming on public mobile communications networks within the Union.

⁷⁹ The measure was in force until 31 March 2022.

⁸⁰ In France, the Digital Cohesion Scheme provides a governmental premium of EUR 150 (and from April 2020 from EUR 300 to EUR 600 based on resources) for residents of badly connected rural areas (white areas) which can be used to finance the equipment, installation or activation of high-speed wireless connection.

⁸¹ In Croatia, a reduced rate – 50% discount for socially vulnerable citizens for a "MAXnet mini" package was offered by Hrvatski telekom, as the universal services operator as of 2020.

⁸² Greece established a subsidy for the purchase of technological equipment (tablet, laptop, desktop). The beneficiaries are supported with checks worth € 200 to purchase technological equipment and cover their needs on access to educational services. The 1st round of the subsidy was provided in 2021 and a 2nd round is planned for 2022.

⁸³ Italy provided support for ultra-wideband connectivity services at least 30 Mbit/s download (The 'voucher Plan' for Less Affluent Families), as well as a 'digitalisation kit' for families that include at least one member enrolled at school or university. In addition, low-income families that did not have an internet or mobile phone contract were granted a free loan of a mobile phone, PC or tablet with connectivity for one year.

⁸⁴ Latvia provided the necessary equipment as gifts and distributed the equipment to the local governments, that transferred them to educational institutions and children in need.

⁸⁵ The Social Internet Access Tariff (TSI) was introduced in 2021 to support consumers from vulnerable socio-economic backgrounds or with special social needs that, for financial reasons, are excluded from access to essential digital services.

⁸⁶ In Poland, the Broadband Fund was created in 2019. The Fund offers subsidies for the purchase of telecommunication services and equipment for various beneficiaries including individual consumers.

⁸⁷ One scheme provided a discount to Maltese residents over 60 years old for internet services. Additionally, a 2021 pilot project named 'Digital Connect' extended access to free laptops and internet access for 2 300 households already in receipt of either a 'pink card'.

⁸⁸ In German: *Telekommunikationsmodernisierungsgesetz*.

⁸⁹ Directive (EU) 2018/1972 establishing the European Electronic Communications Code (Recast).

speed of 10 Mbit/s for uploads and 1.3 Mbit/s for downloads would be a feasible minimum guaranteed speed⁹⁰. In Sweden, an internet speed of 10 Mbit/s was established in 2018.

Additionally, in Czechia the **introduction of the internet as a universal service** is being reviewed by the Telecommunications Office. The review was announced in December 2021, and a decision is expected in Q4 of 2022. If implemented, the suggestion would strengthen the rights of citizens to receive an internet connection in their main residence, and the obligation of service providers to ensure this for anyone who requests it. In France, the transposition of Directive (EU) 2018/1972 led to a reform of the ‘universal service for electronic communications’ – however implementing acts have not yet been adopted, leading to the extension of current social offers until 2023. Along these lines of action, the Malta Communications Authority (MCA) has been installing, since 2015, a network of public WiFi hotspots on the island.

3.2.2. Energy

EU actions to increase access

Prior to the adoption of the EPSR, a number of regulations contributed to a consumer-centric approach to EU energy policy. This begins in 2003 with the introduction of the concept of ‘vulnerable consumers’ in EU legislation through the electricity and gas directives⁹¹. This was supplemented with a 2007 communication regarding a European Charter on the Rights of Energy Consumers, which recognised that having access to electricity was essential for citizens and that consumers had the right to ‘access to adequate levels of energy and reasonable prices’⁹². Finally, ‘energy poverty’ is introduced as a concept in the 2009 energy package with the directives on energy and gas⁹³.

Following this, a number of legislative initiatives are launched in the 2010s:

- **Energy efficiency directives**, which aim to make energy consumption more sustainable integrate discussions of how energy poverty may be reduced as a result⁹⁴.
- A 2015 Communication on delivering a **New Deal for Energy Consumers**, which insisted that Member States take actions to alleviate energy poverty by (1) providing assistance to vulnerable consumers, (2) improving energy efficiency and (3) taking into account other factors such as lack of information, lack of cost transparency, and lack of access to self-consumption⁹⁵.
- The **Clean Energy for all Europeans Package**, which was carried out between 2016 and 2019 and focused on the implementation of the Energy Union. It included measures such as accelerating renovation rates to decrease energy poverty, insisting on EU Member States defining energy poverty, and planning for the launch

⁹⁰ This assessment is in progress at the time of writing and is due to report later in 2022.

⁹¹ Directive 2003/54/EC concerning common rules for the internal market in electricity; Directive 2003/55/EC concerning common rules for the internal market in natural gas.

⁹² Communication COM(2007) 386 final from the Commission, Towards a European Charter on the Rights of Energy Consumers.

⁹³ Directive 2009/72/EC concerning common rules for the internal market in electricity; Directive 2009/73/EC concerning common rules for the internal markets in natural gas. The electricity directive has since been recast as Directive (EU) 2019/944 on common rules for the internal market for electricity.

⁹⁴ Directive 2010/31/EU on the energy performance of buildings; Directive 2012/27/EU on energy efficiency.

⁹⁵ Communication COM(2015) 339 final from the Commission on Delivering a New Deal for Energy Consumers. See also Communication COM/2015/080 final from the Commission on A Framework Strategy for a Resilient Energy Union with a Forward-Looking Climate Change Policy.

of a European Energy Poverty Observatory (EPOV)⁹⁶, which was eventually launched in 2018.

In addition, a number of non-legislative initiatives were also taken, such as (1) the Citizens' Energy Forum, which was set up in 2008 and has met annually since, and (2) the vulnerable consumer working group initiated by the Commission, which met in 2011-2013 and again in 2015, issuing guidance to EU Member States on defining vulnerable consumers and energy poverty⁹⁷.

Member States' action since 2017

Following **significant energy price increases in the 2021/2022 heating season**, the issue of energy poverty has become more visible in many Member States. It has also been raised on an EU level, with communications both on the high energy prices more generally⁹⁸, and more specifically in reference to the Russian invasion of Ukraine in 2022, and what it means for the future of EU energy consumption⁹⁹.

In recognition of the difficulties faced by households as a result of the increases in energy prices, virtually all EU Member States have provided assistance¹⁰⁰. In Denmark this came in the form of a 2021 heating package and a 2022 political agreement on heating assistance to assist low-income households. Austria¹⁰¹, Belgium, Bulgaria¹⁰², Croatia¹⁰³,

⁹⁶ European Commission (2019a), 'Clean Energy for all Europeans', Luxembourg, Publications Office of the European Union.

⁹⁷ European Commission (2015), 'Vulnerable Consumer Working Group: Working Paper on Energy Poverty', European Commission (DG ENER), Brussels. Available online: <https://ec.europa.eu/energy/sites/ener/files/documents/Working Paper on Energy Poverty.pdf>.

⁹⁸ European Commission (2021e), 'Questions and Answers: Commission Communication on Energy Prices', press release of 13 October 2021. Brussels: European Commission.

⁹⁹ Communication COM(2022) 108 final from the Commission on REPowerEU: Joint European Action for more affordable, secure and sustainable energy.

¹⁰⁰ Sgaravatti, Tagliapietra and Zachmann (2022).

¹⁰¹ Austria provides a (one-off) voucher amounting to € 150 to reduce the electricity bill of the main residence (Energy Cost Compensation Act 2022).

¹⁰² Bulgaria provided a one-time aid for heating to low-income individuals in the 2021-2022 season, as well as approved a moratorium that prevented prices to rise beyond the levels of December 2021 (until March 2022). In May 2022, the government proposed additional measures such as removal of excise tax on natural gas, liquefied petroleum gas (propane-butane) and methane, and a decrease of the Value Added Tax (VAT) for natural gas and liquefied petroleum gas to 9 %; decrease of the biofuel prices.

¹⁰³ In Croatia, a regulation that entitles the vulnerable consumer to a voucher for energy consumption was revised to double the amount of the voucher (from 200 kunas to 400 kunas – approx. 53 EUR). The government also set the solidarity surcharge, in the amount of 0.03 kunas for each kWh of consumer energy, which has to be paid to the supplier by regular consumers of electricity.

Estonia¹⁰⁴, France¹⁰⁵, Finland¹⁰⁶, Greece¹⁰⁷, Latvia, Lithuania¹⁰⁸, Netherlands¹⁰⁹, Luxembourg¹¹⁰, Poland, Romania and Sweden similarly implemented **compensation schemes** for high prices, most often extending it to all households based on their energy usage. These cash-benefits are usually established for specific periods of time, in particular the winter months. **Energy bonuses, special tariffs or caps on energy prices** were implemented in other Member States, including Bulgaria, Estonia, Ireland, Italy, Latvia and Poland, Portugal. In other countries (such as Czechia¹¹¹), these special tariffs have not been introduced yet (at the time of writing of this report) but are expected to be discussed in the course of 2022. In Lithuania, domestic consumers have the possibility to gradually switch to purchasing their electricity from selected independent suppliers (refusing of the services of the monopoly public supplier) between 2021 and 2023 (in three phases between 2020 and 2022). This transition is expected to reduce the cost of electricity for consumers and increase the choice of service packages.

Other countries (Austria, Cyprus, France, Poland and Romania) established a **ban on disconnection** from the energy supply in case of lack of payment, or guaranteed access through guaranteed uninterrupted supply (Portugal). In addition to this, in Germany, among other measures, a previous energy surcharge intended to encourage a transition to renewable energy was abolished in 2022 to alleviate costs. This can be considered a structural measure, as the government planned to abolish the surcharge permanently anyways, but at a later stage. The rise in energy prices simply prompted the government to act earlier than planned¹¹². In the same area, the Dutch government stopped two schemes called “Energy Consumption Reduction Scheme” and “Reduction of Energy Consumption in Housing” respectively in 2019 and 2021.

Finally, according to the national experts that developed the national reports, some Member States recently adopted or formulated a definition of energy poverty. This is for instance the case for Poland and Estonia¹¹³.

¹⁰⁴ This included universal measures that were applied to all households that received an energy bill (e.g. reduction of electricity and gas network fees, setting price cap for electricity, gas and heating bills) and measures targeted directly to low-income households (reimbursement of electricity bills for people with below median income).

¹⁰⁵ France provides (since 2018) an energy voucher to support low-income households to pay their energy bills. An additional energy voucher of EUR 100 was paid in December 2021 (in addition to the one already received between March and April 2021). This voucher is valid until March 2023.

¹⁰⁶ The position of consumers on the electricity market has been improved by the government intervention in energy transmission fees that can be charged to customers, which have been lowered in 2022.

¹⁰⁷ In 2017 and in 2020, a one-time special assistance to support low-income consumers, who were disconnected from the electricity grid due to overdue debts.

¹⁰⁸ In Lithuania, amendments to the Law on Natural Gas, the Law on Electricity, the Law on Energy Resources Markets and the Law on Heat Sector were adopted to minimise the impact of the price hike for electricity, gas and heat on households.

¹⁰⁹ The Dutch government implemented three main policy measures: 1) A generic compensation of around €400 per household by (temporarily) lowering energy taxes; 2) A one-off allowance of €800 given to people in social assistance and potentially other groups that also need it; 3) Finally, €150 million of funds were made available to all municipalities to assist households with energy poverty to save costs on energy.

¹¹⁰ In Luxembourg, an energy bonus (between €200 and €400 per household) was provided in 2022 to low-income households. This amount was paid together with the cost-of-living benefit.

¹¹¹ On 22 June 2022, the Czech Government is expected to discuss the introduction of a temporary energy tariff for households, that would be in place for the upcoming winter, based on which the state would guarantee consumers a discount of 15 – 20 %.

¹¹² The Federal Government of Germany (2021), 'Relief for electricity consumers', press release of 27 April 2022. Berlin: Press and Information Office of the Federal Government. Available: <https://www.bundesregierung.de/breg-en/news/renewable-energy-sources-act-levy-abolished-2011854>.

¹¹³ In the Energy Sector Organisation Act, person suffering from energy poverty and vulnerable energy consumers are defined since October 2020. [Energy Sector Organisation Act](#), in effect since July 2016.

3.2.3. Financial services

EU actions to increase access

An important enabler of financial inclusion is the PAD¹¹⁴, which was set up in 2014. It aims to universally provide a right of access to a payment account with basic features for all legally resident in the EU.

In terms of improving financial literacy, there were key initiatives introduced that emphasised the need for financial education. For instance, the Mortgage Credit Directive (MCD)¹¹⁵ in 2014 focuses on guiding consumers through responsible borrowing and debt management, particularly with mortgage credit agreements. Additionally:

- The **Electric Money Directive**¹¹⁶ of 2009 helps to regulate the e-money systems in the EU and fosters healthy competition, which allows more access to consumers.
- Initially proposed in 2011, but implemented in 2019, the **European Accessibility Act (EAA)**¹¹⁷ identified opportunities for the older people and people with disabilities to access certain financial products and services, such as websites and mobile device-based applications.
- The **Markets in Financial Instruments Directive (MiFID) 2**¹¹⁸ of 2014 helped increased the access to financial services for investors through the markets of financial instruments, replacing MiFID 1 that was adopted in 2004.
- In 2015, the **Payment Services Directive 2 (PSD 2)**¹¹⁹ facilitated electronic payments in the EU with the purpose of making international payments within the internal market as easy, efficient and secure as payments within a Member State.
- The **Consumer Financial Services Action Plan**¹²⁰ in 2017, followed after the **Green Paper on retail financial services**¹²¹ in 2015, touched on the need for a deeply integrated market for retail financial services so that consumers could access financial services in other EU Member States.

Member States' action since 2017

No major policy changes were identified for financial services since the completion of the ESPN report. However, some developments outside the domain of access to essential services have had an effect on access for vulnerable people. Stakeholders in Malta reported that the grey listing in May 2021 by the Financial Action Task Force (FATF) means that there are new barriers to access for many vulnerable people: following the FATF requirements of increased monitoring and strengthened measures to prevent money laundering¹²², identification and documentary requirements for new customers

¹¹⁴ Directive 2014/92/EU.

¹¹⁵ Directive 2014/17/EU on credit agreements for consumers relating to residential immovable property.

¹¹⁶ Directive 2009/110/EC on the taking up, pursuit and prudential supervision of the business of electronic money institutions.

¹¹⁷ Directive 2019/882 on the accessibility requirements for products and services.

¹¹⁸ Directive 2014/65/EU on markets in financial instruments.

¹¹⁹ Directive (EU) 2015/2366 on payment services in the internal market.

¹²⁰ Communication COM/2017/0139 final from the Commission on the Consumer Financial Services Action Plan: Better Products, More Choice.

¹²¹ Communication COM/2015/0630 final on the Commission Green Paper on retail financial services Better products, more choice, and greater opportunities for consumers and businesses.

¹²² More information on the financial grey listing of Malta, and progress towards strengthening their institutions, can be accessed in Council of Europe Moneyval Committee (2021), 'Anti-money laundering and counter-terrorist financing

risk excluding many from the system. In addition, there have always been efforts in the country to promote financial capability amongst vulnerable groups since 2017. A working group in the Ministry of Finance known as GEMMA was set up to run campaigns aimed at informing and educating specific population groups about financial matters, such as managing debt, managing a daily budget, understanding consumer rights, understanding the social security system, financial literacy and preparation for retirement.

In the same period, the Croatian Central Bank sent several letters to credit institutions in Croatia, asking them to take special care of older citizens and other vulnerable groups in order to reduce risks of infection, while preserving access to financial services. One of the measures had been to **remove any fees on ATM machines of other credit institutions**. Additionally, based on the request from the Croatian Central Bank, credit institutions organised special working times, increased the amount for non-contact payment and ensured that at least one mode of withdrawing the funds from the account has to be free of charge (either at the bank or at the ATM machine).

Additionally, in light of the war in Ukraine, **special rights have been granted to Ukrainian refugees** who have the right to open a payment account which is entirely comparable to an account held by other citizens¹²³.

Finally, Member States such as Bulgaria, Estonia and Ireland have adopted strategies on financial literacy and inclusion.

3.2.4. Transport

EU actions to increase access

The current EU approach to public transport, including the emphasis on its importance for sustainability and social inclusivity, arguably begins with the **2007 Green Paper on urban transport**. This publication argued that access to public transport in urban mobility systems is of key importance to increase usage among the population, thus decreasing pollution and making urban areas more accessible¹²⁴. This was reinforced by the **2009 Action Plan on Urban Mobility**, where the Commission for the first time presented a comprehensive support package in the field of urban mobility¹²⁵, and by the **2011 White Paper** which argued that the 'quality, accessibility and reliability of transport services will gain increasing importance' in coming years¹²⁶.

Under the Juncker Commission, efforts increased towards decarbonisation of the transport sector and an expansion of cooperative and connected transport systems. The **Europe on the Move policy package**, released in three parts in 2017-2018, were put forward with the aim of 'ensuring a smooth transition towards clean, competitive and connected mobility for all'¹²⁷, but overall did not significantly discuss access issues.

More recently, the **2019 Accessibility Act** which implemented a number of provisions regarding the rights of people with disabilities required that public transport services be made more accessible, e.g. by considering the accessibility of information, vehicles, and

measures: Malta', Committee of Experts on the Evaluation of Anti-Money Laundering Measures and the Financing of Terrorism (Moneyval), Strasbourg, Council of Europe. .

¹²³ This follows the provisions in the PAD that all who are legally resident qualify for the protections listed under the directive. Within the scope of the EU's temporary protection scheme, all Ukrainian refugees are considered legally resident.

¹²⁴ Communication COM/2007/0551 final on the Commission Green Paper Towards a new culture for urban mobility.

¹²⁵ Communication COM(2009) 0490 final from the Commission on an Action Plan on Urban Mobility.

¹²⁶ Communication COM(2011) 144 final on the Commission White Paper on the Roadmap to a Single European Transport Area – Towards a competitive and resource efficient transport system, clause 41.

¹²⁷ Communication COM/2018/293 final from the Commission on Sustainable Mobility for Europe: safe, connected, and clean.

the platforms and interfaces through which people use public transport services¹²⁸. Some measures within the Green Deal and broader environmental transition have also been identified as possible causes of increased issues to access transportation services if they are not paired with economic assistance for those already at risk: this is specifically discussed in relation to increased energy prices if non-sustainable energy sources such as fossil fuels are more heavily taxed, and in relation to higher taxation of fossil-fuelled vehicles¹²⁹.

Member States' action since 2017

The only significant change with regard to transport policy was the **implementation of free public transport for all in Malta in 2022**. Previously, free public transport was available to specific population groups such as school children and old-age individuals. The reform is intended to increase usage of public transport, which constitutes less than 20 % of all trips in Malta, in part due to heavy congestion and poor public transport coverage in the countryside. Free public transport has also been implemented in 11 of Estonia's 15 counties since 2018, and in Luxembourg as of March 2020. In Croatia, free public transport is provided for Ukrainian nationals and to primary and secondary school children (from 2021 to 2022). Free public transport is also provided in several municipalities in Lithuania, which have adopted this measure in the last two years.

Ireland has implemented additional **reductions in public transport fares** as a response to the rising costs of living. In April 2022, public transport fares were cut by 20 %. In May a 'Young Adult Card' was also introduced, reducing fares for those under 24 years old by 50 %¹³⁰. Other measures were implemented in relations to the COVID-19 pandemic or the Ukrainian crisis. For instance, in Finland, the maximum tax deduction for travel expenses between home and the workplace will be temporarily increased in 2022. In Italy, a bonus to support families for the use of public transport was implemented in May 2022, as part of a broader Decree entered into force to support the population in relations to the Ukrainian crisis. In Hungary, local public transport was offered free of charge to those involved in the containment of the virus. In Croatia, Ukrainian nationals are entitled to free rail transport¹³¹.

Poland has earmarked funds for the development of bus transport in non-urban areas as a measure to address the problem of declining public transport outside urban areas and the resulting transport exclusion.

3.2.5. Water and sanitation

EU actions to increase access

In the EU, drinking water supply is mostly governed by the **Drinking Water Directive (DWD)** in place since 1998, which was recently recast as Directive (EU) 2020/2184¹³². The objective of the preceding 1998 Directive was on the quality of water intended for

¹²⁸ Directive 2019/882.

¹²⁹ Proposal COM(2021) 801 final for a Council Recommendation ensuring a fair transition towards climate neutrality; Proposal COM(2021) 568 final for a Regulation establishing a Social Climate Fund.

¹³⁰ Although outside the time frame covered by this report, additional discounts were implemented in the summer of 2022. In Germany a EUR 9 season ticket for all public transport was introduced for the months of June, July and August, and in Spain, free season tickets will be offered from September until the end of the year.

¹³¹ For the right of Ukrainian nationals for free rail transport see the website of Hrvatske željeznice Passenger Transport: <http://www.hzpp.hr/hrvatska-za-ukrajinu?p=271>.

¹³² Directive (EU) 2020/2184 on the quality of water intended for human consumption. Up until early 2021, the relevant legislation was in the form of Council Directive 98/83/EC on the quality of water intended for human consumption (the Drinking Water Directive, DWD).

human consumption and to protect human health from the adverse effects of any contamination of water.

The **recast of the Directive** maintained this objective. However, it crucially also added the objective to improve access to water intended for human consumption¹³³. Article 16 of the Directive includes the following provisions, among others, that EU Member States should consider, in particular for vulnerable and marginalised groups¹³⁴:

- Identify people without access, or with limited access, to water intended for human consumption, including vulnerable and marginalised groups, and reasons for such lack of access;
- Assess possibilities for improving access for such people;
- Inform such people about possibilities for connecting to the distribution network or about alternative means of having access to water intended for human consumption; and
- Take measures that they consider necessary and appropriate to ensure that there is access to water intended for human consumption for vulnerable and marginalised groups.

Moving from drinking water to sanitation, a European key policy is the **Waste Water Treatment Directive (UWWTD)**¹³⁵. It regulates discharges of municipal and agrifood waste water and specifies the kind of treatment that must be provided. The Directive was adopted in 1991 and requires Member States to build and maintain urban waste water collection systems and to treat the collected waste waters depending on where these are discharged. Thirty-one years after the adoption of the UWWTD, considerable progress has been made in its implementation. With the increase of tertiary treatment installations (e.g. in Central Europe the national population connected to waste water treatment plants with tertiary treatment increased from 30 % to over 80 % from 1990 to 2015), the UWWTD has been successful in increasing connection of households to collection and treatment systems and thus lowering nitrogen and phosphorus emissions to the aquatic environment. Through the investments, both access to sanitation and access to clean water has been significantly improved in the EU.

On an international scale, in 2015, the **2030 Agenda for Sustainable Development** put the issue of access to water and waste water services for all at the centre of the international policy agenda¹³⁶. Even before this, at a global level, sanitation was identified as a major issue, as evident e.g., through countless water, sanitation and hygiene (WASH) interventions from humanitarian organisations.

Member States' action since 2017

The only changes identified for water and sanitation concern the **energy bonuses and vouchers in Italy**. The water bonus was introduced in 2018 and it ensures that individuals entitled to this benefit receive – free of charge - 50 litres of water per day. This is a means-tested measure, and the value of the water bonus differs according to the geographical area in which the subsidised supply is located, as water tariffs are not the same at national level. As of 2021, two separate tap and drinking water bonuses

¹³³ As stated in the preamble of the Directive, this was included as a follow-up to the Right2Water initiative which identified the issue that part of the population – and especially certain marginalised groups – have no access to water intended for human consumption, and that providing such access is a commitment under SDG 6.

¹³⁴ In this context, the definition of 'marginalised groups' is provided by the Member States themselves.

¹³⁵ Council Directive 91/271/EEC concerning urban waste-water treatment (the Urban Waste-Water Treatment Directive UWWTD).

¹³⁶ UN General Assembly Resolution A/RES/70/1 of 21 October 2015, Transforming our world: the 2030 Agenda for Sustainable Development, recital 7.

were introduced, which provide respectively a partial reimbursement (up to 50 %) of plumbing expenses, or expenses for the purchase of bathrooms and sinks and the replacement of appliances in homes and businesses, as well as the reimbursement of up to 50 % of the expenses incurred for purification, filtering and mineralisation of domestic water for citizens that apply (with no income requirement).

In Lithuania the government **extended the eligibility criteria for compensations** for heating, drinking and hot water costs, and therefore a larger number of people could benefit from it. This was put in place because of the emergency and the COVID-19-related lockdown in the country, and it will remain in place for some time thereafter, from May 2020 until April 2024). In France, the possibility for local authorities to apply social water pricing or provide financial support for the payment of water bills was extended to all municipalities in 2019, following an experiment in 50 municipalities. **Bans on disconnection from water** were implemented in Belgium and Portugal, also in relation to COVID-19, and Bulgaria established **caps on water supply and sanitation prices**. Finally, in Poland, the procedures for setting water and sewage tariffs were changed in 2018, and now the tariffs must be approved by the central regulator (the Polish state water authority).

4. Legal and policy framework

This section explores the legal and regulatory frameworks in place to support access to essential services. Section 4.1 elaborates on the governance of services in terms of the main support measures in place, as well as a brief discussion on how the broader welfare state structures provide support to accessing essential services. Sections 4.2 and 4.3 then survey the identified definitions of ‘essential service(s)’ and ‘affordability’ in the EU Member States, and whether these are concepts that are present in the policy frameworks.

4.1. Governance

Overall design of welfare systems

Access to the different essential services is almost never collectively discussed in Member States. Instead, single services are referred to in a number of separate strategic and policy documents, making the policy framework for these services quite fragmented. In almost **half of the Member States, access to essential services is primarily sought through the main minimum income benefit of the Member State**. Minimum income benefits, such as social assistance, are in these cases used as the main measure to ensure that households in need are able to meet living costs, essential service-related or otherwise.

The exact design of the social assistance or minimum income schemes of each country vary, and can either consist of a lump sum based on the household’s income in relation to a defined subsistence level and/or its composition; or it can consist of multiple components, one of which relates to expenses on essential services¹³⁷. The former policy design is more common. Two prominent examples of the latter form are Sweden, where income support includes a component covering ‘reasonable costs of housing’ relative to the local area; and Germany, where the minimum income support includes specific components for payment of a range of goods, including essential services.

In some EU Member States, a specific housing allowance or rent support is provided to low-income households, which most can include a component dedicated to covering energy and water-related expenses. Receipt of a certain minimum income benefit can also be used as a way of identifying the target population of other policy measures (e.g. receipt of old-age pension can be used as a way of automatically allocating social tariffs for old-age pensioners).

In the rest of the Member States, support to access to essential services is provided mostly through specific measures addressed to each of the services separately, mainly via reduced tariffs, cost reimbursements and dedicated cash benefits. Notably, in most cases, the affordability of the services is not the main focus of measures aimed at providing access to essential services. Other aspects such as physical access are privileged.

Two Member States stand out as relying more heavily than others on targeted and service-specific measures, rather than providing assistance through more prominent social welfare payments. **In Italy, access measures (for all services) focus on special tariffs and discounts** which to an extent are targeted towards low-income households. **Hungary has in place a system of identifying ‘vulnerable consumers’** based on

¹³⁷ A summary of social assistance and guaranteed minimum income schemes as mapped out by the national reports is presented in Table 32 in Annex B.

receipt of other benefits such as carer's allowances or old-age pensions, allowing them access to certain reduced tariffs.

Digital communications

Efforts to increase access to digital communications have generally concerned **quality and infrastructure access rather than affordability**. This is often outlined in digital transformation plans or digitalisation strategies of the Member States. Most Member States focus particularly on increasing the reach of the broadband network to cover "white areas" (e.g. Belgium, Estonia, France, Greece, Ireland, Italy, Lithuania, Malta, Poland, Romania, Slovenia and Spain).

A number of EU Member States have also established some **concrete goals towards internet access** specified in legislation or public guidance documents. Those identified are summarised in Table 11.

Table 11 – Definitions and targets of minimum internet download or upload speeds

Member State	Identified definitions or targets of minimum download or upload speeds
DK	98 % of households should have access to internet with 1 Gb/s download speed by 2025.
EE	100 % of households and companies should have access to internet of at least 100 Mb/s which can be increased up to 1 Gb/s by 2030. Estonia also aims to increase the share of people satisfied with digital services from 69 % in 2019 to 90 % by 2030.
FI	All households should have access to internet with 100 Mb/s download speed by 2025.
DE	A discussion is ongoing regarding the level of internet speed that is to be considered minimum applicable internet speed. The current proposal is 10 Mb/s for uploads and 1.3 Mb/s for downloads.
IE	100 % of the rollout area (rural areas account for 23 % of the population in about approximately 554 000 homes, farms, schools and businesses) with minimum speeds of 500 Mb/s.
LV	All Latvian residents to have access to internet speed of at least 100 Mb/s, upgradable to gigabit, in both urban and rural areas. Moreover, all large urban areas should have 5G coverage.
MT	There is a universal service obligation incumbent on suppliers to provide internet to all those who apply for it. As of 2021, the required speed is a 30 Mb/s download speed and 1.5 Mb/s upload speed, and an unlimited data cap.
NL	All households should have access to internet with 100 Mb/s speed by the end of 2023, and a large majority should have access to 1 Gb/s.
PL	Universal access to the internet with a capacity of at least 100 Mb/s by 2025, with a possibility of upgrade of the bandwidth measured in Gb/s. Internet access with a capacity of at least 1 Gb/s for all organisations that are the main driving forces of socio-economic development. These include schools, transport hubs, and major public service locations. This also applies to enterprises with intensive internet activity. Fully developed 5G connectivity on all major communication routes and in major urban centres.
SE	10 Mb/s download speed is specific as minimum applicable internet speed since 2018.

Member State	Identified definitions or targets of minimum download or upload speeds
SI	All households to have access to internet at a speed of at least 100 Mb/s which can be upgraded to Gb speed.
SK	All households should have an internet connection with a data download speed of at least 100 Mb/s with the possibility of expansion to 1 Gb/s by 2030. Coverage of socio-economic interaction entities with a connection speed of at least 1 Gb/s (for e.g. schools, institutions, offices, transport hubs) by 2030.

Source: Milieu elaboration based on national reports.

Note: This summary is based on the targets and definitions found by national experts in the course of their investigation, and that additional targets may be in place e.g. on a subnational level.

Tariff reductions and subsidies/compensations for low-income households were identified in almost half of the EU Member States. More information on these schemes is provided in Section 7.

Some schemes have also facilitated the **distribution of equipment to individuals or households in need**, especially school children in light of the COVID-19 pandemic. Such schemes were identified in France, the Netherlands and Romania.

In three Member States, Belgium, France and Hungary, digital communications are considered as a **‘universal service’**.

Moreover, Belgium, Czechia, Denmark, Estonia, Finland, Greece, Lithuania, and the Netherlands report that there are distinct strategies in place to **increase the digitalisation – and with it, access – of public services**. The exact means vary, but include digitalisation of public service portals, provision of free WiFi in public buildings, and better integration between services.

Finally, a lack of digital skills can be a barrier to accessing essential services, such as financial services, especially in EU Member States with a high degree of digitalisation. Several measures are in place in the Member States, particularly **training for digitally low-skilled people**. These schemes often target individuals of old age. Such digital literacy strategies and programmes have been identified in Belgium, Czechia, Estonia, Finland, France, Greece, Ireland, Latvia, Lithuania, Poland, Slovakia and Spain.

Energy

Governance of energy services generally focuses on the energy transition, in particular supporting the improvement of energy efficiency or use of renewable energy in all households – not exclusively low-income ones. More recently, these also include significant elements of affordability and access. **Reduced tariffs and cost reimbursements** are by far the most adopted measures to ensure access to energy in EU Member States, together with assistance provided in the context of **housing allowances and social assistance schemes**. In addition to longstanding measures, additional measures to **compensate households for high energy prices** in the 2021-2022 heating season have been implemented, and are discussed further in Section 3 and Section 7.

In order to protect vulnerable households, **disconnection from the energy supply due to non-payment is generally a last-resort measure** which requires extensive notifications and offers of alternative repayment plans. For instance, interest-free loans must be offered in Germany to assist with paying back debts, and disconnections in the winter season are not allowed. In Austria, during the winter period, if a consumer fails to pay their bill but lives in a building that is heated primarily by electricity (or where electricity is needed for the functioning of the heating system), the power may only be

disconnected 90 days after the notice is sent and if in that time the consumer has failed to deal with the issue or has not notified the operator that the problem has been resolved (in other cases the announcement time is 30 days).

A number of EU Member States have adopted **dedicated plans and programmes to tackle energy poverty, or plan to do so in the future**. For instance, The Strategy of Regional Development of Czechia 2021+ includes as a goal to prevent energy poverty and social exclusion more broadly. Estonia has introduced the concept of the vulnerable energy consumer and person suffering from energy poverty in its Energy Sector Organisation Act, establishing that these groups must be considered in the context of energy plans and that measures to include those groups or alleviate their situation need to be included in the plans. However, so far, no specific measures for this group have been established. In France, the National Strategy to prevent and fight poverty from 2018 states the objective of developing and diversifying tools to tackle energy poverty. More specifically the Strategy aims to improve access to energy assistance schemes and simplify and reinforce support schemes for thermal renovation of housing, in particular by making them more accessible to the poorest households. In Poland, the Energy Policy stresses the importance of the transition being carried out in a way which ensures socially acceptable energy prices and does not deepen energy poverty, and foresees the utilisation of different EU funding mechanisms to support this process. Slovakia has adopted a Strategy on the Protection of Consumers at Risk of Energy Poverty in 2020, that will be a new policy document currently being prepared and planned to be submitted for wider consultation during the summer months of 2022 (currently not available online).

Financial services

Access to financial services in the form of a basic bank account and daily payment services is directly affected by the transposition in all Member States of the **PAD**¹³⁸. This Directive requires Member States to allow any individual who is legally resident in the EU, to open a bank account with basic services. While there is some variation in how the Directive is implemented, the Member States define in various ways that only 'reasonable charges' can be required by financial institutions in order to safeguard affordability. Member States **differ in the extent to which they specify what counts as 'reasonable'**, though. In Austria, Bulgaria, Lithuania, Portugal and Slovenia a specification is provided, either in absolute terms or as a percentage of e.g. minimum wage or social security payments. Croatia and Hungary additionally provide subsidised accounts for those with the lowest incomes – in Italy and Slovakia, a basic account is provided free of charge for these groups.

Financial literacy is one of the barriers to access to financial services, and in relation to this many EU Member States have adopted specific **strategies to improve financial literacy** among vulnerable groups. For instance, Estonia adopted a Financial Literacy Development Plan 2021-2030, whose main focus is on education measures, including development of teaching materials for schools and kindergartens, development of a teacher network on financial literacy etc. In Italy, there is a national strategy to promote financial literacy and financial education (Comitato EduFin) that include representatives from the main financial authorities of the country (Bank of Italy, Consob, Ivass, Isvap). In 2021 the Minister of Education and the Bank of Italy have signed an agreement to introduce financial education in school. Some pilot initiatives are in progress. In France, 400 budget advice services were created in 2020 to support persons in financial difficulties with budget management and existing over-indebtedness situations. Although these services do not have the direct aim of supporting access to financial services, they can inform users about their rights and increase the visibility of existing support measures.

¹³⁸ Directive 2014/92/EU.

Notably, in a limited number of Member States, physical access to financial services is being tackled by specific strategies. By way of example, Lithuania has adopted measures to **increase access to cash**. In 2021, the Bank of Lithuania and other financial and credit institutions signed a Memorandum of Understanding aimed at increasing sustainable access to cash and cash alternatives in the regions. The financial market participants agreed that within one year 90 % of the Lithuanian population should have access to cash withdrawal points within 10 km of their declared place of residence, or 99 % of the population within 20 km; 100 new ATMs are planned to be installed by 1 July 2022 in smaller settlements of the country (with a population of up to 4 000). Similar measures have been adopted in Spain, Ireland and Finland. Notably, when more ATMs are available, the incentive to deposit money in a bank account is higher. This is because people know that they will be able to withdraw money easily from an ATM, and therefore they do not need to keep cash at home. Indirectly, the increasing availability of ATMs can incentivise the opening of a bank account¹³⁹.

Transport

With the exception of cross-country services, such as long-distance trains and highways, **transport governance is generally delegated to regions and municipalities** (exceptions are Luxembourg and Malta, which constitute a special case because of their reduced size). This means that the specific regulations around their provision, the definition of price levels and any special tariffs are heavily decentralised and cannot be summarised here. However, national governments do set requirements in terms of e.g. access for people with disabilities, which must be considered by regional public transport authorities in the course of their duties. As discussed further in Section 7.1, **access to public transport is mostly facilitated through reduced tariffs for specific target groups** – in most cases older people and children rather than low-income groups.

Water and sanitation

In most EU Member States, the **water and sanitation services are levied, and in a few cases regulated jointly**. Generally, access to clean and potable water is not identified as a significant problem in the Member States, and rates of connection to water mains and sewerage infrastructure is generally high (two significant exceptions are Hungary, Romania and Slovenia). In cases where households are not connected to municipal infrastructure, this is generally due to them being located too remotely for such connection to be cost-efficient. They are then responsible for supplying their own water and sewerage solutions, and measures to provide cost assistance with this have not been identified for any of the countries.

In most cases, access to water and sanitation services is facilitated through a system of **reduced tariffs and lower taxes**. In addition to this, **disconnections are rare and generally discouraged**, and will be preceded by – depending on the national regulation – offers of delayed payment, payment in instalments, or referrals to public debt assistance.

In some instances, special initiatives are undertaken to provide **physical access to water and sanitation services** to specific population groups, such as the homeless or Roma. This is the case of France, where municipalities of over 5 000 inhabitants are obliged to provide access to drinking water and sanitation in stopping places for Roma people. Slovakia also implemented a project focusing on providing access to drinking water in municipalities with the presence of marginalised Roma communities (MRK), which is co-financed by the European Regional Development Fund.

¹³⁹ Based on discussion with senior thematic expert.

4.2. Definition of ‘essential service(s)’

Essential services are generally not clearly defined in national legislation among EU Member States, either collectively or individually. As shown in Table 12 the term ‘essential services’ (translated into the national language) often does not occur at all, or is discussed in a broader context of societally important infrastructure but without specifying the services that it encompasses.

Table 12 – Definitions of ‘essential services’ currently used in the EU

MS	Definition of essential services	Description
AT	No	No national definition, either collectively or individually. Water, sanitation and public transport, as well as a basic energy service (“Grundversorgung”), are to a large degree regarded as “public goods” in Austria’s political system. This implies that the provision of such services is often seen to fall under the responsibility of public authorities to a substantial degree.
BE	No	No national definition, either collectively or individually. However, the Belgian law transposing the EU Directive on network and information systems uses the concept of essential services with regard to services that are considered of general interest for public security. These services, as referred to in the transposing law, include energy, transport, financial services, drinkable water, health and digital infrastructure.
BG	No	No national definition, either collectively or individually. However, some of the relevant legislation contains detailed provisions or examples about what services must be provided on the territory, including free of charge or at discounted prices.
CY	No	No national definition, either collectively or individually. However, the term “essential services”, from a slightly different perspective is widely used in issues related to employment relations. There are the following eight specific areas which are described as “Designated Essential Services: the supply of electrical power, the supply of drinking water, the operation and functioning of telecommunications, the safe operation of air transport and air traffic control, the operation of hospitals, the operation of prisons, the activities related to the operations of the support infrastructure of the National Guard, the Police and the Fire Service and the safe operation of Port traffic.
CZ	No	No national definition, either collectively or individually.
DE	No	No national definition, either collectively or individually. The ability to access services is indirectly guaranteed through the subsistence level defined in social legislation. However, social policies under Social Code Books II and XII generally cover the costs of services. Sums for single adults are mentioned in the sector-specific examples.
DK	No	No national definition, either collectively or individually.
EE	Yes	<p>Different definitions of essential services are provided in different pieces of Estonian legislation. Under the Emergency Act, the state has the responsibility to ensure continuity of vital services, and these include: electricity, natural gas, liquid fuel supply, operability of national roads, phone and mobile phone service, data transmission service, digital identification and digital signing, emergency care, payment services and cash circulation and district heating, operability of local roads and water supply and sewerage.</p> <p>Under the Social Welfare Act, the support for the coverage of a number of expenses needs to be granted for minimum income support applicants. These are: rent, payments for maintenance and renovation of an apartment building, costs of water supply and sanitation, costs for heating water, heating rooms,</p>

MS	Definition of essential services	Description
		<p>electricity, household gas, land tax, home insurance and waste transport.</p> <p>Another source of defining essential services that are necessary for a minimum level of coping and covering essential daily needs is the level of minimum means of subsistence. The Estonian subsistence minimum consists of three components – minimum expenses on food (including 41 components), housing and other non-food expenses including clothing, health, transportation (personal and public transport), communication (including internet), entertainment (sports, books, media, computer etc.), education, household (e.g. appliances, furniture) and other (personal care, childcare).</p>
EL	No	No national definition, either collectively or individually.
ES	Yes	No unified definition, but different possible interpretations. According to the doctrine of the Constitutional Court, “those services that satisfy fundamental rights and freedoms or constitutionally protected goods of citizens” are considered essential. The Ombudsman sets out his interpretation of ‘Essential Services’ in clear terms. As defined on his website, “Electricity and water supply, transport and communications are essential services for the development of a dignified life, provided by both public administrations and private companies, and all citizens have the right to receive them.
FI	No	No national definition, either collectively or individually. Emphasis is on basic security and basic services, which should be guaranteed to everyone regardless of income or other characteristics. ‘Basic services’ are not further defined.
FR	No	No national definition, either collectively or individually.
HR	No	No national definition, either collectively or individually. However, the Social Welfare Act establishes that the right to Guaranteed Minimum Benefit is granted to a person or household that does not have sufficient funds to cover their basic necessities of life. A person entitled to receive a Guaranteed Minimum Allowance is also entitled to receive a housing allowance, which is aimed to cover the person’s rent, utility fees, heating, water and costs that have arisen due to works made to enhance the energy efficiency of the building where the person is residing.
HU	No	No national definition, either collectively or individually.
IE	No	No national definition, either collectively or individually.
IT	Yes	Generally, laws refer to ‘essential levels of services’ but do not further specify what this entails. Maintaining these essential levels has been facilitated by the 2017 introduction (and subsequent reforms) of a national minimum income benefit, which was previously lacking.
LT	No	No national definition, either collectively or individually. Some legal papers refer to “services of general interest” (incl. water and sanitation services), or “public services” (incl. a wider range than essential services), “urgent(vital) services to the public” (incl. energy, water and sanitation, digital communications, transport)
LU	Yes	The term ‘essential services’ is indirectly defined in the national law transposing Directive (EU) 2016/1148 through the term of operators of essential services (opérateurs de services essentiels). Article 7(2) of the law lists the criteria which are used to determine whether an entity qualifies as an operator of essential services. The Annex already allows us to understand which services are considered as essential in Luxembourg insofar as the operators are divided between 7 sectors: 1. Energy; 2. Transports; 3. Credit institutions; 4. Financial

MS	Definition of essential services	Description
		<p>market infrastructures; 5. Health sector; 6. Supply and distribution of drinking water; 7. Digital infrastructure. Furthermore, Article 7(4) of the law provides that the list of essential services is established by the competent authority through the adoption of a regulation. To that extent, regarding the financial sector, Article 2 of Regulation N°20-04 adopted by the Financial Sector Supervisory Commission (Commission de surveillance du secteur financier (CSSF)) lists as essential services: custodian bank function, deposit management, granting of credit, investment service, payment service and admission to trading in financial instruments on a regulated market of MTF type trading platform.</p> <p>In addition, The Luxembourg Institute of Regulation (ILR) through Regulation ILR/N19/1 lists the following sectors as essential services: energy, transport, health, drinking water and digital infrastructure.</p>
LV	No	No national definition, either collectively or individually. Instead, “services of general economic interest” (e.g. “public services”) are defined as economic activities in the public interest that one or more service providers cannot provide without state aid, while ensuring that the service is available to all residents without discrimination. Such services would not be profitable for the service providers without state aid. The service is encompassing all service providers for the four out of six essential services, notably water, sanitation, energy and digital public services.
MT	No	No national definition, either collectively or individually.
NL	No	No national definition, either collectively or individually.
PL	No	No national definition, either collectively or individually.
PT	Yes	Law 23/96 of 26 July 1996, as subsequently amended, provides a national definition of essential public services in Portugal. Since 2017, there was only one amendment to the law, introduced by Law 51/2019, of 29 July 2019. Through this amendment, passenger services became an essential public service. Currently, the list of essential public services includes: (i) water; (ii) electrical energy; (iii) piped natural gas and liquefied petroleum gases; (iv) electronic communications; (v) postal services; (vi) wastewater collection and treatment; (vii) urban solid waste management; and (viii) passenger services.
RO	Yes	Essential services are defined in Romania as a service which cumulatively a) is essential in supporting the most important societal or economic activities, b) has a supply depending on a network or an information system, and c) would cause significant disruption if interrupted. The definition was mainly introduced in relation to the protection and maintenance of high-level security for informatics systems and networks but encompasses all services.
SE	No	No national definition, either collectively or individually.
SI	Yes	The Security Act, which aims to transpose Directive (EU) 2016/1148 into Slovenian legal system, is the only legal act that defines the term ‘essential services’. Pursuant to Article 5(2) the providers of essential services are those operating in the following areas: energy, digital infrastructure, supply and distribution of drinking water, health care, transport, banking, financial market infrastructure, food supply and environmental protection. Article 3(1) of the Consumer Protection Act (Zakon o varstvu potrošnikov) states that businesses and organisations that provide public services and goods to consumers are obliged to ensure regular and quality provision of services and appropriate development and improvement of service quality. Several of the essential services listed in the 20th principle of the EPSR (e.g. water, sanitation, energy,

MS	Definition of essential services	Description
		transport) are provided as public utilities regulated in the Services of General Economic Interest Act
SK	No	No national definition, either collectively or individually.

Source: Milieu elaboration based on national reports.

However, indirect definitions of essential services can be found where there is legislation or guidelines indicating a minimum provision of a service (e.g. through a minimum internet speed that should be available to all) or through a continuity of service in the social interest (e.g. not being able to disconnect households from energy or water services, or ensuring that this is only done as a last resort). This is the case for the Member States listed in Table 13.

Table 13 – Definitions of the six essential services currently in use in the EU

Digital communications	Energy	Financial services
BE, BG, HR, EE, FR, DE, LV, LT, MT, PT, SI, SE	BE, CZ, DE, IT, MT, NL, PL	All MS
Transport	Water and sanitation	Not reported
DE	CZ, DE, FI, HU, MT, SE	CY, DK, RO, ES

Source: Milieu elaboration based on national reports.

Digital communications

As summarised in Table 11, many EU Member States have a **definition of minimum accessible internet speed**, or goals towards what this speed should be in the near future. This reflects the fact that a connection on its own is not necessarily sufficient to guarantee access to the internet: the quality of the service must be of such that it can meet the demands of users.

In terms of specific provisions, a few EU Member States provide **indirect definitions of digital communications as an essential service**. In Finland, access to a computer or smart phone is considered essential to participating in society, and it is therefore possible to apply for supplementary social assistance to finance the purchase of equipment. Digital communications costs also form part of the social assistance package in Germany. In Malta, an internet connection has been established as a 'universal service' since 2011, requiring internet service providers to connect any applicant to the network. A similar obligation is in place in Sweden and in Portugal.

In some Member States, definitions are provided in terms of **minimum internet speed** (in Mb/s). In Belgium, electronic operators have a coverage and bandwidth obligation. Here, someone is sufficiently connected to the internet according to the Belgian legislation if the connection is of 1 Mb/s, and 99.99 % of the Belgian population can benefit from this bandwidth through a fixed network. In Croatia, the universal service operator is obliged to provide a data transfer speed of at least 4 Mb/s. In Lithuania, adequate broadband internet access services are defined as the internet access services that provide a minimum of 10 Mb/s downstream speed and 1 Mb/s upstream speed.

In some EU Member States, a **definition of digital communications as an essential service is provided by identifying a list of ‘activities’ that should be possible with a certain level of internet speed**. For instance, in Bulgaria, digital communications as an essential service are defined as broadband internet that supports the use of email, search engines, basic education tools, job search tools, online banking, electronic administrative services, access to online newspapers and news as well as social media, instant text messages and video calls, purchasing and sale of products and services online. In France, the Postal and Electronic Communications Code establishes a ‘universal service for electronic communications’, which enables ‘each end-user to have access, at a fixed location and at an affordable price’ to ‘an adequate high-speed Internet access service’, and ‘a voice communications service’ including connections telecommunications networks. In Latvia, Cabinet of Ministers Regulations No. 402 provides for the definition of a service (digital service): it is a service which involves one or more services being performed in electronic form, including through the use of websites, mobile applications, and text messages or e-mail.

No specific definitions were identified in other EU Member States, although all countries have broader strategies which seek to extend access to digital communications and the internet among the population.

Energy

Where energy poverty – i.e. the **lack of access to energy** as an essential service – is defined, it generally follows a similar pattern: it is defined as **a situation where households are unable to afford energy and electricity at a level acceptable to society, or is only able to do so at the expense of other resources**. Only a limited number of EU Member States provide an explicit definition of energy poverty. As indicated in Section 6.4, EPOV informs that only Austria, Cyprus and Spain have adopted official definitions of energy poverty. However, the national reports indicated that additional definitions might be in use in Member States:

- Belgium: The concept of energy poverty has been recognised and actively handled in federal plans in recent years and by various institutions throughout the country. The Poverty Alleviation Forum in Brussels defined energy poverty as ‘the inability of a household to access – in its home – the energy it needs, at an affordable cost in terms of its income’.
- France: The National Observatory for Energy Poverty defined energy poverty already in 2010 as a situation in which a person faces difficulties in having available the energy necessary to satisfy the basic needs because of their limited resources or because of the conditions of the household¹⁴⁰.
- Italy: Energy poverty is defined in the 2017 National Energy Strategy as not being able to acquire a basket of energy goods and services, and energy vulnerability refers to the situation in which one does so at the expense of other resources.
- Malta: The National Energy and Climate Plan describes energy poverty as the inability to keep one's home adequately warm.
- Poland: Energy poverty is defined, in the Energy Law, as a situation in which a household cannot meet its needs regarding sufficient heating, cooling or electricity used for functioning of appliances and lighting. In order to be regarded as falling in the poor energy category, the household must fall under the following conditions: 1) low income; 2) high expenditures for energy; 3) inhabiting an apartment or a building with low energy efficiency.

¹⁴⁰ ONPE (2014) Premier rapport de 'ONPE. Se : https://www.anah.fr/fileadmin/anah/Actualites_presse/2014/ONPE-RapportSynthese.pdf.

Besides the ones presented above, no other definitions were identified in EU Member States. In Sweden, researchers have noted that the concept of energy poverty does not generally feature at all in the debate, as the issue is considered as one to be dealt with under the broader umbrella of social welfare and assistance programmes¹⁴¹.

Financial services

As in previous sections, financial services are understood as essential in the sense that the PAD has been transposed in all EU Member States. The definition therefore follows that of the Directive: **‘access to payment accounts with basic features should be ensured... irrespective of the consumers’ financial circumstances**, such as their employment status, level of income, credit history or personal bankruptcy¹⁴². The exact wording varies slightly between EU Member States, but all fulfil the requirement in the transposition. However, the exact ‘reasonable fees’ to charge are determined by financial institutions rather than public bodies.

Transport

Transport is generally operated on a decentralised basis, with regions and/or municipalities in charge of the provision. **Beyond tasking subnational government units with providing transport services, transport is generally not defined as an essential service.** However, it can indirectly be considered an essential service in cases where central legislation offers reduced tariffs or cost-free travel cards for perceived risk groups such as old-age individuals, school pupils, young people, etc. This can both ensure access to affordable prices¹⁴³, and encourage increased use of public transport (with prices being one of the multitude of determinants of whether individuals are likely to use public transport or not¹⁴⁴).

This recognises both that certain groups of people are more likely to be in situations of poverty or less likely to have access to private cars, and that assistance may need to be provided in order to ensure access. However, such tariffs are generally defined on a subnational level and tend to be the subject of policy decisions rather than legislative measures, meaning they can change over time. There is also a risk that, absent of central government compensation, poorer regions and municipalities are not able to offer the service due to strained finances.

An exception to the rule above is cases where specific transport services (‘paratransit’) are offered to certain risk groups which may otherwise struggle to get around due to conditions such as mobility restrictions, impaired hearing and vision, or learning difficulties. This is offered on a local level in Finland, the Netherlands and Sweden. However, here too the capacity of subnational government units is limited depending on their financial circumstances. In Sweden, a decreasing level of granted paratransit permits has led to the government to request a report from the state agency Transport Analysis to investigate whether the legislation is sufficient to ensure adequate service provision, or whether the rights need to be strengthened¹⁴⁵.

¹⁴¹ von Platten (2021), *Energy Poverty in Sweden* [Online]. ENGAGER COST Action. Available online: <https://www.eppedia.eu/article/energy-poverty-sweden> [Accessed 10 May 2022].

¹⁴² Directive 2014/92/EU.

¹⁴³ It should be noted that there is no systematic review available on the use and levels of reduced tariffs in the EU. It is therefore not certain that even the reduced tariffs are necessarily affordable relative to local incomes, transport need, and other determinants of public transport use.

¹⁴⁴ Minelgaite, Dagiliute and Liobikiene (2020), ‘The Usage of Public Transport and Impact of Satisfaction in the European Union’, *Sustainability*, 12(9154), 1-13. Available online: <https://www.mdpi.com/2071-1050/12/21/9154>.

¹⁴⁵ The accessibility of paratransit has previously been assessed, and found restrictive, in Transport Analysis (2019), ‘Kartläggning av hinder i kollektivtrafiken för personer med funktionsnedsättning’, Stockholm, Transport Analysis. Similar systematic analyses have not been identified for Finland and the Netherlands.

Water and sanitation

Indirectly, as signatories to the UN Declaration of Human Rights, all the EU Member States have endorsed the notion of water and sanitation as a right and essential service. However, **water and sanitation are generally not defined as essential services** as such. Where definitions are given they are generally broad: e.g. in Czechia where it is considered part of the ‘basic living needs at a level acceptable to society’ which underpins means tests for social assistance benefits, but the acceptable level of water and sanitation access is not further specified. In Luxembourg, ‘Access to water’ is defined as ‘ensuring sufficient access to water intended for human consumption for personal needs in terms of food and hygiene’. In Croatia, an indirect definition of water as an essential service can be identified in the legislation on water services, which establishes that in case of non-payment of bills, the public water service provider is obliged to enable the delivery of water for human consumption of at least 50 litres per household member per day, for at least eight hours, in a manner and place determined by the general conditions of water services, while taking into account the socially vulnerable users.

Broadly, the essential nature of water is recognised as Governments – or decentralised units tasked by the Government – recognise their responsibility to provide water services to the broader population. In Finland and Sweden, this is specified through universal service obligations, where local governments are required to provide infrastructure services to collections of households and ‘larger populations’ (this is assessed on a discretionary basis, but in Sweden appears to be ca. 20-30 households). Outside of such areas, households are themselves responsible for installing the infrastructure through wells, septic tanks, etc.

4.3. Definition of ‘affordability’

As for the preceding section, EU Member States generally do not directly define what qualifies as ‘affordable’ essential services, either in relation to the provisions of the EPSR or in the context of their national policy landscape. However, **understanding of affordability can be indirectly assessed by considering whether benefits are provided for their payment**, and if so, at what level these benefits are given.

Germany is worth mentioning as an illustrative example. The German minimum income benefits under Social Code Books II and XII, which provide the main social assistance benefits, include cost components for the individual essential services¹⁴⁶. However, these benefit components do not necessarily relate to the actual costs incurred by the household, and are more to be considered indicative values of how much is expected to be a reasonable spend per month. In particular, Germany estimates those values based on the average expenditure of households in poverty (minus deductions for goods that are considered as not deserving of public support such as tobacco). As such, the total amount of spend on essential services per month is close to the expenditure of households in poverty, but likely lower than actual expenditure¹⁴⁷.

In Sweden, a similar situation is in place: social assistance benefits are divided into a first part covering consumption items, and a second covering ‘reasonable costs for housing’, which are determined locally by the municipalities that are in charge of allocating social benefits. These housing costs include energy, water and sanitation (the latter two of which are commonly charged as part of rent); the other essential services are covered by the first part on consumption items. Thus, while there are no legal

¹⁴⁶ The specific amounts for a single adult in 2022 are EUR 40.15 per month for digital communications; EUR 38 for energy; EUR 2.2 for financial services; EUR 40.3 for transport; and ‘reasonable costs’ for water and sanitation, determined based on local conditions.

¹⁴⁷ Based on input from thematic senior expert.

specifications on the levels of support, there is a recognition that costs should be reasonable and relative to the living standards and requirements of the local area.

Table 14 – Definitions of 'affordability' of the six essential services currently in use in the EU

Digital communications	Energy	Financial services	Not reported
AT, BE, HR, CZ, EE, FI, FR, HU, IT, PT	AT, FR, IE, LV, LT, LU HU, IT, MT, RO	LT, LU, SI	BG, CY, DK, NL, SK, ES, SE
Transport	Water	Sanitation	
-	HU, MT, RO	HU, MT, RO	

Source: Milieu elaboration based on national reports.

Digital communications

In Austria, people living in **low-income households**, who at the same time receive at least one social benefit, can apply for a **special allowance covering (parts of) their telephone and internet costs**. The allowance amounts to EUR 12 per month and is directly transferred to the telephone and internet service provider contracted by the beneficiary.

In Belgium, **high-speed internet** must be provided at an “**affordable price**” throughout the territory to any consumer who requests it. While no definition of “affordable price” is provided, it can be observed that people benefitting from the social tariff for digital communications will have reductions of 40 % on their fixed telephony and fixed internet subscription (maximum EUR 8.40) and a reduction on their call charges of EUR 3.10.

All individuals in Croatia are entitled to **internet access** at a ‘**reasonable price**’. The universal service operator (Hrvatski telekom) provides special packages for vulnerable citizens and other categories of vulnerable users. As an example, a popular Max2 package (phone and internet) costs 239 kunas per month (approximately EUR 32), whereas the basic reduced package costs 140 kunas per month (approximately EUR 19).

In Czechia, **digital communication** is a ‘universal service’ which needs to be available to everyone at a ‘**reasonable price**’. A specific elaboration is not made, however, on what qualifies as a reasonable price.

To provide physical access to high-speed broadband network, Estonia has set **a cap on the price for joining a network** at a maximum of EUR 200 for the end user.

In Finland, **digital communications’ costs** are considered a **vital household expense** and one-fifth of the basic income support (EUR 98 for a single person in 2022) can be received to cover or assist with telephone and internet costs. Additional support packages are available in some localities: for instance, in Helsinki an additional benefit of EUR 300-400 can be applied for to finance the purchase of equipment in the form of smartphones and computers.

In France, **electronic communications** are considered a ‘**universal service**’, whose access needs to be provided ‘at an affordable price’ for all end-users. There is no definition of what is considered ‘affordable price’, but some indications can be obtained by looking at the numbers of tariff reductions offered. Certain citizens can benefit from a tariff reduction on a landline phone of EUR 4.21 excluding VAT/month, set by ministerial order, that can be supplemented by a voluntary top-up by Orange (telecom operator) of EUR 5.35 (excluding VAT) per month, which in practice amounts to EUR 6.49 per month,

including VAT. A package of internet, phone and television at EUR 19.99 per month is available based on income criteria.

In Hungary, **special tariffs** are available for households that have not previously been connected to the internet: the 2015 Digital Welfare Package, extended in 2017, ensures that internet packages are available with a 15 % discount, with a guaranteed 7.5 Mbit/s download speed in 2022¹⁴⁸.

A **social tariff** is also in place in Italy, where telecommunications operator TIM is authorised by the Guarantor Authority for Communications to offer a 50 % discount for a basic mobile phone account to households that qualify by virtue of low income. Currently, the price is EUR 9.4 per month¹⁴⁹.

In Portugal, the **social tariff** for digital communications amounts to EUR 6.15 (EUR 5 + VAT) per month for Internet services with 12 megabits per second (Mbps) download speed and 2 Mbps upload speed, with a monthly traffic limit of 15 gigabytes (GB). There might be a cost for service activation and/or access equipment that will never exceed EUR 26.38 (EUR 21.45 + VAT) and can be paid in parcels up to a maximum period of 24 months.

Definitions have not been identified for other EU Member States.

Energy

Hungary defines a set of '**socially eligible protected customers**', whereby recipients of certain benefits can receive easement of payments for energy payments and the installation of meters¹⁵⁰. In a similar vein, Romania has in place a definition of vulnerable households with regard to energy, which seeks to identify those who are struggling to pay for their heating while also passing an income test. When identified as such, these vulnerable households are protected from disconnection due to non-payment, and also qualify for additional assistance¹⁵¹.

Some countries also have **specific tariffs, bonuses, or payment schemes to support energy costs**.

In Malta, up to EUR 75 per year per person can be awarded to **support the payment of electricity consumption of low-income families**, and even higher if there are humanitarian grounds.

In Italy, where a national minimum income scheme was only realised in 2018, several individual schemes are in place: an **electricity bonus**, in place since 2008 provides cash bonuses from EUR 166 (for a household with maximum two members) to EUR 256 (for households with five or more members; for households with 3-4 members the bonus is EUR 236). The value of the gas bonus, in place since 2009, depends on household type, usage and the heating needs¹⁵².

¹⁴⁸ Digital Success Programme (Digitális Jólét Program) (2022), *About Digital Success Programme* [Online]. Budapest: Ministry for Innovation and Technology. Available online: <https://digitalisjoletprogram.hu/en/about> [Accessed 11 May 2022].

¹⁴⁹ Autorità per le Garanzie nelle Comunicazioni (AGCOM) (2020), *Agevolazioni per utenti a basso reddito* [Online]. Rome: AGCOM. Available online: <https://www.agcom.it/agevolazioni-per-il-servizio-universale> [Accessed 11 May 2022].

¹⁵⁰ Hungarian Government Act LXXXVI of 2007 on electricity; Hungarian Government Act XL of 2008 on the supply of gas.

¹⁵¹ Romanian Law 196/2016 on the minimum inclusion income.

¹⁵² Additional information on values for Q1 2022 can be found at: Autorità di Regolazione per Energia Reti e Ambiente (ARERA) (2022), *A quanto ammontano i bonus sociali* [Online]. Rome: ARERA. Available online: https://www.arera.it/it/consumatori/bonus_val.htm [Accessed 11 May 2022].

In Austria, different landers provide a **specific means-tested allowance for heating costs for low-income households**. The benefit varies between EUR 110 per year in Carinthia and EUR 270 per year in Vorarlberg.

In France, an **energy voucher** has been established to support citizens pay their energy bills (inter alia). The value of the voucher depends on the income level and number of persons in the household. The amount varies from EUR 48 to EUR 277 (with an average of EUR 148) according to income (reference tax income) by consumption unit (to take into account the number of persons in the household). The amount of the energy voucher has been increased in 2019 by EUR 50.

In Ireland, a **fuel allowance** is paid to qualifying households over a specified period (the 2021-22 period was 28 weeks from 27 September 2021). In 2021 fuel allowance was EUR 28 per week, and was increased in Budget 2022 by EUR 5 to EUR 33 per week. In Latvia, access to electricity and gas is facilitated for so-called “protected users”, which receive a specific allowance for electricity. The allowance goes from EUR 20 per month for large families to EUR 15 per month for other groups of people, including people with disabilities, low-income households (person) or a family (person) who takes care of a child with disability. Further, given the increase of gas prices and at the same time, in order to stimulate the COVID-19 vaccination campaign, 5-months allowance (from November 2021 to March 2022) of EUR 20 per month was provided for persons above the age of 60 who could prove COVID-19 vaccination.

In Lithuania, in accordance with the Law No IX-1675, families or single residents shall be **compensated for a part of home heating costs** (or costs of other approved types of energy or fuel) exceeding 10 % of the difference between the average monthly income per family (or single person) and two amounts of SSI (since 1 June 2022 – EUR 297) per person, or three amounts of SSI (since 1 June 2022 – EUR 441) for a single person. The compensation covers all the actual costs of heating in excess of 10 % of this difference. The law provides for compensation equal to the actual costs of heating a home when the monthly income per family (or single resident) is less than two amounts of the SSI (EUR 297) for each person living in the same household or three amounts of the SSI (EUR 441) for a single resident. In Luxembourg, an energy bonus has been introduced in 2022 following the increase in energy prices. The allowance applies for people whose income does not exceed the limits of the cost-of-living allowance (see above). The amount of the energy allowance varies between EUR 200 and EUR 400 per household depending on the composition of the household.

While definitions have not been identified for other EU Member States through the national report, it is worth noting that additional schemes may be in place¹⁵³.

Financial services

In line with the provisions of the PAD, EU Member States allow financial institutions to charge reasonable fees for basic bank accounts, in an attempt to ensure affordability. As per these provisions, such reasonable fees should take into account at least national income levels and the average fees charged for bank accounts. However, **exact values of what ‘reasonable fees’ entail have not been identified** in several Member States. This in effect delegates the responsibility for setting fees to the financial institutions, although consumers are also provided with price comparison sites to inform their choice.

Some Member States define reasonable charges more explicitly, or otherwise how these are to be calculate. Austria and Lithuania defines a specific price level through the

¹⁵³ A summary that remains of energy support schemes in the EU that remains up-to-date in 2022 can be found via Bruegel: cf. Sgaravatti, Tagliapietra and Zachmann (2022).

competent authorities, whereas Bulgaria, Croatia and Portugal define the allowed rates specifically in relation to either net earnings and/or average bank charges.

There are also cases where **free or subsidised accounts are provided to low-income individuals** who pass a means test. This is the case in Hungary, Italy, Slovakia, and Slovenia. In France, free basic accounts are available to all applicants, albeit with a limited range of functionalities.

Transport

Although there are some research efforts either by state agencies or other research institutes to further investigate access to transport services and issues of affordability¹⁵⁴, **no national definitions of affordability have been identified in this regard**. This may at least in part be due to the multi-faceted nature of access to transport services, which does not only take into account ability to pay, but also distance to transport stops; physical access of the infrastructure; and the actual transport needs of the household. It is also possible that there are local or regional definitions of affordability, as the subnational public transport authorities are ultimately in charge of delivering the service.

An exception can be found in France and Germany. In the former, an **official indicator of 'transport energy vulnerability'** ("precarité énergétique dans les transports") exists and estimates that 10.2 % of households need to spend twice the median or more on mandatory car trips¹⁵⁵. In the latter, an estimation of the sum for transport is defined as one of the cost components under the minimum income scheme, which means that this is the level of transport expenditure that every household ought to be able to afford regardless of circumstances. This is set at EUR 40.3 per month for transport.

Water and sanitation

For most EU Member States, no definitions of affordability have been identified.

Some exceptions can be found, however. In Romania, households with a net income below the equivalent national minimum wage can receive up to 50 % of their water and sewerage costs as a **benefit to alleviate cost pressures**.

In Hungary, vulnerable consumers – defined as those who are in receipt of certain specific benefits¹⁵⁶ – have some additional protection to improve their access to water and sanitation. However, this comes in the form of **alternative payment plans**, e.g. by deferral or payment in instalments, rather than through cash benefits or reimbursement. Since 2017, connecting one's household to water mains infrastructure is free of charge; connecting to sewerage infrastructure is cheaper than before but retains a small cost, as the installation is more complicated.

In Malta, persons of low-income families can receive **subsidies** under the energy benefit scheme of no more than EUR 59 per year for renting a water meter. Water companies are also mandated to take into account social goals when setting tariffs.

¹⁵⁴ In Sweden: Transport Analysis (2021), 'Transporternas ekonomiska överkomlighet – hur mäter vi det?', PM 2021:3, Stockholm, Transport Analysis. In the Netherlands: Jorritsma, Berveling, de Haas, Bakker and Harms (2018), 'Mobiliteitsarmoede: vaag begrip of concreet probleem?', Kennisinstituut voor Mobiliteitsbeleid, Den Haag. Available online: <https://www.kimnet.nl/publicaties/rapporten/2018/10/31/mobiliteitsarmoede-vaag-begrip-of-concreet-probleem#:~:text=Of%20mobiliteitsarmoede%20in%20Nederland%20bestaat,wijzen%20die%20gebrekkige%20vervoersmogelijkheden%20hebben>.

¹⁵⁵ Cochez, Durieux and Levy (2015).

¹⁵⁶ Since 2015, a Government decree specifies vulnerable households as those entitled to old-age allowance, housing allowance, nursing fee; who are active-age persons receiving social benefit; receiving regular child protection benefits; receiving home creation support; failing to meet mortgage obligations; or who are tenants of the National Asset Management Ltd (*Magyar Nemzeti Vagyonkezelő Zrt.*).

In Greece, it is **not universally defined what price may be reasonable for water and sanitation services** and this has not changed since 2017 and the introduction of the EPSR. The levels of compensation are at the discretion of municipal water services and depend on a number of variables relating to the personal situation of the applicant household and its characteristics. The final price paid is a result of local conditions and bound by principles of solidarity towards water access since the access to water is generally perceived as a right.

In Poland, as of 1 January 2018, the National Water Management Authority acts as the central regulator of tariffs for the provision of water and for sewerage services. This means that **water companies must apply every three years to the regulator for approval of their tariffs**. The regulator can decide that the tariffs are too high (i.e. not in agreement with the rules of costs optimisation). Currently, the average rate for water and sewage in Poland is ca. PLN 12/m³ (EUR 2.7), which is comparable to tariffs being in place in much richer countries of the European Union.

5. State of play on access

The lack of general definitions on essential services and affordability (as demonstrated in Chapter 4) leads to challenges in understanding the extent of access issues. The aim of this section is thus to give a snapshot of the current state of access to the different services by triangulating data from the literature review, the national reports from the national experts and the quantitative data from EU-SILC 2020.

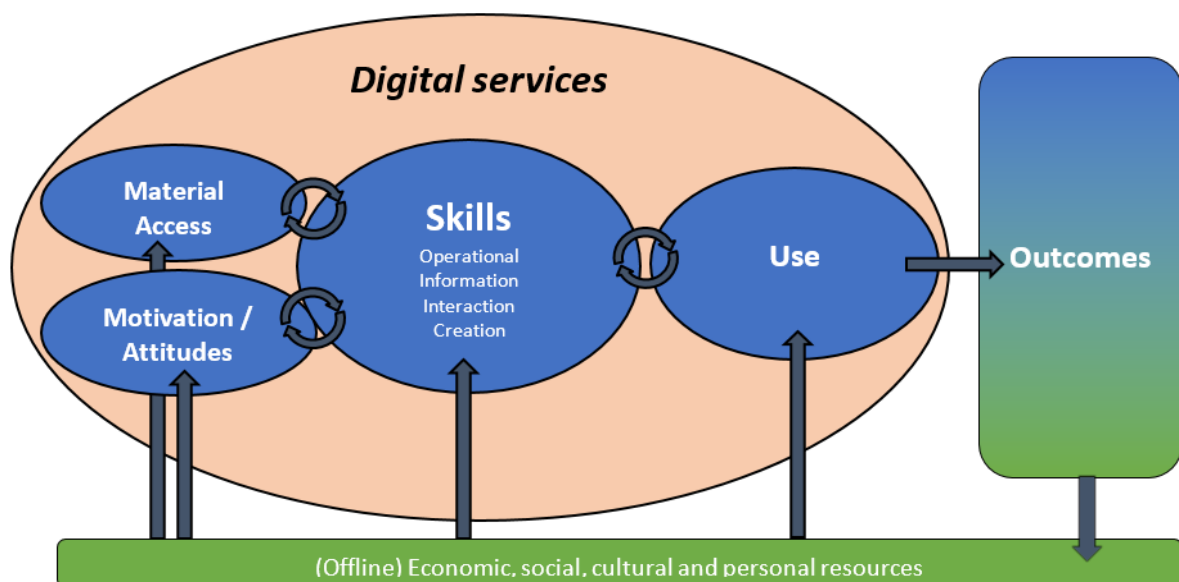
Each essential service is discussed separately, firstly in terms of qualitative evidence on the state of play and, lastly, in terms of quantitative descriptive statistics on access levels. The latter also include discussions on AROPE (being at risk of poverty or social exclusion), given its main role in hindering affordability, as it will be argued below.

Looking at each essential service separately, however, gives only part of the picture. Therefore, Section 5.6 analyses the overlaps between access to the different services, also giving insights on the main demographic and socio-economic characteristics of vulnerable households.

5.1. Digital communications

Digital communications refer to the access to electronic communications services such as Internet/broadband access and ICTs. Figure 1 presents a conceptual model that illustrates the different types of access to digital communications; material access (e.g. infrastructure), digital skills (e.g. operational skills), and use (e.g. frequency, type of use)¹⁵⁷.

Figure 1 – Process model of access to digital services



Source: Van Deursen, A., and Helsper, E. (2021), '[Mediawijsheid: Conceptualisering en belang in een gemedieerde samenleving. Lacunes in bestaand onderzoek en beleid](https://www.utwente.nl/en/centrefordigitalinclusion/Files/mediawijsheid-conceptualisering-en-belang-vandeursen-helsper.pdf)', Universiteit Twente, Enschede.

Insufficient access in these areas has a negative impact on the economic, social, cultural, and personal aspects of someone's life, leading to a 'digital divide' between those that

¹⁵⁷ Van Deursen and Helsper (2021), 'Mediawijsheid: Conceptualisering en belang in een gemedieerde samenleving. Lacunes in bestaand onderzoek en beleid', Universiteit Twente, Enschede. Available online: <https://www.utwente.nl/en/centrefordigitalinclusion/Files/mediawijsheid-conceptualisering-en-belang-vandeursen-helsper.pdf>.

are digitally included, and those that are not. The OECD defines this as ‘the gap between individuals, households, businesses and geographic areas at different socio-economic levels with regard to both their opportunities to access information and communication technologies (ICTs) and to their use of the internet for a wide variety of activities’¹⁵⁸. Improving access to broadband and ICT services, for example, is ultimately expected to lead to a better facilitation of public services, and hence foster digital inclusion¹⁵⁹.

One factor affecting access is the pricing of digital services and the risk of affordability issues. Although the price of ICT services keeps decreasing globally and EU Member States remain well below the affordability target on average¹⁶⁰, there are still areas and population groups that lack affordable broadband or internet access to sufficient standards¹⁶¹. The increasing availability of free Wi-Fi in public places is a good way to increase access, but this needs to be complemented with secure and private connections as alternatives that all people can afford¹⁶².

Access levels

In the context of this report, access to digital communications has been studied quantitatively by looking at internet affordability. **On average, around 4 %¹⁶³ of people in EU-SILC 2020 sample across EU Member States cannot afford to have an internet connection¹⁶⁴.**

Being at risk of poverty or social exclusion influences whether a household is able to afford internet access. This is evident from the figure below that shows two facets of AROPE¹⁶⁵. The share of people unable to afford internet access is higher among those that are also at risk of poverty or have very low work intensity. In addition, inability to afford internet access is also linked to other material deprivation items, such as the ability to face unexpected financial expenses, to afford paying for holidays and to afford to replace worn-out furniture¹⁶⁶.

¹⁵⁸ OECD (2001), 'Understanding the Digital Divide', OECD, Paris, 5.

¹⁵⁹ Negreiro (2015), 'Bridging the digital divide in the EU', PE 573.884, European Parliamentary Research Service, Brussels, 2. Available online: [https://www.europarl.europa.eu/RegData/etudes/BRIE/2015/573884/EPRS_BRI\(2015\)573884_EN.pdf](https://www.europarl.europa.eu/RegData/etudes/BRIE/2015/573884/EPRS_BRI(2015)573884_EN.pdf).

¹⁶⁰ International Telecommunications Union (ITU) (2021), 'The affordability of ICT services: 2020', ITU, Geneva. Available online: https://www.itu.int/en/ITU-D/Statistics/Documents/publications/prices2020/ITU_A4AI_Price_Briefing_2020.pdf.

¹⁶¹ Caradaica (2021), 'Digital Divide in the European Union', *Politics and Knowledge: New Trends in Social Research - Proceedings of the 7th ACADEMOS Conference 2020*, Bucharest, SNSPA, 99-106. Available online: https://www.researchgate.net/publication/348365501_Digital_Divide_in_the_European_Union.

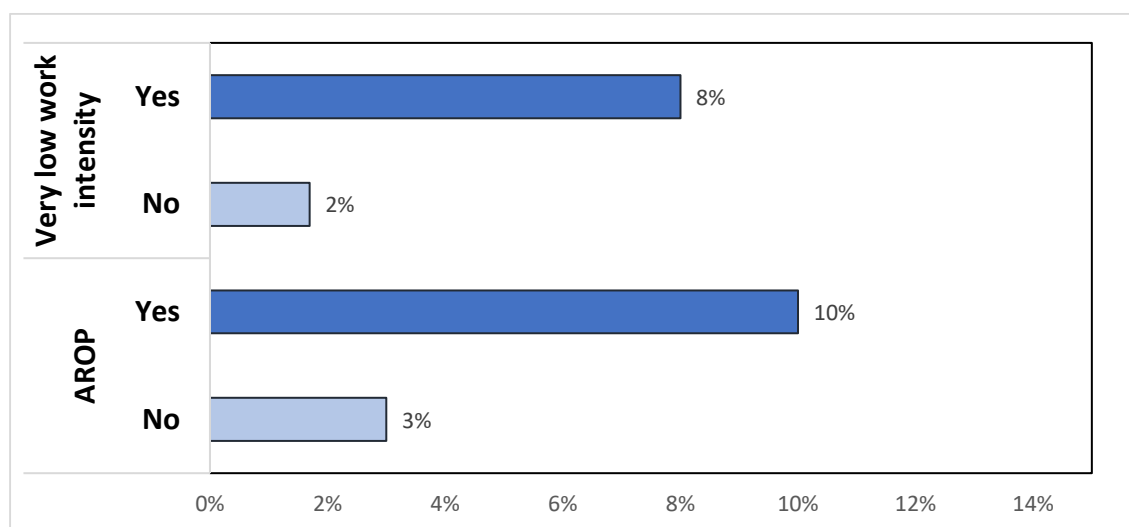
¹⁶² Baptista and Marlier (2020), 23.

¹⁶³ Small discrepancies with indicators published on Eurostat website may be explained by the anonymisation of the EU-SILC database.

¹⁶⁴ See Table 33 in Annex B for a full comparison of EU Member States for all essential services.

¹⁶⁵ AROPE (at risk of poverty and social exclusion) is a composite indicator comprising of: i) being at risk of poverty (AROP), ii) being materially and socially deprived, and iii) living in a household with low work intensity.

¹⁶⁶ Details on material deprivation for all essential services can be found in Table 34 Annex B.

Figure 2 – Access to internet, by AROP and work intensity, 2020

Source: EU-SILC 2020, Milieu calculations.

Note. Very low work intensity means working age person (18-64) who worked a working time equal or less than 20 % of their total work-time potential during the previous year.. Being at risk of poverty (AROP) means having a share of equivalised disposable income below the at-risk-of-poverty threshold (i.e. 60 % of the national median equivalised disposable income after social transfers). *How to read the table:* out of all the people unable to afford internet access, 8 % have very low work intensity and 10 % are at risk of poverty.

5.2. Energy

Despite a number of references to the topic in EU regulations and laws, there is no universal definition of energy poverty in Europe. However, academically the concept can be considered as 'the inability of households to secure socially- and materially-necessitated levels of energy services in the home'¹⁶⁷. In a recent recommendation the European Commission described energy poverty as 'a situation in which households are unable to access essential energy services'¹⁶⁸, and emphasised the need for EU Member States to develop publicly available definitions of energy poverty¹⁶⁹. However, energy poverty remains inconsistently identified and addressed in EU Member States, and many still lack a clear definition¹⁷⁰.

Ameliorative measures can be broadly divided into cost compensation on the one hand, and measures to increase buildings' energy efficiency on the other. If there are insufficient resources to compensate costs, inadequate benefits to struggling households itself becomes a cause of energy poverty¹⁷¹. Four main categories of benefits can be identified: basic or uninterrupted supply; cash benefits; in-kind or fuel benefits; and reduced or social tariffs¹⁷².

¹⁶⁷ Petrova (2017), 'Encountering energy precarity: Geographies of fuel poverty among young adults in the UK', *Transactions of the Institute of British Geographers*, 43(1), 17-30. Available online: <https://rgs-ibg.onlinelibrary.wiley.com/doi/epdf/10.1111/tran.12196>.

¹⁶⁸ Recommendation (EU) 2020/1563 of 14 October 2020 on energy poverty.

¹⁶⁹ C(2020) 9600 final, Annex to the Commission Recommendation on energy poverty.

¹⁷⁰ Bouzarovski and Thomson (2020), 'Towards an inclusive energy transition in the European Union', European Energy Poverty Observatory (EPOV), Brussels, 31. Available online: <https://op.europa.eu/en/publication-detail/-/publication/4a440cf0-b5f5-11ea-bb7a-01aa75ed71a1/language-en>.

¹⁷¹ Baptista and Marlier (2020), 116.

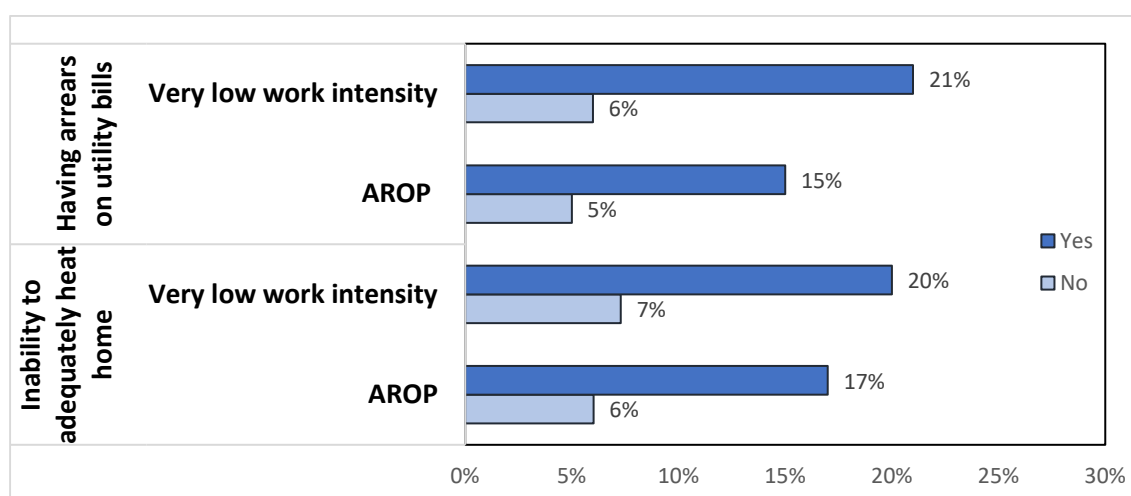
¹⁷² Ibid.

Access levels

In the context of this report, access to energy services has been studied quantitatively by looking at whether the households had arrears on their utility bills within the past 12 months (which also reflects access to water and sanitation services) and whether the households can adequately heat their home. According to the data, **around 7.7 % of people in EU-SILC 2020 sample cannot afford to adequately heat their home and 7 % had arrears on utility bills.**

When looking at AROPE, being at risk of poverty or having very low work intensity seems to play a more significant role for access to energy services, than it did for digital communication (see Figure 3). For instance, out of those unable to adequately heat their home, 17 % are also AROP and 6 % are not.

Figure 3 – Access to energy services, by AROPE and work intensity, 2020



Source: EU-SILC 2020, Milieu calculations.

Note. Very low work intensity means working age person (18-64) who worked a working time equal or less than 20 % of their total work-time potential during the previous year.. Being at risk of poverty (AROP) means having a share of equivalised disposable income below the at-risk-of-poverty threshold (i.e. 60 % of the national median equivalised disposable income after social transfers).

5.3. Financial services

Access to financial services such as basic payment services is an important tool that facilitates inclusive growth by making sure that all population groups are financially included. This includes the right to open payment accounts, the facilitation of cross-border accounts, and the transparency of fees¹⁷³. Financial education allows people to make timely payments, make smarter saving and borrowing decisions, and manage their financial risks better. In terms of availability, there is no significant absence of financial products, services and/or intermediaries in Europe¹⁷⁴.

In terms of access issues, a recent study by the European Commission identifies a limited access to payments infrastructure, and fewer bank branches and ATMs¹⁷⁵. This

¹⁷³ European Commission (2021f), 'Study on EU payment accounts market: Final report', European Commission (DG FISMA), Brussels. Available online: <https://data.europa.eu/doi/10.2874/45634>.

¹⁷⁴ European Banking Federation (EBF) (2021), 'Banking in Europe: EBF Facts & Figures 2021', EBF, Brussels, 4-19.

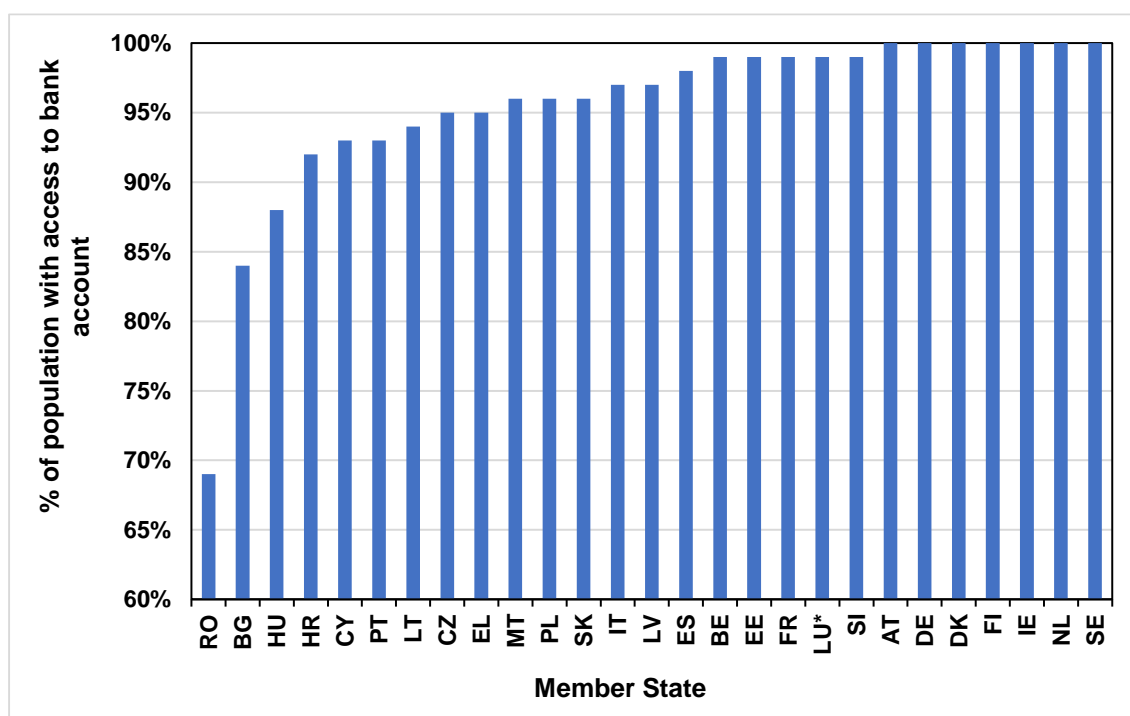
¹⁷⁵ European Commission (2021f), 22.

indicates a lower demand for cash and a switch to digital banking – something which in turn may increase the risk of financial exclusion for some groups, i.e. those with low digital skills. Moreover, there exists much variation among the EU Member States in terms of inhabitants per ATM¹⁷⁶.

Access levels

No appropriate EU-SILC variables are available for studying access to financial services. However, data from the World Bank's Global Findex dataset illustrates the proportion of individuals in each EU Member State that hold an account with a financial institution. Figure 4 below shows that in most Member States, the vast majority of people aged 15 and above have a bank account. Only in Hungary (88 %), Bulgaria (84 %) and Romania (69 %) the 90 % threshold is not crossed. In the EU on the whole, the data indicates that ca. 13.4 million people aged 15 and above remain without a bank account, or 4 % of the population. This is down from 37 million, or 9 %, in 2017.

Figure 4 – Proportion of people aged 15 and above with a bank account, 2021¹⁷⁷



Source: World Bank (2022), The Global Findex Database 2021: Financial Inclusion, Digital Payments, and Resilience in the Age of COVID-19 [Online]. Washington, DC: The World Bank. Available: <https://www.worldbank.org/en/publication/globalfindex> [Accessed 28 July 2022].

Note. LU* data is for 2017.

5.4. Transport

The broad definition of having issues to access transport services means that a number of dimensions can be considered as barriers. Two main sets of factors can be identified in **access** and **cost**. Speaking first of access, this dimension concerns not only physical distance to transport services (people living in rural or under-served urban areas and/or

¹⁷⁶ European Banking Federation (EBF) (2021), 13-14.

¹⁷⁷ Note that the definition in the database is 'account with a financial institution'. It has been interpreted by the research team that the most likely financial institution to hold an account with is banks, hence why it is presented here.

do not own a car are particularly affected)¹⁷⁸, but also *physical* access of modes of transport for e.g. people with disabilities, older people, and those who are pregnant.

As for the other essential services, affordability concerns also play a role: in 2014 (note: no more recent data is available) 2.4 % of all people in the EU, and 5.8 % of those at risk of poverty, could not afford regular use of public transport¹⁷⁹. Ameliorative policy measures to prevent or alleviate issues to access transportation means generally address cost concerns, and come in the form of different groups receiving reduced public transport tariffs, cash benefits or subsidised access to public transport, generally delivered on a subnational level¹⁸⁰. The effectiveness of these measures in ensuring transport access for vulnerable populations has however been contested:

- First, the lack of targeting within the vulnerable groups to identify (1) cost constraints based on household income and (2) actual transport needs means that the benefits reach many individuals who are not actually in need¹⁸¹;
- Second, transport needs vary not just by demography but also by other needs: solutions to provide transport to schools and further education institutions may be different from those that improve physical access or rural access to transport services¹⁸²; and
- Finally, it has been noted that households may offset higher transport costs with lower housing costs, as housing outside of urban centres may be cheaper¹⁸³. A consideration of transport costs independently of the household's broader economy therefore becomes problematic.

Throughout, policy-making is constrained by a lack of suitable and accurate data on usage, access and proximity to services¹⁸⁴. In part this difficulty stems from data not being collected: for instance, an ad hoc module for EU-SILC contained a question on the number of people who could not regularly afford public transport, but was only collected for the reference year 2014¹⁸⁵, and similar indicators are not currently produced by Eurostat. In the absence of coordinated statistical collection, estimates of vulnerable transport users vary widely depending on which definition is used¹⁸⁶.

However, a recent effort from the European Commission offers a way of assessing at least some aspects of transport access by using geospatial data to measure how many

¹⁷⁸ In 2019 6% of Europeans could not afford a personal car, ranging from 1.6% in Cyprus to 23.4% in Romania; cf. Eurostat (2021b), *Persons who cannot afford a personal car [ILC_MDDU05]* [Online]. Available online: https://ec.europa.eu/eurostat/databrowser/view/ilc_mddu05/default/table?lang=en [Accessed 19 January 2022].

¹⁷⁹ Eurostat (2021c), *Persons who cannot afford a regular use of public transport by age, sex and income group [ILC_MDES13A]* [Online]. Available online: https://appsso.eurostat.ec.europa.eu/nui/show.do?dataset=ilc_mdes13a&lang=en [Accessed 19 January 2022]. The data is only available for 2014 based on an EU-SILC ad hoc module.

¹⁸⁰ Baptista and Marlier (2020), pp. 74-84.

¹⁸¹ Mackett (2014), 'Has the policy of concessionary bus travel for older people in Britain been successful?', *Case Studies for Transport Policy*, 2(2), 81-88. Available online: [https://discovery.ucl.ac.uk/id/eprint/1443617/1/Mackett_B60%2526 CS in TP on concessionary travel.pdf](https://discovery.ucl.ac.uk/id/eprint/1443617/1/Mackett_B60%2526%20CS%20in%20TP%20on%20concessionary%20travel.pdf); Lucas, Mattioli, Verlinghieri and Guzman (2016), 'Transport poverty and its adverse social consequences', *Transport*, 169(6), 353-365. Available online: <https://www.icevirtuallibrary.com/doi/10.1680/jtran.15.00073>.

¹⁸² Samek Lodovici and Torchio (2015), 'Social Inclusion in EU Public Transport', European Parliament (DG IPOL), Brussels.

¹⁸³ Lucas, Mattioli, Verlinghieri and Guzman (2016), p. 357.

¹⁸⁴ Ibid.

¹⁸⁵ Eurostat (2021c).

¹⁸⁶ Lucas, Mattioli, Verlinghieri and Guzman (2016).

people in European cities live within 500 metres of public transport stops¹⁸⁷. This forms part of an effort to gather indicators to track progress towards UN SDG 11, to ‘Make cities inclusive, safe, resilient and sustainable’. This goal includes an indicator on public transport access, but few countries or regions currently collect the data¹⁸⁸. While not offering insights on affordability, the DG REGIO mapping can therefore offer at least some supplementary evidence on the availability the physical access aspect of transport.

Finally, researchers have also cautioned against simple measures of capturing vulnerable transport users which do not take into account dimensions such as transport needs and available options, arguing that affordability alone risks making an ‘inadequate and misleading’ measure¹⁸⁹. Consequently, previous studies have often relied on literature review to assess transport access for different demographic groups¹⁹⁰.

Access levels

Given the difficulties to capture vulnerable transport users, we looked at both extremes of expenditure on public transport¹⁹¹:

- Households spending less than half of the national mean, and
- Households spending more than twice the national mean.

Indeed, spending too little on public transport could hint at a lack of resources, while spending too much could result in the inability to afford other necessary items (e.g. housing). The EU-SILC variable on public expenditures includes as zero values those for whom public transport is provided free of charge (e.g. persons above/below a certain age or working in public transport companies). Given the high number of zero values in certain countries, the mean was considered rather than the median (even if the literature advocates for the latter as it accounts for the distribution of values).

According to EU-SILC 2020 ad-hoc module, **around 44 % of people spend below half of the national mean and 11 % spend more than twice the national mean**. Even though the focus of this report is on public transport, considerations on the cost of private means of transportation are also important, as this is what households turn to in the absence of public transportation. Therefore, the multivariate analysis in Section 6.2.1 brings more nuances to the descriptive statistics by considering also expenditures on private transport (i.e. private cars).

When looking at AROPE facets (i.e. being at risk of poverty or social exclusion), the differences between vulnerable and non-vulnerable individuals are not so significant, as shown in Figure 5. There are, however, hints that those who are at risk of poverty and with very low work intensity tend to stay in the lowest side of public transport expenditures

¹⁸⁷ Poelman, Dijkstra and Ackermans (2020), ‘How many people can you reach by public transport, bicycle or on foot in European cities?’, *DG REGIO Working Papers*, WP 01/2020, European Commission (DG REGIO), Brussels. Available online: https://ec.europa.eu/regional_policy/sources/docgener/work/012020_low_carbon_urban.pdf; European Commission (2022b), *Map: UN SDG 11.2.1 – Access to public transport* [Online]. Brussels: European Commission (DG REGIO). Available online: https://ec.europa.eu/regional_policy/mapapps/public_transport/sdg-city-accessibility.html [Accessed 21 January 2022].

¹⁸⁸ Based on the SDG Tracker from the Oxford Martin Schools Our World in Data; cf. Ritchie, Roser, Mispy and Ortiz-Ospina (2018), *Measuring progress towards the Sustainable Development Goals – Target 11.2: Affordable and sustainable transport systems* [Online]. Oxford: Oxford Martin School. Available online: <https://sdg-tracker.org/cities#11.2> [Accessed 21 January 2022].

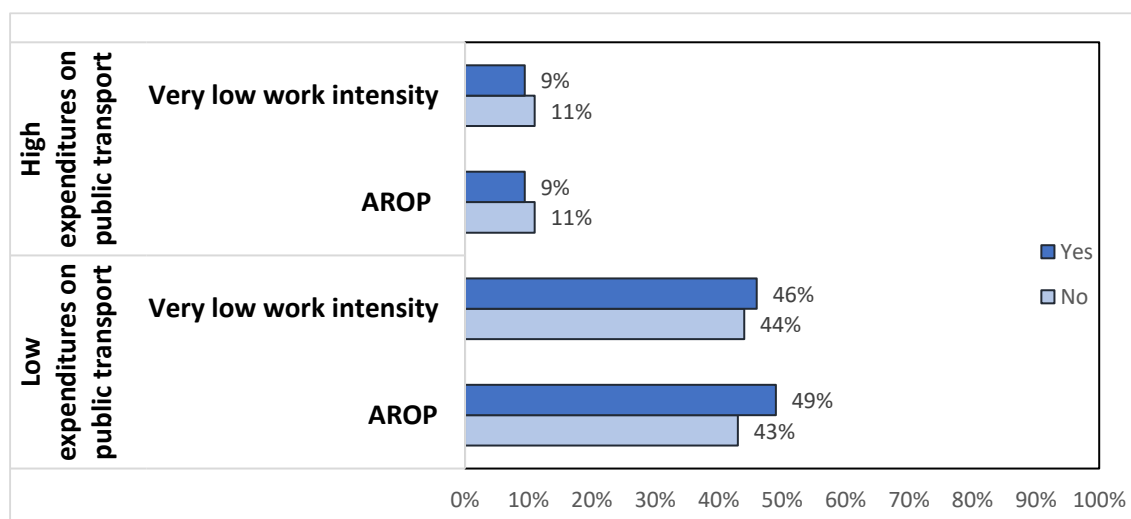
¹⁸⁹ Gómez-Lobo (2011), ‘Affordability of Public Transport: A Methodological Clarification’, *Journal of Transport Economics and Policy*, 45(3), 437-456. Available online: <https://repositorio.uchile.cl/bitstream/handle/2250/143936/Affordability-of-Public.pdf?sequence=1&isAllowed=y>. Titheridge, Mackett, Christie, Oviedo Hernández and Ye (2014), ‘Transport and poverty: A review of the evidence’, University College London Transport Institute, London, p. 33. Available online: <https://discovery.ucl.ac.uk/id/eprint/1470392/>.

¹⁹⁰ See e.g. Titheridge, Mackett, Christie, Oviedo Hernández and Ye (2014); Samek Lodovici and Torchio (2015).

¹⁹¹ Following the suggestions related to energy indicators in paragraph 2.4.

(thus spending less than half the national mean). The descriptive statistics show only preliminary insights and careful conclusions should be drawn from them. Indeed, there are several other variables that may influence the level of expenditures on public transport (e.g. whether the household is located in an urban or rural area). A more accurate and comprehensive picture is given via the multivariate analysis (Section 6.2.1).

Figure 5 – Public transport expenditures, by AROP and work intensity, 2020



Source: EU-SILC 2020, Milieu calculations.

Note. High expenditures on public transport services refers to spending more than twice the national mean. Low expenditures on public transport services refers to spending less than half the national mean. Very low work intensity means working age person (18-64) who worked a working time equal or less than 20 % of their total work-time potential during the previous year.. Being at risk of poverty (AROP) means having a share of equivalised disposable income below the at-risk-of-poverty threshold (i.e. 60 % of the national median equivalised disposable income after social transfers).

5.5. Water and sanitation

Definitions of access to water include a range of indicators including distance to water sources, water quality, stability of water supply, and affordability. This study will primarily focus on affordability for water and sanitation.

Within the field of affordability, the following aspects can be identified as relevant in the context of this study:

- Affordability of water in public spaces (i.e. outside one's home where water of drinking water quality can be accessed through the tap);
- Affordability of connection fees; and
- Affordability of fees.

The first aspect is linked to the provision of drinking water in public spaces which has been prioritised in some EU countries, specifically in large cities. Those public taps are a relevant source of refreshment for the whole population, but are at the same time a crucial source of drinking water for people sleeping rough. Another example in this regard is bottled water. While it is available throughout the EU, affordability can be an issue for the poorest population (in addition to being a large burden on the environment).

The latter two aspects are discussed as part of the background on waste water and are not repeated here, given that fees in the vast majority of cases are charged together,

and therefore the only way to measure consumption-based fees is through water metering.

It should be added to the discussion that the Water Framework Directive (WFD) has had a major influence on pricing for water services over recent decades since, as per Article 9, 'Member States shall take account of the principle of recovery of the costs of water services, including environmental and resource costs'¹⁹². Although environmental and resource costs are only very rarely included in fees (for example, when the investments were financed by EU grants), the full cost recovery of the infrastructure and service through fees is today an established principle in most EU countries.

Finally, even though the focus is on affordability, the issue of affordability and water quality – the main objective of the recently recast DWD¹⁹³ – cannot be fully separated. Another part of the revised DWD is new quality parameters to be met by drinking water in the future. While this might lead to positive health effects across Europe, it is likely that the required investments will increase fees (due to the cost-covering principle of the WFD) which might cause affordability issues for more households.

Moving over to sanitation more specifically, in 2016, it was estimated that around 10 million people do not have access to sanitation facilities within the EU, as stated in the latest implementation report of the UWWTD from 2020¹⁹⁴. The UWWTD is currently subject to revision and an impact assessment is conducted to this end, but it is not expected to include 'access' as an objective.

The UWWTD does not set out how exactly people should be connected. Likewise, there is no generally accepted definition for 'access to waste water services'. Compared to some other essential services (e.g. transport or digital services), sanitary facilities are not mobile but stationary. Thus, 'access' should be understood to include access in different locations, such as access to sanitation at school, work, or public spaces.

As presented above, this study will focus on the following three aspects of affordability:

- Affordability of sanitation outside one's home (e.g., public spaces);
- Affordability of getting connected to the waste water collection network; and
- Affordability of paying the fees for the waste water collection and treatment.

Affordability of sanitation services in public spaces can pose an issue for the poorest individuals if the services require payment (i.e. paying toilets), as it is the case in most territories across the EU¹⁹⁵. Even though usually not high, such fees can be a deterrent to low-income individuals or rough sleepers, the latter of which may not have access to any other facilities.

While not widespread, social policies exist to address these situations in some cities which e.g., provide keys or passes to public toilets for people sleeping rough. An additional measure present in larger cities are specific houses/places which provide toilet access (among other facilities) to rough sleepers¹⁹⁶. The point of affordability of sanitation services in public spaces also has a gender dimension since, while some territories in

¹⁹² Directive 2000/60/EC, Article 9.

¹⁹³ Directive (EU) 2020/2184.

¹⁹⁴ Report COM(2020) 492 final from the Commission: Tenth report on the implementation status and programmes for implementation (as required by Article 17 of Council Directive 91/271/EEC, concerning urban waste water treatment). The next implementation report (the eleventh) is based on 2018 reporting data and will be published in 2022.

¹⁹⁵ Even though not in the focus of this study, it should also be noted that physical access to sanitation in public spaces also varies widely across EU Member States. For example, public toilets are usually to be found in larger cities while such facilities rarely exist in smaller towns or villages (which are not tourist destinations).

¹⁹⁶ While often shelters are only open at night.

the EU (mostly larger cities and tourist destinations) have mounted public and free-of-charge urinals in hot spots, those are in most cases designed for men and are not easily used by women. However, due to a lack of adequate data (e.g. homeless individuals are generally not included in surveys) it is likely to be difficult to quantitatively assess the prevalence of this problem.

Affordability of getting connected¹⁹⁷ to the waste water collection network is a shared public-private issue. As mentioned before, the EU Member States are for environmental reasons obliged¹⁹⁸ to ensure that waste water from households is collected and treated. However, household connections (i.e., the connection to the mains) are in most national contexts to be paid for by the house owners, generally in the form of a one-off charge. While in newly built houses this does not pose a problem because it is factored into the overall costs of the house, it can present an affordability issue in old building stock, especially in some of the newer EU Member States such as Croatia or Romania where some agglomerations still have significant populations that are not connected.

Some quantitative indications on the numbers of non-connected households of existing building stock at agglomeration, NUTS2 and national level can be inferred from the policy reporting on the UWWTD¹⁹⁹. This, however, needs to be cross-referenced with other factors such as the magnitude of connection charges and disposable income of households.

Finally, it should be noted that usually, waste water and water supply fees are not split but charged as one fee. A wide range of social measures exist for ensuring affordability of those fees including reduced tariffs, minimum provisions of 'free' water and sanitation (in terms of volume, either as a targeted measure or across all households linked to a water service provider) and protection from disconnection, counselling as well as social protection measures.

While abundant research and literature exist on this topic in several EU countries those measures are decided upon at the level of regions or even municipalities, leading to a wide variety of measures to be considered when quantitatively assessing trends and numbers at national levels. Adding to the complication, is also the question of the data owners. While for measures such as reduced tariffs the water service providers are the data owners (since they directly deduct parts of the water bill), in other cases such as income support the public authorities are the data owners.

To counter this funding gap, some EU Member States can rely on resources from the European Structural Investment Funds when increasing fees would exacerbate potential affordability issues and access to finance is limited²⁰⁰. The assessment of the national investment plans could be beneficial to get information on future investment needs²⁰¹ and the countries' plans for meeting those.

¹⁹⁷ It should be noted that agglomerations can also decide to not connect households corresponding to up to 2 % of the overall wastewater load and instead rely on so-called Individual or other appropriate systems (IAS) where the establishment of a collecting system is not justified either because it would produce no environmental benefit or because it would involve excessive cost. While this issue is different from an environmental as well as data standpoint, it nevertheless falls into the same category of on-off charges for access to sanitation and should therefore be counted into this category.

¹⁹⁸ At least in agglomerations above 2 000 p.e.

¹⁹⁹ However, this requires profound knowledge of the existing data, also taking into account the national specifics (e.g. interpretation of some Articles – especially Article 5 – and respective data quality per country). Ramboll has supported the EC over the last three years in the exercise of analysing this data and is currently involved in preparing the next, 11th Implementation Report).

²⁰⁰ See about this issue e.g. the recent study by the OECD: OECD (2020b).

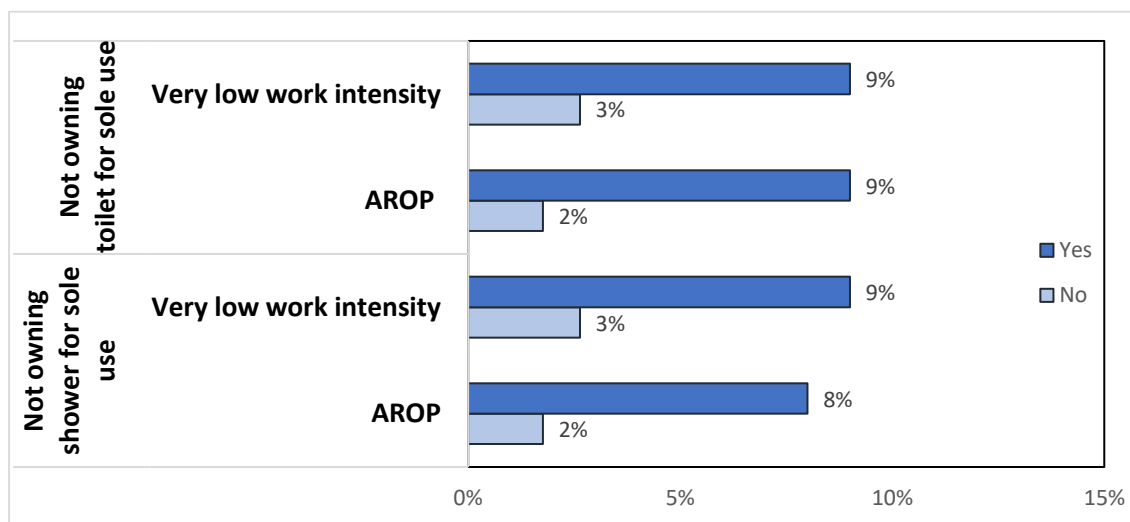
²⁰¹ I.e. the 3rd criterion of the enabling condition; cf. Council of the European Union of 13 February 2019, Cohesion Policy Legislative Package 2021-2027 - Partial mandate for negotiations with the European Parliament', 6147/19 ADD 1.

Access levels

Considering data availability in EU-SILC, the variables used as proxies for water and sanitation services access are: whether the households have access to a shower or bath for sole use and to a toilet for sole use. On average, **around 3.4 % and 3.6 % of people in EU-SILC 2020 sample do not have a shower or bath for sole use, and a toilet for sole use**, accordingly.

As it was the case for the other services, being at risk of poverty or having very low work intensity has an influence on whether the person owns a shower or bath for sole use.

Figure 6 – Water and sanitation services, by AROP and work intensity, 2020



Source: EU-SILC 2020, Milieu calculations.

Note. Not owning a shower for sole use also includes a bathtub. Very low work intensity means working age person (18-64) who worked a working time equal or less than 20 % of their total work-time potential during the previous year.. Being at risk of poverty (AROP) means having a share of equivalised disposable income below the at-risk-of-poverty threshold (i.e. 60 % of the national median equivalised disposable income after social transfers).

5.6. Overlaps in affordability between services

In the sections above, we looked at essential services in a vacuum, thus focusing on those households lacking access to one specific service. However, access across services is likely to be correlated; those unable to afford one service may also have access issues to other services. To analyse such overlaps, we take the affordability indicators used until now in the analysis as a proxy for access to the water and sanitation, energy and digital communications. Table 15 presents the correlation matrix between the indicators and shows that variables are positively correlated (although correlations are relatively weak). This implies that people who are e.g. not able to afford internet access are generally not able to adequately heat their houses or afford a shower (or bathtub) for sole use.

Table 15 – Correlation between essential services based on EU-SILC data,2020

Variables	(1)	(2)	(3)	(4)
(1) Inability to afford internet	1.000			
(2) Inability to adequately heat home	0.196	1.000		
(3) Having arrears on utility bills	0.170	0.211	1.000	
(4) Not owning a shower/bath for sole use	0.170	0.083	0.067	1.000

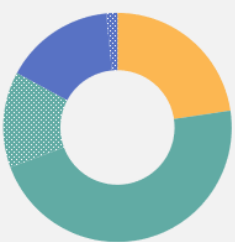
Source: EU-SILC 2020, Milieu calculations.

Note. Only essential services where access issues are more straightforward are included. Thus, transport services are left out.

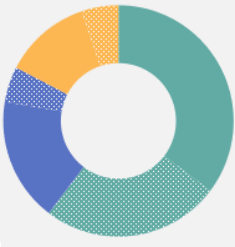
Table 16 shows the shares of not having access to one, two, or all three proxy indicators (i.e. inability to afford internet, inability to adequately heat home and not owning a shower/bath for sole use) out of all people lacking access to at least one of the considered essential services, and out of the sample population. Arrears on utility bills covers heating, electricity, gas, water, etc. and therefore relates to more than a service. Hence, overlaps between the latter and energy and water & sanitation services are provided in the service breakdown column only and are not used to assess overlaps.

It appears that the majority of people lacking access to at least one of the three essential services considered, lacks access to one service only, and only around 0.3 % of the sample population are flagged by all indicators and therefore experiences access issues for all services considered. In addition, the energy related indicator (i.e. inability to adequately heat home) is the one flagging more “access issues”; out of those lacking access to one service only, around 60 % have issues to adequately heat their home. Out of those, around 22 % also have arrears on their utility bills.

Table 16 – Lack of access to one or more services based on EU-SILC 2020²⁰²

Having no access to:	As % of total w/o access to at least one service	As % of total sample population	Services breakdown
One service only	83 %	9.4 %	 <ul style="list-style-type: none"> Inability to afford internet Inability to heat home Heating & Arrears on utility bills Not owning shower for sole use Shower & Arrears on utility bills

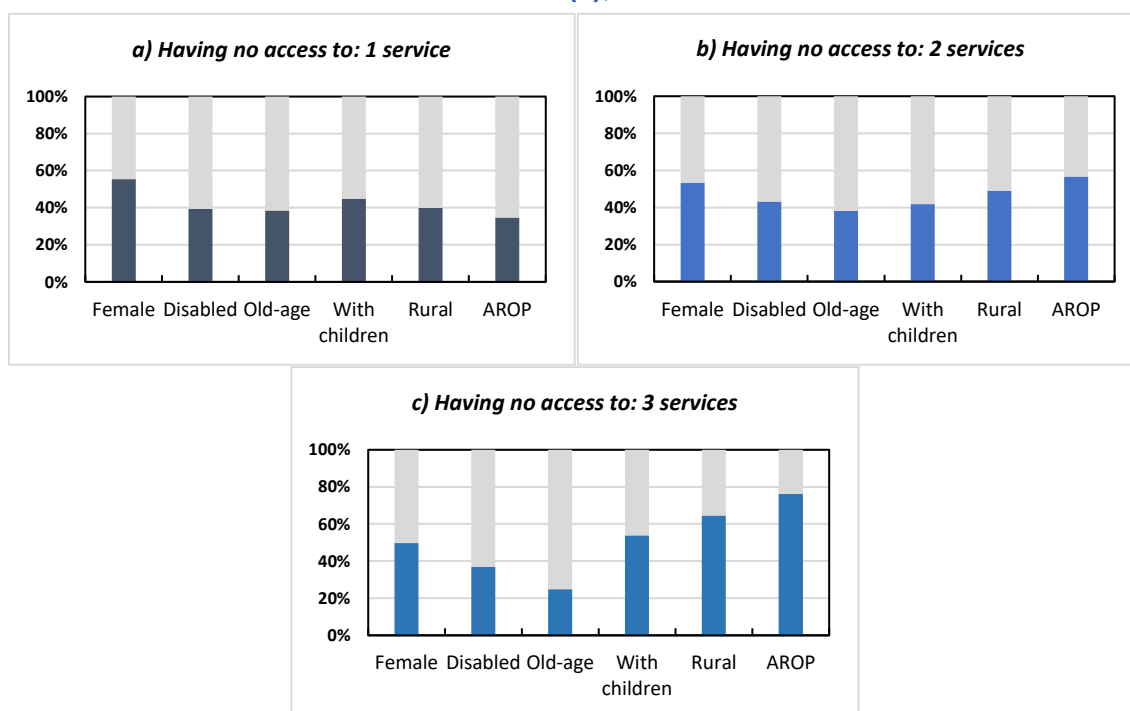
²⁰² A breakdown of overlaps by country is available in Annex B Table 35.

Having no access to:	As % of total w/o access to at least one service	As % of total sample population	Services breakdown
Two services only	15 %	1.7 %	 <ul style="list-style-type: none"> Internet & Heating Internet & Heating & Utility Internet & Shower Internet & Shower & Utility Heating & Shower Heating & Shower & Utility
All three services	2 %	0.3 %	
Total w/o access to at least one service	100 %	11.3 %	

Source: EU-SILC 2020, Milieu calculations.

Going one level deeper, Figure 7 shows some characteristics of the individuals without access to one or more services. The shares of women, people with disabilities, old-age people and members of households with children stay relatively stable across the different panels. On the other hand, the shares of rural people and people who are at risk of poverty sharply increase: more than 60 % with access issues for all three indicators live in rural areas and almost 80 % are individuals at risk of poverty.

Figure 7 - Characteristics of individuals with lack of access to one or more service(s), 2020



Source: EU-SILC 2020, Milieu calculations.

Note. *How to read the graph:* a little bit more than 50 % of the people without access to one service is a woman and 40 % lives in rural areas. While the share of women remains quite stable across the panels, the share of rural people increases; around 65 % of people lacking access to all three services lives in rural areas.

6. Barriers and drivers to access essential services

This section underlines several factors that can influence access to the different services. These factors can be divided into barriers (such as being at risk of poverty or lacking the requisite skills or knowledge to access a service) and drivers (such as receiving social benefits, or there being other measures that make access easier or cheaper).

Barriers mostly refer to those factors that challenge or prevent affordability, and can be clustered in two categories:

- **Individual barriers** refer to demographic and socio-economic characteristics of the population. For instance, some policy measures are too restrictive in terms of the characteristics of the target population, and therefore some population groups are unable to benefit from the measure, and this makes it difficult for them to access the service. Other individual barriers associated with other dimensions of access (e.g. minimum skills required to operate or access) might also have an impact on affordability.
- **Other barriers**, in this context, refers to barriers associated with affordability and other dimensions of access, that are not related to the individual per se. These can for instance relate to lack of infrastructure or territorial inequalities.

Separately, **drivers** are understood to be factors that can enhance the affordability of essential services for the population that is at risk of poverty or social exclusion. These drivers likely result from policy measures such as financial incentives, training, information campaign, reduction of territorial inequalities.

6.1. The multidimensional nature of access and identification of barriers

Based on the main findings from literature review (discussed for each service in the sections below) and national reports, several barriers to access to the different essential services could be identified.

The identification of barriers to access to the different essential services is challenging given the multidimensional nature of the concept of access. Although the latter is mainly understood in this report as “affordability”, it nevertheless covers other dimensions that are often interrelated (such as availability, accessibility, and quality). In this context, the barriers to access linked to these dimensions may not only have a *direct* impact on affordability, but also an *indirect* one via the interlinkages of the dimensions²⁰³.

To design and implement effective policies to improve access to essential services, the multidimensional nature of access and the barriers identified accordingly, should be taken into account. This helps identify what policy measures are required to reach the populations in question and illustrates where there are gaps in policy solutions.

Overlaps in the barriers to access and vulnerable populations vary between (and in some cases within) EU Member States. This depends on, for example, their policy frameworks to improve access to essential services, the policy measures used to compensate costs or guarantee access, and the needs of the population. However, the literature review does identify some common overlaps and connections, which will be used to guide the

²⁰³ For instance, a household living in a rural area and able to afford to pay for public transport (affordability dimension) could still have affordability issues if the distance to the nearest train station is such that it requires taking the private car and spending on fuel and park permits (availability dimension).

analysis of individual EU Member States. Broadly, access issues in relation to essential services can be divided into four categories²⁰⁴.

- **Quality:** The service is of a good standard and is satisfactory; it is able to respond to the needs of the user. While this is an important criterion for assessing whether services fulfil their purpose, it will be evaluated on a case-by-case basis in Member States where relevant. Quality of service provision is not a focus of the report but may be an important dimension in some specific cases – e.g. water of insufficient quality may not be possible to consume, and would thus not be considered a service provided.
- **Accessibility:** The service can be reached or obtained easily, and it is easy to understand and to use. This includes physical distance to the service, which may be of particular concern in rural, sparsely-populated areas (most notably in the case of transport). Concerns relating to knowledge required to use or access the service, or issues of physical accessibility, are also relevant here.
- **Availability:** The service exists and it is available for those who need it. This entails both access to equipment, such as broadband routers or computers/smartphones in the case of digital communications, and access to infrastructure. This too can be of particular concern in rural areas where access to broadband lines, water mains, etc. can be sparser²⁰⁵, but also applies to some urban populations.
- **Affordability:** The service is cheap enough for people who need it to be able to afford it. This mainly impacts low-income households, but depending on price fluctuations – e.g. in relation to high energy prices in the winter of 2021/2022²⁰⁶ – can also impact middle-income households. While the composition of low-income populations varies between countries, over-represented groups generally include younger people, with limited incomes; older people without labour income; minorities and recent movers or migrants; and those with lower education attainment. Affordability concerns will ultimately apply to all services, depending on the costs in the Member State in relation to household incomes.

Based on the above, some indications can be provided regarding the overlap in accessibility issues between services. This is summarised in Table 17.

Table 17 – Overlap of accessibility issues for essential services

Barriers to access		Digital comms.	Energy	Financial services	Transport	Water & sanitation
Accessibility	Distance				X	
	Physical access	X		X	X	
	Knowledge	X		X		

²⁰⁴ Caritas (2019), 'Belgium Country Report: Access to services by vulnerable groups - barriers, obstacles and good practices', Caritas, Brussels, p. 10. Available online: https://www.caritas.eu/wordpress/wp-content/uploads/2020/01/Caritas-Cares-Report-Belgium_singles.pdf.

²⁰⁵ For instance, in the EU 59 % of rural households have access to high-speed broadband, compared to an EU average of 86 %; cf. Communication COM(2021) 345 final from the Commission on a Long-term Vision for the EU's rural areas – Towards stronger, connected, resilient and prosperous rural areas by 2040, p. 6.

²⁰⁶ Communication COM/2021/660 final from the Commission on Tackling rising energy prices: a toolbox for action and support.

Barriers to access		Digital comms.	Energy	Financial services	Transport	Water & sanitation
Quality		<i>Applies to all on country-by-country basis.</i>				
Affordability		X	X	X	X	X
Availability	Infrastructure	X	X	X	X	X
	Equipment	X				

Source: Milieu elaboration.

Initially, there are two main dimensions that are common to all services: affordability in the form of cost concerns, and availability concerns in terms of infrastructure. If a service is either too expensive in relation to median incomes, or simply not physically available (e.g. if an area is not served by transport, or does not have access to municipal waste water or water lines) it provides significant and crucial barriers to access. Affordability constraints would be expected to mainly affect low-income households, while unavailable infrastructure would have a more specifically geographic dimension²⁰⁷.

Some barriers are more specific to certain services: e.g. access to digital communications requires not only infrastructure, but also equipment in the form of computers or smartphones. Financial services and digital communications both require a certain level of previous knowledge to access. There is also a physical access dimension for digital communications, financial services and transport, all of which need to ensure that their service provision is adapted to individuals who may have special needs and requirements.

Transport, finally, is the main essential service that is affected by the distance one needs to travel to access it. This could to some extent also affect individuals who need to use public Wi-Fi to access the internet, or homeless individuals dependent on public toilets for their sanitation needs, but it is not a core access issue for these services and therefore not included in the table.

The sections below delve deeper into the individual (Section 6.2) and other (Section 6.3) barriers, differentiating those that are cross-cutting (common to all services) to the service-specific ones.

6.2. Individual barriers

6.2.1. Cross-cutting individual barriers

As previously identified in the ESPN report on policy measures to improve access to essential services²⁰⁸, **low income and risk of poverty or social exclusion is the main barrier to accessing essential services**. Its significance varies across the services, and national experts identify it as being less of a barrier for financial services (where charges, in most cases, are relatively low) and for water and sanitation (where access is usually ensured if one is able to pay the rent, and the main population at risk is homeless

²⁰⁷ However, certain demographics may be over-represented in these geographic areas, adding yet more dimensions to the vulnerable group.

²⁰⁸ Baptista and Marlier (2020).

individuals). The descriptive statistics above confirmed the consistent impact that poverty has on the ability to access the services.

In addition to low income or very low work intensity, other vulnerable groups, common to all services, have been identified by the literature review and national reports. While the exact composition of populations at risk of access facing access barriers will vary across EU Member States, over-represented groups generally include old-age people, single parents (and especially mothers), people with disabilities or learning difficulties, women, people belonging to minority populations and being a non-national.

To corroborate the cross-cutting nature of the individual barriers mentioned above with quantitative data, Table 18 and Table 19 look at key characteristics of the households with access issues. These descriptive statistics give only preliminary hints on the barriers to access; a more comprehensive and sound econometric analysis is conducted further below to account for factors that play a role when it comes to services' access, such as income, and unobserved differences across countries.

Table 18 looks at the demographic and household composition characteristics. It appears that **individuals living in households with disabled member(s) are particularly vulnerable across all services**. In addition, people living in households where a woman is responsible for the accommodation and with old-age member(s) are instead particularly vulnerable when it comes to energy (including utilities) services. Turning to transport services, households with non-EU country of birth and those with children tend to stay in the highest share of transport expenditures, while the opposite is true for those with old-age or disabled person(s).

Table 18 - Demographic and household composition characteristics of households with essential service access or affordability issues (in %), 2020

Services	Responsible person		Birth country			Household with disabled		Household with old-age		Household with children	
	Male	Female	National	EU	Other	No	Yes	No	Yes	No	Yes
Inability to afford internet	4	5	4	3	4	3	7	6	8	8	7
Having arrears on utility bills	6	9	6	9	9	5	10	5	10	9	6
Inability to heat home	7	10	7	9	11	6	13	7	8	8	7
Not owning shower for sole use	3	4	3	3	3	3	5	3	4	4	3
Low transport expenditures	43	46	45	45	38	43	48	39	51	47	39
High transport expenditures	11	11	10	12	15	11	9	12	9	10	12

Source: EU-SILC 2020, Milieu calculations.

Note. The responsible person is the person owning or renting the accommodation (the oldest is considered in cases of shared responsibility). Birth country is the country of residence of the mother at the time of birth; "National" refers to the reporting country, "EU" refers to EU Member States excluding reporting country, "Other" refers to third countries. Household with (i) disabled, (ii) old-age, or (iii) children refers to whether the household has at least (i) one member with (strong) limitations in activities due to health problems, (ii) one member above 65 years old, or (iii) one member below 18 years old. High transport expenditure refers to spending equal or more than twice the national mean. Low transport expenditure refers to spending less than half the national mean. *How to read the table:* around 5 % of people living in households where the responsible person is a female cannot afford internet access, this percentage increases to 9 % when looking at having arrears on utility bills.

Table 19 instead looks at socio-economic characteristics. **People with lowest levels of education, those that perceive housing costs as a heavy burden, those with unemployed members in the household and in the lowest quintile of the income distribution are more at risk of access for all services**. For public transport services, households with more disadvantaged socio-economic characteristics tend to stay in the

lowest share of transport expenditures, compared to those with more favourable socio-economic characteristics.

Table 19 - Socio-economic characteristics of households lacking access to the services (in %), 2020

Services	Education			Housing costs			Activity status			Income quintiles	
	Low	Med.	High	Heavy burden	Somewhat of a burden	Not a burden	Empl.	Unempl.	Retired or Inactive	Lowest	Highest
Inability to afford internet	7	3	1	9	3	1	2	11	5	8	2
Having arrears on utility bills	9	7	4	17	4	1	6	19	9	11	3
Inability to heat home	11	7	4	16	5	3	6	18	10	15	3
Not owning shower for sole use	6	3	2	6	3	2	3	8	6	8	1
Low transport expenditures	49	44	41	43	44	44	38	43	46	58	35
High transport expenditures	10	11	12	12	11	11	13	11	12	6	16

Source: EU-SILC 2020, Milieu calculations.

Note. Low education means 0-2 ISCED level, medium 3-4, and high 5-8. Housing costs indicate the extent to which those are perceived a financial burden. The activity status “retired or inactive” includes “retired”, “inactive” and “other inactive”. High transport expenditure refers to spending equal or more than twice the national mean. Low transport expenditure refers to spending less than half the national mean. *How to read the table:* around 9 % of people that perceive housing costs as a heavy burden cannot afford internet access.

The national reports and literature review also bring attention to another affected group with a unique challenge; the **homeless population**, for whom delivery of services is particularly difficult owing to the lack of a fixed residence and, usually, deep poverty. Homelessness cannot be analysed quantitatively with EU-SILC; however, national reports and past research highlight that in some countries, such as Bulgaria, Greece, Luxembourg, Malta and Slovakia, the Roma population has been identified as particularly at risk when it comes to access to essential services – in particular in relation to physical access, as many settlements are not connected to the grid e.g. for energy and water and sanitation.

Multivariate analysis

To gain a deeper understanding on the cross-cutting factors influencing access to the different essential services, and on the characteristics of the most vulnerable groups, this section delves into the regression analysis. The multivariate analysis brings nuances to the descriptive statistics by looking at the impact of the relevant variables on services access while controlling for observed and unobserved characteristics (the latter referring to factors that are not included in the analysis but may have an impact on affordability).

Table 20 and Table 22 present the simplified outcomes²⁰⁹.

Starting with Table 20, Model (1) shows the effects on not being able to afford internet access, compared to having internet access. Model (2) shows the effects on not being able to adequately heat the home, compared to being able to do so. Model (3) shows

²⁰⁹ More detailed results are summarised in Annex C to conserve space.

the effects of having arrears on utility bills, compared to not having them. Model (4) shows the effects on not owning a shower/bath for sole use, compared to having one.

In general, the quantitative analysis appears to mostly confirm the national reports and literature review, in that:

- Households where the **first responsible person for the accommodation is a female are more at risk of having access issues** for all the services, compared to households with a male responsible person.
- **Increasing the size of the households is associated with greater likelihood of having access issues.** In particular, households with three or more children are particularly more at risk when it comes to energy-related services, compared to households without children.
- **Households with disabled person(s) appear to be the most vulnerable group;** they are (strongly) more at risk of not being able to afford internet access, adequately heat home, have arrears on utility bills and not owning a shower/bath for sole use, compared to households without disabled person(s).
- **Being at risk of poverty, having households with very low intensity and perceiving housing costs as “heavy burden” increase the chances of being at risk of access** in all the models. The opposite is true for having higher education or being part of a higher income quintile.
- In addition, being at risk of poverty amplifies access issues of vulnerable groups; being AROP and part of a vulnerable group increases the risk of not being able to afford the essential services (models in Annex C).

Table 20 – Output of logit regression analysis for Digital Communications, Energy and Water & Sanitation, 2020

	(1) Inability to afford internet	(2) Inability to adequately heat home	(3) Having arrears on utility bills	(4) Not owning shower/bath for sole use
Female responsible for accommodation (reference: male responsible)	+	+	+	+
Age	Not sig	+	+	Not sig
Country of birth:				
EU (excl. reporting country)	-	Not sig	Not sig	Not sig
Other (third countries) (reference: national of the reporting country)	Not sig	+	+	Not sig
Owner (reference: renter)	-	-	-	-
Household size²¹⁰	+	Not sig	+	+
Household with:				
1 child	-	-	Not sig	-
2 children	-	-	Not sig	-
3 or more children (reference: w/o children)	-	+	+	-
Household with old-age person(s) (reference: w/o old-age)	++	Not sig	-	-
Household with disabled person(s) (reference: w/o disabled)	++	+	+	+
Household location:	Not sig	-	-	++

²¹⁰ Some of the variables included may be correlated; the choice of including them relies on the extent of value added. For instance, household size is a continuous variable and captures the impacts of increasing the size on accessibility, whereas household with children is an indicator variable and compares the impact of having 1, 2, or 3 or more children to households without children.

<i>Thinly populated</i>				
<i>Intermediate</i>	-	-	<i>Not sig</i>	+
<i>(reference: densely populated)</i>				
Education level (ISCED):				
<i>Medium (3-4)</i>	-	-	-	-
<i>High (5-8)</i>	-	-	-	-
<i>(reference: low (1-2))</i>				
Income quintiles	-	-	-	-
Household AROP	+	+	+	++
<i>(reference: not AROP)</i>				
Household with very low work intensity	++	++	+	<i>Not sig</i>
<i>(reference: not very low work intensity)</i>				
Housing costs:				
<i>Somewhat of a burden</i>	-	-	-	-
<i>Not a burden at all</i>	-	-	-	-
<i>(reference: heavy burden)</i>				
Energy prices		++	++	
Leaking roof etc.		++	++	
<i>Observations</i>	335 483	335 483	336 022	335 243
<i>Country FE</i>	YES	YES	YES	YES

Source: EU-SILC 2020, Milieu calculations.

Note. "Not sig.": variable has no explanatory power, magnitude and direction cannot be interpreted. "+" / "-": higher/lower likelihood of inability to afford the service. "++" / "--": particularly strong impact. Model (1) is a multinomial logit regression, Models (2) to (4) are binary logit regressions. Output on not having a toilet for sole use not included (see Annex C for details) as very similar to Model (4). For indicator variables, the reference group is specified below. The responsible person is the person owning or renting the accommodation (the oldest is considered in case of shared responsibility). Low education means 0-2 ISCED level, medium 3-4 and high 5-8. Income quintiles are computed at Member State level. Households are at risk of poverty if the equivalised disposable income is below the at-risk-of-poverty threshold (i.e. 60 % of the national median equivalised disposable income after social transfers). Densely populated areas have density of at least 1 500 inhabitants per km² and a minimum population of 50 000; intermediate areas have density of at least 300 inhabitants per km² and a minimum population of 5 000; thinly populated areas are areas outside urban clusters. Households have very low work intensity if working age members worked a working time equal or less than 20 % of their total work-time potential during the year. The indicator was constructed using the Eurostat definition of low work intensity, taking into account the working age population of the household (those aged 18-64, but excluding students aged 18-24). Fixed effects included to account for unobserved differences between countries. Energy prices and income variables are included in purchasing power parity. The unit of measure for energy price is kilowatt/hour. Energy prices only capture differences across member states, not over time. This is due to the nature of the regression analysis, which only focuses on year 2020. Missing data were handled via listwise deletion (i.e. row with missing value is omitted). *How to read the table:* increasing household size, increases the risk of not being able to afford internet access. In contrast, perceiving housing costs as somewhat of a burden or not a burden at all decreases the risk of not being able to afford internet access, relative to those perceiving housing costs as being a heavy burden.

Turning the discussion to transport services, capturing affordability issues is more challenging, given the multi-facet nature of transport access. However, to have a sense of the relation between transport expenditures and household characteristics, we looked at transport expenditures as a share of households' disposable income. Even though the focus of this report is on public transport services, we also considered private transport expenditures to give a more complete picture. Indeed, as shows in Table 21, private transport represents a higher share of disposable income across all quintiles of the income distribution.

Table 21 also shows the disproportionate impact of transport expenditures on households with lower incomes. Indeed, when looking at the absolute numbers, expenditures increase progressively across the quintiles. However, the story changes when considering transport expenditure as a share of income; households in the bottom quintiles of the income distribution tend to spend a higher share of their income on transport, compared to households in the highest quintiles.

Table 21 – Monthly transport expenditures as shares of disposable income, by income quintile, 2020

Transport expenditures		1 st quintile	2 nd quintile	3 rd quintile	4 th quintile	5 th quintile
Public transport expenditures	in absolute numbers (in PPP €)	27	35	40	45	57
	as share of income (in %)	3.5	2.1	1.7	1.5	1.1
Private transport expenditures	in absolute numbers (in PPP €)	127	170	208	240	286
	as share of income (in %)	12.9	9.2	8.2	7.1	5.4

Source: EU-SILC 2020, Milieu calculations.

Note. Transport expenditures in purchasing power parity (euros). *How to read the table:* Households in the first quintile of the income distribution tend to spend on average 3.5 % of their disposable income on public transport and around 13 % on private transport.

Challenges in capturing access to transport services

Understanding and monitoring vulnerable transport users is high on the policy agenda of EU Member States. Having limited access to transport services may enhance social and economic inequalities via restricting access to opportunities in the labour market, to health care services and to social participation more generally.

Research on the topic in the European context is scant and the concept eludes a clear and standard definition. Indeed, access to transport is a multi-faceted concept; the choice of transport mean is influenced by several factors, both structural (e.g. availability and regularity of the service, distance to public transport stops) and individual (e.g. affordability, physical access, self-assessed needs and preferences)²¹¹.

In the context of this report (also considering the data availability in EU-SILC), access to transport services is analysed via households' expenditures on public transport. However, given the intricate nature of the concept, a deeper and more comprehensive understanding requires the consideration of multiple indicators, rather than a single metric or composite²¹².

Coming back to the econometric analysis, Table 22 presents the simplified outcome of the effects on the share of public and private transport expenditure. These estimates can be considered as preliminary results and further research is needed to ensure all perspectives of transport affordability are taken and to fully rule out reverse causality issues. The latter may happen in case it is the dependent variable that is the *cause* of

²¹¹ Mattioli, Giulio. *Forced car ownership in the UK and Germany: socio-spatial patterns and potential economic stress impacts*, Social Inclusion, Volume 5.4, 2017, pages 147-160.

²¹² Christopher Lowans, Dylan Furszyfer Del Rio, Benjamin K. Sovacool, David Rooney, Aoife M. Foley, *What is the state of the art in energy and transport poverty metrics? A critical and comprehensive review*, Energy Economics, Volume 101, September 2021, pages 1-19.

the independent ones (e.g. lower share on transport causes the household to have very low work intensity as job opportunities are limited).

Given the difficulties in capturing vulnerable groups for transport services, the literature review and national reports can be considered as a roadmap when interpreting the quantitative results. In general, it appears that:

- **Having non-EU country of birth is associated with an increase in public transport expenditure**, compared to nationals. This variable may also capture those that are part of ethnic minorities that are identified in the literature as a vulnerable group when it comes to transport services.
- **Households with three or more children entail a higher share of transport expenditures** in both models. Households with children are also identified as a vulnerable group in the literature for transport services.
- **Households with old-age or disabled person(s) tend to spend less on public transportation**, compared to households without old-age or disabled person(s). This may give hints of bottlenecks when it comes to access for these vulnerable groups (as indicated in the literature).
- Location may also seem to play a role when it comes to the choice of transportation; **households in rural areas tend to spend more on private means of transport**. This may give hints of bottlenecks in the public transport system (further elaborated in Section 6.3.2).
- Notably, **AROP households seem to spend a higher share of their disposable income on transport services** (mainly on private transport), compared to non-AROP households. This may suggest more difficulties for the former to afford other necessary items (e.g. housing).

Table 22 - Output of tobit regression analysis for Transport services, by quintile, 2020²¹³

	(5a) Public transport expenditure as share of income	(5b) Private transport expenditure as share of income
Female responsible for the accommodation (reference: male responsible)	Not sig	-
Age	Not sig	-
Country of birth:		
EU (excl. reporting country)	+	+
Other (third countries) (reference: national of the reporting country)	-	Not sig
Owner (reference: renter)	+	+
Housing expenditures as share of income	--	+
Household size	+	-
Household with:		
1 child	-	Not sig
2 children	-	Not sig
3 or more children (reference: w/o children)	+	+

²¹³ Households with negative shares or shares above 100 % have been excluded from the calculations. Negative shares stem from negative (disposable or gross) income reported in EU-SILC. Shares above 100 % stem from an income reported that is lower than the expenditures on transport. Reasons for having a negative, or too low, income reported include: tax burden higher than income (e.g. if the person is unemployed, time lag between the reference year for taxes and the current year for receiving income), self-employed individuals starting their business and registering initial losses, etc.

Household with old-age person(s) (reference: w/o old-age)	-	-
Household with disabled person(s) (reference: w/o disabled)	-	Not sig
Household location: <i>Thinly populated</i>	-	+
<i>Intermediate</i> (reference: densely populated)	-	+
Education level (ISCED): <i>Medium (3-4)</i>	Not sig	+
<i>High (5-8)</i> (reference: low (1-2))	+	+
Owning a car <i>No - cannot afford it</i>	++	--
<i>No - other reasons</i> (reference: owning a car)	+	--
Household with very low work intensity (reference: not very low work intensity)	-	-
Housing costs: <i>Somewhat of a burden</i>	-	+
<i>Not a burden at all</i> (reference: heavy burden)	+	Not sig
Household AROP (reference: not AROP)	+	++
Income quintile	-	-
Observations	110 094	213 719
Country FE	YES	YES

Source: EU-SILC 2020, Milieu calculations.

Note. Notes under Table 20 apply. Models (5a) and (5b) are tobit regressions. Transport expenditures are monthly. Fixed effects included to account for unobserved differences between countries (controlling for regional differences did not significantly change estimates). Explanatory income variables, housing expenditures and dependent variables in purchasing power parity (euros). *How to read the table*: increasing the size of the household increases the expenditure share on public transport and decreases the one for private transport. Similarly, not owning a private car (due to affordability or other reasons) increases the expenditures of public transport and decreases those for private transport, compared to those owning a private car.

Single-parent households may also be considered a vulnerable group, as they generally have fewer economic resources than households with two parents and are thus at greater risk of hardship. In the data, single-parent households represent a relatively small part of the population in many EU Member States, therefore only careful conclusions can be drawn. Nonetheless, it appears that single-parents can be considered a vulnerable group across all services, particularly when it comes to energy (see Annex C).

On the one hand, the quantitative analysis has mostly confirmed the several barriers identified by the literature review and national reports. On the other hand, it has brought new insights on the main factors influencing access and the characteristics of vulnerable groups. To gain a deeper understanding of the causes behind those vulnerabilities, however, these insights should be contextualised according to the different services. The section below thus complements the analysis by delving deeper into service-specific individual barriers, several of which were identified by the qualitative national reports.

6.2.2. Service-specific individual barriers

Digital communications

Generally, the literature review identifies as vulnerable population with regard to access to digital communications those with low digital literacy, and those that are older, low-income or have disabilities. These groups often experience a lack of affordable

smartphones and internet access, difficulties in navigating user interfaces, no access to secure information, and/or a lack of locally relevant services in local languages²¹⁴. In addition to these groups, the Commission also identifies the unemployed as a vulnerable population²¹⁵. In terms of digital skills and broadband/mobile coverage, there also exists a significant gap between urban and rural areas²¹⁶.

The importance of increasing access to digital services will also affect other essential services positively. As mentioned in the Commission's 'Digital Agenda for Europe', a more effective use of digital communications will enable a more integrated payment market. Also, improved digital literacy leads to better financial literacy (e.g. being able to use financial applications), which creates more access to financial services. Alternatively, vulnerable people will be able to find more efficient transport solutions if they have better access to mobile internet²¹⁷.

Lack of interest or trust in digital communications

From the national reports, it appears that in two Member States (Belgium, the Netherlands) the **lack of trust in digital communications** (i.e. in relation to data protection) might be a barrier to access. In Romania, the lack of interest in digital communications was also noted as an individual barrier reducing the motivation to make use of digital communications.

Low digital skills

Improving **digital literacy** remains the most important point of emphasis where many opportunities can be found, with previous EU efforts noting room for improvement²¹⁸. Vulnerable groups such as low-income individuals need to strengthen their digital skills to be able to work with the latest technologies (not only for job opportunities but also to be included in other areas of society). According to data from the Commission, a significant amount of EU citizens lacks basic digital skills, with strong variation between EU Member States.

Low digital skills are chiefly an issue of **education** (incl. traditional literacy), which is met in several Member States by efforts such as providing courses for those at risk. In addition to this, community support centres, libraries and social context at home play a role in improving digital skills. The risk groups are mainly **older individuals, low-income households and those living in rural areas**, but the level of *basic* digital skills across the population varies significantly across the EU, from 80 % in the Netherlands in 2019 to 30 % in Bulgaria²¹⁹. It should, however, be noted that research shows that the figure for information and communication skills are much lower²²⁰, and vary by e.g. education, income and urban-rural differences.

Additionally, in 2019, the main reason listed by Europeans for not having internet access at home was the lack of need or interest (45 %) ²²¹; while this may contribute to a digital

²¹⁴ Datta, Bhatia, Noll and Dixit (2019), 'Bridging the Digital Divide: Challenges in Opening the Digital World to the Elderly, Poor, and Digitally Illiterate', *IEEE Consumer Electronics Magazine*, 8(1), 78-81. Available online: <https://ieeexplore.ieee.org/document/8570906/>.

²¹⁵ Negreiro (2015), 4.

²¹⁶ European Commission (2022a).

²¹⁷ Communication COM(2010) 245 final.

²¹⁸ European Commission (2019c), 'Reflection Paper towards a Sustainable Europe by 2030', European Commission, Brussels. Available online: https://ec.europa.eu/info/sites/default/files/rp_sustainable_europe_30-01_en_web.pdf.

²¹⁹ European Commission (2020), 'Digital Economy and Society Index (DESI) 2020: Human Capital', Brussels, European Commission.

²²⁰ Information shared by senior thematic expert on digital communications.

²²¹ European Commission (2022a).

divide, it is questionable if it constitutes an issue of access, at least in those cases where households would otherwise be able to afford the service.

Physical access barriers

With widespread digitalisation in EU Member States, citizens encounter digital interfaces throughout their life: whether when using e-government services, attending an online meeting with their bank, or buying a public transport ticket through a mobile phone application. **If digital interfaces are not accessible to people with disabilities**, including visual or auditory conditions, learning difficulties and other conditions, these individuals are significantly at risk of not being able to access services. Some EU Member States indicate that they have strategies and procedures in place to improve access for people with disabilities, but it is important that this work continues as digitalisation progresses across all sectors.

Energy

The (recast) Electricity and Gas directives require EU Member States to define 'vulnerable consumers' in the context of their respective services²²². However, at the time of writing only eight Member States provide a legal definition of energy poverty (Austria, Cyprus, France, Ireland, Romania, Portugal, Slovakia, and Spain). What can generally be said is that energy poverty is multidimensional, arising from a combination of low income, high (and volatile) energy prices and poor energy efficiency of dwellings and appliances²²³. Overall, data from the literature review indicates that housing conditions are a greater factor in energy poverty than climate, meaning that the issue can affect all EU Member States regardless of their average temperature levels and the severity of their winters²²⁴.

In terms of costs, households bear the effect of high or volatile energy prices, which can lead to them either falling into arrears due to high bills, or under-consuming energy to keep costs down. Amidst broader policy changes towards increased sustainability and phasing-out of fossil fuels, there is a risk that energy poverty will increase further unless the costs of new energy sources is not sufficiently compensated for poorer households²²⁵.

Households which are already at risk of poverty are therefore the most obvious vulnerable population, with less funds to use towards energy in the first place. This problem is further aggravated if the households do not own their dwellings, and therefore may be unable to implement solutions which may otherwise increase energy efficiency²²⁶.

As a result, the most common method EU Member States use to identify populations that are vulnerable to energy poverty is by cross-referencing with households that are

²²² Directive 2009/73/EC; Directive (EU) 2019/944.

²²³ Recommendation (EU) 2020/1563; European Commission (2019b), 'Employment and social developments in Europe 2019 – Sustainable growth for all: choices for the future of Social Europe', European Commission (DG EMPL), Brussels, 82.

²²⁴ Magdalinski, Delair and Pellerin-Carlin (2021), 'Europe Needs a Political Strategy to End Energy Poverty', *Jacques Delors Energy Centre Policy Paper*, 259, 3. Available online: https://institutdelors.eu/wp-content/uploads/2021/02/PP259_210202_Precarite-energetique_Magdalinski_EN.pdf.

²²⁵ Eurofound (2021), 'Distributional impacts of climate policies in Europe', Publications Office of the European Union, Luxembourg. Available online: https://www.eurofound.europa.eu/sites/default/files/ef_publication/field_ef_document/ef20037en.pdf; Guyet (2021), 'The impact of the energy price crisis on vulnerable households: a new test for EU unity?', *CIFE Policy Paper*, 123. Available online: https://www.cife.eu/Ressources/FCK/files/publications/policy/paper/2021/CIFE_PP_Guyet_Energy_Price_Crisis_December2021.pdf.

²²⁶ Hernández and Bird (2010), 'Energy Burden and the Need for Integrated Low-Income Housing and Energy Policy', *Poverty & Public Policy*, 2(4), 5-25; Wrigley and Crawford (2017), 'Identifying policy solutions for improving the energy efficiency of rental properties', *Energy Policy*, 108, 369-378.

already in receipt of social welfare; other methods include identification by health status or basing assistance on how large a proportion of disposable income is spent on energy.

In addition, according to the literature review, while households at risk of energy poverty share similar characteristics in many EU Member States – notably low income and/or being at risk of poverty – energy poverty remains a multidimensional concept that takes on a different character depending on the EU Member State. Across the EU, a significant portion of households at risk of energy poverty belong to the middle-income group, illustrating that the phenomenon is not only relevant for households at risk of income poverty²²⁷.

It should also be mentioned that while energy poverty and fuel poverty may sometimes be used synonymously in the context of being able to heat one's dwelling²²⁸, being able to *cool* one's dwelling is a substantial concern in warmer, southern European countries²²⁹. Households which are *not* actually at risk of poverty may also face energy poverty in countries with high energy costs or a prevalence of low energy efficiency: for the average household, spending on electricity, gas and other fuels in 2019 ranges from 2 % of disposable household income in Malta, to 8.5 % in Slovakia²³⁰.

From the national reports, no individual barriers have been identified, besides poverty risk and low income. From the multivariate analysis, households with a woman responsible for the accommodation tend to be slightly more at risk of energy-services access compared to households with a man responsible. However, most risks pertain to structural factors such as the quality of housing, availability of price caps or social tariffs, and measures to protect against price volatility. This is discussed further in the subsequent section.

Financial services

The PAD does not provide a definition for 'vulnerable consumers', but states that 'Member States should be able to provide that payment accounts with basic features are to be offered to those consumers on particularly advantageous terms, such as free of charge'²³¹. Many differences can be observed in how the various Member States identify their vulnerable population²³².

²²⁷ European Commission (2019b); Baptista and Marlier (2020).

²²⁸ Halkos and Gkampoura (2021), 'Coping with Energy Poverty: Measurements, Drivers, Impacts and Solutions', *Energies*, 14(10), 1-14. Available online: <https://www.mdpi.com/1996-1073/14/10/2807>; Gouveia and Palma (2019), 'Harvesting big data from residential building energy performance certificates: retrofitting and climate change mitigation insights at a regional scale', *Environmental Research Letters*, 14(095007). Available online: <https://iopscience.iop.org/article/10.1088/1748-9326/ab3781>.

²²⁹ Reflecting this, some studies consider energy costs both in relation to heating and cooling; cf. Gouveia, Palma and Simoes (2019), 'Energy poverty vulnerability index: A multidimensional tool to identify hotspots for local action', *Energy Reports*, 5, 187-201. Available online: <https://www.sciencedirect.com/science/article/pii/S2352484718303810>.

²³⁰ Eurostat (2022c), *Final consumption expenditure of households by consumption purpose (COICOP 3 digit) [nama_10_co3_p3]* [Online]. Available online: https://appsso.eurostat.ec.europa.eu/nui/show.do?dataset=nama_10_co3_p3&lang=en [Accessed 14 January 2022].

²³¹ Directive 2014/92/EU, Recital 46.

²³² In Romanian legislation, vulnerable consumers are defined as those with under 60 % of average salary. In Italy the payment accounts with basic features are offered free to consumers with low incomes, whereas in Spain they are offered free if the consumer is in a special situation of vulnerability or at risk of financial exclusion based on their gross income and wealth. Moreover, in Ireland, a payment account with basic features is free during the first two years, after which a fee is charged if the client does not fall under a category of vulnerable consumers. Cf. European Commission (2021f), p. 35; World Bank and International Monetary Fund (IMF) (2018), 'Romania Financial Sector Assessment', The World Bank, Washington, DC, p. 14. Available online: <https://openknowledge.worldbank.org/bitstream/handle/10986/30221/128959-FSAP-P164039-PUBLIC-SecM2018-0237-002.pdf?sequence=1&isAllowed=y>.

Most reports and studies also do not follow a specific definition for vulnerable population groups. All in all, in the EU, vulnerable groups in the area of financial services include low-income individuals, women, asylum seekers, people from migrant backgrounds, young people, the elderly, less educated people, the unemployed, the homeless, and rural dwellers²³³. Additionally, people with sensory, physical and cognitive disabilities (i.e. seeing, dexterity, or language) might experience difficulties with respect to operating ATMs or digital applications, if these are not designed in an accessible way²³⁴. On another level, individual EU Member States may also have high management or withdrawal fees, or complicated procedures for opening or unblocking bank accounts²³⁵.

Access to financial services could not be analysed with EU-SILC due to a lack of relevant data. However, the national reports highlighted the individual barriers below.

Financial literacy

The most-identified barrier to accessing financial services is **low financial literacy**, i.e. 'financial education, such as basic economics, statistics and numeracy skills combined with the ability to employ these skills in making financial decisions'²³⁶. According to a recent OECD survey, while not including all EU Member States, it was found that financial literacy overall was low across the surveyed countries and that vulnerable groups included women, young people, and people with low digital skills²³⁷.

In terms of how to address the issue, access could be greatly enhanced by offering financial education, which would teach them to take effective actions, improve their well-being, and enable economic participation²³⁸. This can furthermore lead to improved efficiency, transparency, competition and access to financial markets by removing information asymmetries and power imbalances²³⁹.

As discussed under 'Digital communications' above, another aspect of financial literacy concerns being able to navigate and make full use of new digital banking tools. **A lack of digital skills therefore also acts as a barrier to accessing financial services.** This is mentioned as a barrier by 12 out of 27 Member State experts.

Other barriers, identified in a limited number of Member States, include the lack of residency/homelessness or indebtedness, which can make it difficult to establish a bank account, and the lack of trust in banks. In Member States where the price of basic accounts are not specified or regulated (as discussed in Section 4.1), there is also a risk that high account charges act as a barrier for the most economically vulnerable.

²³³ See e.g.: Batsaikhan and Demertzis (2018), 'Financial literacy and inclusive growth in the European Union', *Bruegel Policy Contribution*, 08, 1-18. Available online: https://www.bruegel.org/wp-content/uploads/2018/05/PC-08_2018.pdf; Directive 2014/92/EU; European Commission (2021f); European Banking Authority (EBA) (2021a), 'EBA Consumer trends report 2020/21', EBA, Paris. Available online: https://www.eba.europa.eu/sites/default/documents/files/document_library/Publications/Reports/2021/963816/EBA_Consumer_trend_report.pdf.

²³⁴ Whitney, Hara and Whitney (2018), 'Study on risks and opportunities of digitalisation for financial inclusion', European Commission (DG FISMA), Brussels, pp. 14-28. Available online: https://ec.europa.eu/info/sites/default/files/business_economy_euro/banking_and_finance/documents/fsug-study-181001-digitalisation-financial-inclusion_en.pdf.

²³⁵ European Banking Authority (EBA) (2021a).

²³⁶ Batsaikhan and Demertzis (2018).

²³⁷ OECD (2020d), 'OECD/INFE 2020 International Survey of Adult Financial Literacy', Paris, OECD. Available online: <https://www.oecd.org/financial/education/oecd-infe-2020-international-survey-of-adult-financial-literacy.pdf>.

²³⁸ European Banking Authority (EBA) (2020), 'EBA report on financial education 2019/2020', EBA, Paris, pp. 7-8. Available online: https://www.eba.europa.eu/sites/default/documents/files/document_library/Consumer_Corner/Financial_education/EBA_Financial_Education_Report_2019-2020_FINAL_Combined.pdf.

²³⁹ World Bank (2014), 'Global Survey on Consumer Protection and Financial Literacy: Oversight Frameworks and Practices in 114 Economies', The World Bank, Washington, DC. Available online: <https://openknowledge.worldbank.org/bitstream/handle/10986/18978/887730WP0v20P10port0CPFL0Box385258B.pdf?sequence=1&isAllowed=y>.

Low digital skills

The EU has seen increasing digitalisation of banking in the form of online access to a broadening range of services; online consultations with bank advisors; digital and contactless means of payment; and an overall increase in financial technology. This has been supported, for example, by the EU digital finance strategy, as elaborated in 2020²⁴⁰.

Proponents of digital banking and an overall digitalisation of the financial services sector argue that it increases the availability and choice for consumers, and helps foster innovation in the sector²⁴¹. It has also been argued that it can improve access for underrepresented groups by increasing reach, convenience and cost efficiency²⁴².

However, national experts note that an increased digitalisation, especially if coupled with a steady decrease in the availability of physical bank offices, can act as a barrier to access for people who have low digital skills or who lack the transport means to travel for errands. This is mentioned as a barrier by 11 out of 27 Member State experts. This especially affects older people for whom it may be difficult to learn to use the new services, and who in the past have relied both on a bank branch and on the availability of physical means of payment. The resulting risk of financial exclusion has been raised by, for example, the European Banking Authority²⁴³. Finally, in the absence of sufficient digital skills, an increased digitalisation of banking services also carries the risk of vulnerable groups being targeted by fraud, data theft, and lack of privacy²⁴⁴.

Transport

While the exact vulnerable populations vary between countries, the literature review has generally identified low-income groups who spend a high percentage of their income on transport²⁴⁵. This is the main dimension that policy measures seek to address²⁴⁶. Additionally, groups such as people with disabilities, older people and those who are pregnant all face physical access issues if platforms, carriages and services (including booking and reservation systems) are not adapted to their group's needs²⁴⁷. Women are also more vulnerable to issues to transport access as they are more likely to use public transport, less likely to own cars than men, and generally have less time available for travel due to an uneven division of care and housework²⁴⁸.

Finally, the geographic spread of transport services means that some (especially rural) areas lack sufficient transport services, impacting all households in the area but especially those that cannot afford a personal car. Improving rural access to public

²⁴⁰ Communication COM(2020) 591 final from the Commission on a Digital Finance Strategy for the EU.

²⁴¹ E.g. European Banking Federation (EBF) (2015), 'The digital transformation of banks and the Digital Single Market', *EBF Discussion Paper*, EBF, Brussels.

²⁴² Bank for International Settlements (2018), 'Implications of fintech developments for banks and bank supervisors', Bank for International Settlements, Basel, pp. 22-23. Available online: <https://www.bis.org/bcbs/publ/d431.pdf>.

²⁴³ European Banking Authority (EBA) (2021b), 'Report on the use of digital platforms in the EU banking and payments sector', EBA/REP/2021/26, EBA, Paris, 64-65.

²⁴⁴ OECD (2020a), 'Financial Consumer Protection Policy Approaches in the Digital Age: Protecting consumers' assets, data and privacy', OECD, Paris, pp. 10-11. Available online: <https://www.oecd.org/finance/Financial-Consumer-Protection-Policy-Approaches-in-the-Digital-Age.pdf>.

²⁴⁵ Lucas, Mattioli, Verlinghieri and Guzman (2016), p. 362.

²⁴⁶ Baptista and Marlier (2020).

²⁴⁷ Zając (2016), 'City Accessible for Everyone – Improving Accessibility of Public Transport Using the Universal Design Concept', *Transportation Research Procedia*, 14, 1270-1276. Available online: <https://www.sciencedirect.com/science/article/pii/S2352146516302010>.

²⁴⁸ Civitas (2016), 'Transport Poverty', *Civitas Thematic Policy Note*, European Commission, Brussels, pp. 9-10. Available online: https://civitas.eu/sites/default/files/civitas_policy_note_transport_poverty.pdf.

transport is recognised by the European Commission as one of the dimensions required to fulfil their vision for rural areas towards 2040²⁴⁹.

The inequalities in groups' access to public transport has been illustrated by the COVID-19 pandemic. Based on public health guidance, many households chose to forego public transport and instead use private cars; however, this option is not available to the estimated 35 % of income-poor households that do not have a private car²⁵⁰.

The national experts did not identify specific individual barriers that hinder access to public transport (from an affordability point of view). A number of barriers are, however, identified in the literature²⁵¹, as 'socio-demographic vulnerabilities'. These refer to 'salient characteristics of populations that affect access to transport services, whether financially or otherwise'²⁵². These are discussed further in the sub-sections below.

People with disabilities

While not related to affordability concerns, **people with disabilities** are overall a vulnerable group in terms of being able to access public transport. This is compounded by the fact that a wide range of conditions may constitute a barrier, including both physical impairments (e.g. reduced mobility, auditory or visual impairment) and psychological conditions (e.g. learning difficulties or conditions which may make it difficult to access or operate digital interfaces). EU-SILC data seem to corroborate the lower expenditures of households with disabled member(s) on public transport (see [Figure 8](#)).

As with financial services, there is also an **overlap with the level of digital skills** as an increasing number of public transport authorities transfer to digital ticketing and travel planning.

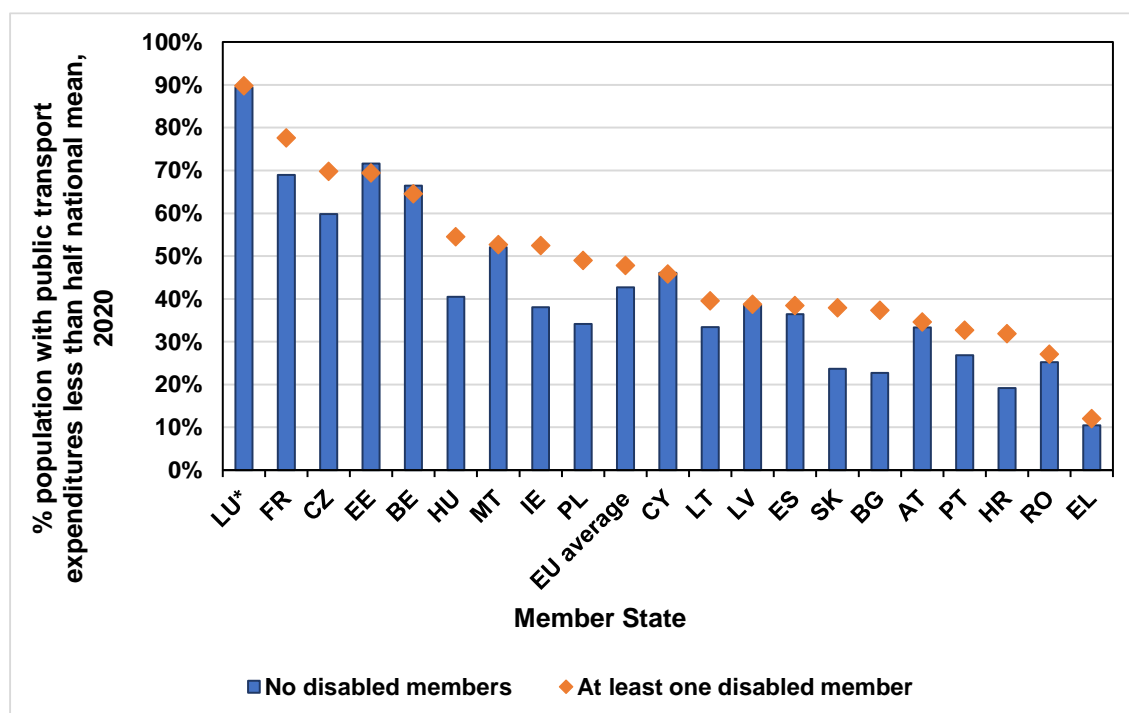
²⁴⁹ Communication COM(2021) 345 final.

²⁵⁰ European Commission (2021b), 'Employment and social developments in Europe 2021', European Commission (DG EMPL), Brussels. Available online: <https://ec.europa.eu/social/main.jsp?catId=738&langId=en&pubId=8402&furtherPubs=yes>.

²⁵¹ Simcock, Jenkins, Lacey-Barnacle, Martiskainen, Mattioli and Hopkins (2021).

²⁵² Ibid.

Figure 8 - Share of population spending less than half the national mean on public transport, by disability, 2020



Source: EU-SILC 2020, Milieu calculations.

Note: EU averages weighted. Missing data for DE, DK, FI, IT, NL, SE and SI. * indicates low data reliability (observations between 20 and 49).

While some EU Member States (e.g. Finland, Netherlands and Sweden) indicate that they have procedures in place for guaranteeing paratransit or taxi services for these target groups, service provision often varies significantly across countries: as public transport is generally operated at regional level, regions with smaller tax bases or overall weaker economies may struggle to adequately finance the services. While this touches on issues of availability, there is also an aspect of affordability in whether these subsidised paratransit or taxi services are available to people with disabilities, who otherwise either face the challenge of paying out of pocket, or abstaining from travel.

Water and sanitation

Compared to other services, the profile of vulnerable populations in relation to water and sanitation services from the literature review is in general low-income groups and/or homeless groups. As mentioned above, a substantial share of the population in the EU has a water and sanitation connection in their households. In some cases, the water tariffs might pose an affordability problem. In other cases, where no connection is available yet, the connection fees might pose an affordability problem.

In the case of the homeless population, this is also in general an affordability issue since, while bottled water (for consumption) and public restrooms might be available, they might be too expensive.

Affordability of water and sanitation also has spatial variation. Since water fees (which as mentioned above also include the price for sanitation in most cases) need to fully cover the costs of the service²⁵³, fees tend to be higher in rural areas where the

²⁵³ As per Article 9 of the Water Framework Directive (WFD) which states that 'Member States shall take account of the principle of recovery of the costs of water services, including environmental and resource costs'. Although

population is less dense and thus (i) with higher per capita investment needs for collection infrastructure and (ii) costs for collection and treatment infrastructure, as it is spread over fewer households. Finally, ageing infrastructure is a major issue in several EU countries which need to invest heavily in the years to come in order to maintain the current status of the infrastructure.

Lacking a fixed address or home

The main risk group of not being able to access water and sanitation are **homeless individuals or those without a fixed address**. This is mentioned as the main individual barrier for this service by 11 out of 27 Member States.

Table 23 presents some estimates on homeless populations in the EU Member States. While there are few comprehensive databases, some estimates can be presented based on data from FEANTSA (the European Federation of National Organisations Working with the Homeless) and the OECD²⁵⁴; however, annual aggregate estimates for the EU are not possible as the year of data availability ranges from 2009 to 2020. With a few exceptions, the national experts report that access to both water and sanitation is generally high and does not feature significantly on the general policy agenda.

Table 23 – Estimates on homeless population, 2009-2020

Member State (year of estimate)	Estimate
AT (2018)	22 741
BE (2014)	18 725
CZ (2014)	30 000
DE (2018)	678 000
DK (2019)	6 431
EE (2011)	864 *
EL (2009)	21 216 *
FI (2019)	5 280
FR (2016)	143 000
HR (2014)	641
HU (2020)	7 604
IE (2017)	11 543
IT (2014)	50 724
LT (2019)	4 015
LU (2018)	873
NL (2019)	39 300
PL (2019)	30 330
PT (2018)	6 044

environmental and resource costs are only very rarely included in fees, the full cost recovery of the infrastructure and service through fees is today an established principle in most EU countries. Cf. Directive 2000/60/EC.

²⁵⁴ OECD (2020c), *HC3-1: Homeless population* [Online]. Paris: OECD. Available online: <https://www.oecd.org/housing/data/affordable-housing-database/housing-conditions.h> [Accessed 7 July 2022]; FEANTSA (2022), *Resources database* [Online]. Brussels: FEANTSA. Available online: <https://www.feantsa.org/en/resources/resources-database> [Accessed 2 August 2022].

Member State (year of estimate)	Estimate
RO (2011)	165 000
SE (2017)	33 000
SI (2019)	5 519
SK (2011)	23 483 *

Source: FEANTSA (2022), Resources database [Online]. Brussels: FEANTSA. Available online: <https://www.feantsa.org/en/resources/resources-database> [Accessed 2 August 2022]; countries marked * are derived from OECD (2020c), HC3-1: Homeless population [Online]. Paris: OECD. Available online: <https://www.oecd.org/housing/data/affordable-housing-database/housing-conditions.htm> [Accessed 7 July 2022].

Note: Estimates are based on individual country reports using the latest available data from state and non-state sources. They relate to different years, and national definitions may vary. No data is available from either source for Bulgaria, Cyprus, Latvia and Malta.

For homeless individuals, the problem is compounded if the Member State – or the locality in which they live – **lacks public infrastructure** such as public water taps and free-of-charge, accessible public toilets. Mapping the extent to which this is provided is furthermore complicated, as it is generally a municipal (or, at most, regional) competency. No systematic studies have been identified for the Member States of the extent to which this is available.

6.3. Other barriers

6.3.1. Other cross-cutting barriers

Low adequacy and coverage of minimum income benefits

Minimum income benefits serve two main functions in relation to providing access to essential services. One is cases where minimum income benefits are the main support measure available and seek to ensure that households have a sufficient economic standard to – implicitly or explicitly – afford e.g. essential services. Another is where receipt of a minimum income benefit is used as an eligibility requirement for other, service-specific measures.

The design and delivery of minimum income and social assistance schemes has been extensively discussed in research²⁵⁵, and an in-depth discussion is beyond the scope of this study. However, as low income is a cross-cutting barrier to accessing all the essential services herein, and many Member States provide the bulk of assistance through minimum income benefits²⁵⁶, some things are worth noting:

- In many EU Member States, **minimum income benefits are insufficient in protecting against poverty**. This point has been raised both by national experts, civil society organisations in the Member States²⁵⁷, and systematic evaluations in

²⁵⁵ E.g. Frazer and Marlier (2016); Gábos and Tomka (2022), 'Developments in minimum income benefits levels in Europe', *EUROSHIP Working Paper*, Oslo, Oslo Metropolitan University. ; Coady, Jahan, Matsumoto and Shang (2021), 'Guaranteed Minimum Income Schemes in Europe: Landscape and Design', *IMF Working Paper*, IMF, Washington, D.C.

²⁵⁶ Cf. Section 7.1 for a more in-depth discussion and mapping of the policy measures in place in different Member States.

²⁵⁷ In Germany, e.g. Paritätischer Wohlfahrtsverband (2020), 'Arm, abgehängt, ausgegrenzt: Eine Untersuchung zu Mangellagen eines Leben mit Hartz IV', Berlin, Paritätischer Wohlfahrtsverband. In the Nordics, e.g. Kuivalainen and Nelson (2011), 'Eroding minimum income protection in the Nordic countries? Reassessing the Nordic model of social assistance' in Kvist and Fritzell (eds.), *Changing social equality: The Nordic welfare model in the 21st century*, Bristol, Policy Press. A significant number of additional examples are found in literature.

academia²⁵⁸. It has also been noted by, for instance, the Council, in reference to hardship inflicted by the COVID-19 pandemic²⁵⁹. Insufficient minimum incomes increases the risk of low-income households not being able to afford essential services.

- As they seek to provide a minimum subsistence level only for the neediest, **many minimum income benefits have strict eligibility requirements, and in particular a low level of means test threshold**. This limits coverage and the number of recipients, and therefore risks not reaching households which are not at the bottom of the income distribution, but nevertheless may face issues in affording services.
- In addition, **non-take up of benefits**, where eligible recipients do not apply for a benefit due to e.g. a lack of knowledge, bureaucratic complexity (including where there are many overlapping schemes, possibly with differing eligibility criteria), shame, or distrust in public institutions²⁶⁰. Such issues do not only apply to minimum income benefits, but also to other measures.

Lack of awareness and restrictive conditions for service-specific benefits

The lack of information and awareness on service-specific benefits constitute barriers to access for both digitalisation (five EU Member States) and energy (half of the EU Member States). In this respect, the digitalisation of many services is also considered an additional barrier to access the benefits, for those with low digital skills or limited to no access to relevant digital devices. Moreover, the conditions of access to different contracts are in some cases too restrictive or difficult to navigate for certain customers, and this can limit take up and fuel a vicious cycle of energy poverty or inability to access digital communications.

6.3.2. Other service-specific barriers

Digital communications

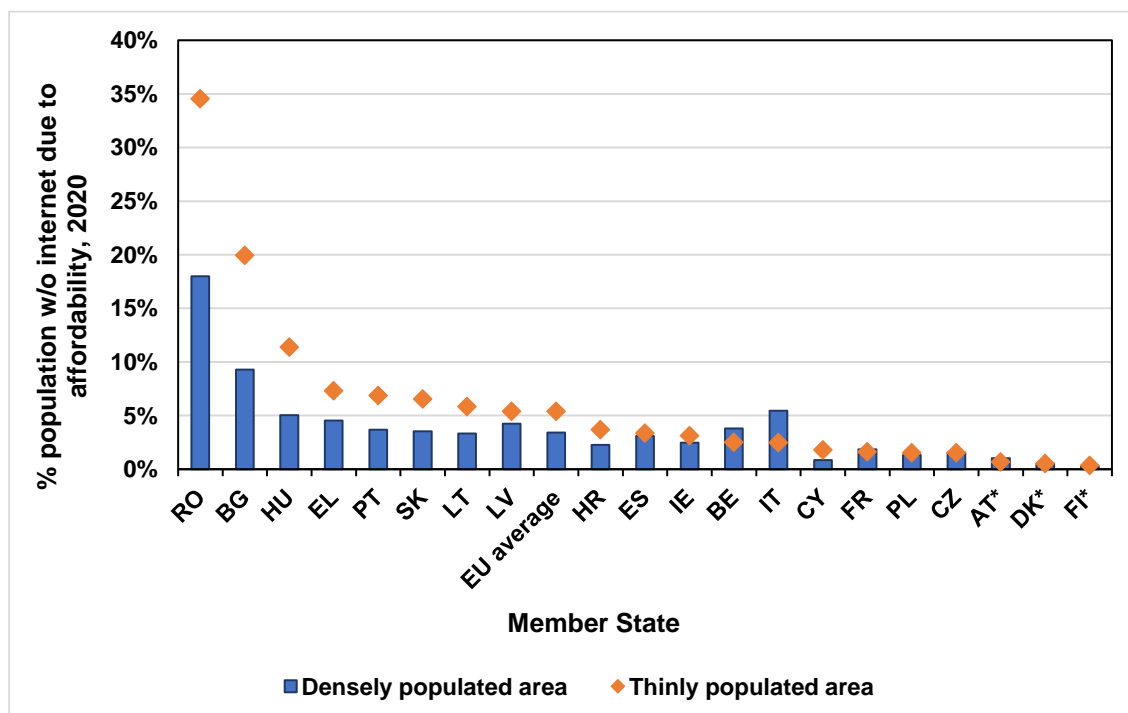
Living in rural areas

While access to internet is high in the EU overall, **access to high-speed internet is lower in rural areas** due to geographic factors such as a dispersed population and/or natural obstacles which may block the signal. In a situation where higher-speed internet is required for many private and professional activities, this poses an access issue. In some cases, this is associated with infrastructural and maintenance problems, as well as administrative hurdles that can affect the take up of relevant funds by municipalities or regions. Figure 9 shows that access to internet generally is high across Europe; 97 % and 95 % of people can afford internet in urban and rural areas, accordingly. However, in some countries individuals living in rural households are clearly disadvantaged, mainly in Romania and Bulgaria. Romania is a strong outlier compared to all other EU Member States.

²⁵⁸ Cantillon, Goedemé and Hills (eds.) (2019), *Decent Incomes for All: Improving Policies in Europe*, Oxford, Oxford University Press; Penne, Hufkens, Goedemé and Storms (2020), 'To what extent do welfare states compensate for the cost of children? The joint impact of taxes, benefits and public goods and services', *Journal of European Social Policy*, 30(1), 79-94.

²⁵⁹ Council Conclusions 11721/2/20 of 9 October 2020 on Strengthening Minimum Income Protection to Combat Poverty and Social Exclusion in the COVID-19 Pandemic and Beyond.

²⁶⁰ For a recent review, see Goedemé and Janssens (2020), 'The concept and measurement of non-take-up: An overview, with a focus on the non-take-up of social benefits', *InGRID Deliverable 9.2*, KU Leuven, Leuven.

Figure 9 – Share of population unable to afford internet, by location, 2020

Source: EU-SILC 2020, Milieu calculations.

Note: EU weighted average. No data for DE, EE, LV, MT, NL and SI. IT data from 2019. * indicates low data reliability (observations between 20 and 49). LU and SE excluded due to low number of observations (below 20) in either category.

Lack of access to digital devices

Many countries implement measures to facilitate material access to digital devices, as well as to facilitate appropriate connection to the internet. Although this was not mentioned as a barrier by national experts, the presence of such measures indicates that this is indeed a significant barrier. The type of device and also the quality of the device contributes highly to what individuals do online and the skills they can develop in terms of digital communications.

Energy

Living in low quality housing

The quality of the housing, and housing equipment, plays a role when it comes to affordability of energy. In fact, the literature review indicates that households that live in energy inefficient homes tend to spend more on energy bills. Moreover, those who do not own their dwelling are generally not able to improve the energy efficiency and sustainability of the building (and the actual landlords do not have an incentive to do so either), which weakens any changes in energy behaviour. This means that a **combination of low incomes and energy inefficient housing** leads to a cycle of energy poverty that becomes difficult to break²⁶¹ (and that can be further intensified by higher energy prices). This is mentioned as a major individual barrier in 9 out of 27 Member States.

Other barriers, identified in the literature but not by the national experts, include consumption behaviours and practices, the occupation of the space (low or over-

²⁶¹ Ugarte, van der Ree, Voogt, Eichhammer, Ordoñez, Reuter, Schlomann, Lloret and Villafáfila (2016), 'Energy Efficiency for Low-Income Households', Brussels, European Parliament (DG IPOL).

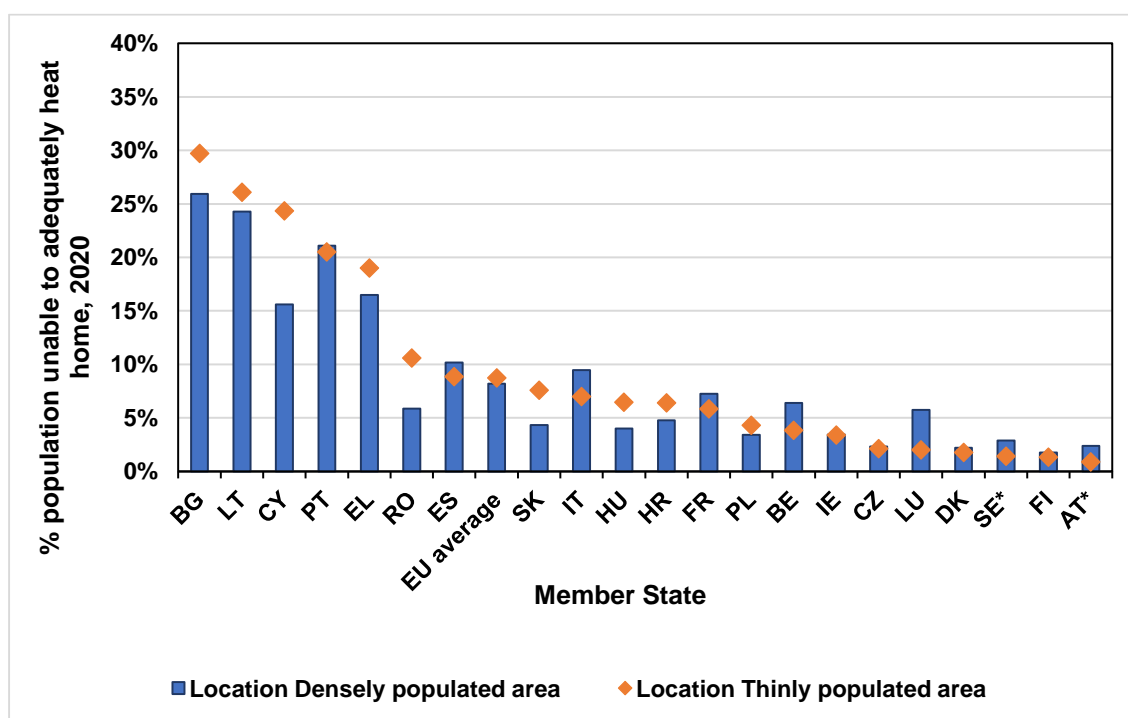
occupied space), the expenditure for rent, as well as the low environmental quality of the housing.

Living in rural areas

Households in **rural areas are generally at a greater risk of energy poverty**, as reported by the national experts. In cities, energy- and cost-efficient solutions such as district heating can improve access to and affordability of energy. It is also easier for energy companies to address any faults and issues. This is a more significant barrier in EU Member States with an expansive and sparsely populated countryside such as Sweden and Finland, which also have higher heating needs during the colder months of the year. It is worth mentioning, however, that a study²⁶² found that energy poverty is pronounced both in rural and inner-urban areas – though this has not been highlighted by the national experts in the context of this study.

Figure 10 shows that for several Member States, living in rural households does increase the risk of not being able to adequately heat the home, compared to urban households. However, for other countries (such as Italy, France, Belgium and Luxembourg) location does not seem to play a significant role.

Figure 10 –Share of population unable to adequately heat home, by location, 2020



Source: EU-SILC 2020, Milieu calculations.

Note: EU weighted average. No data for DE, EE, LV, MT, NL and SI. IT data from 2019. * indicates low data reliability (observations between 20 and 49).

Volatile energy prices

The negative impact of energy prices on energy-related variables was clear from the regression results in Table 20 (section 6.2.1). Most recently, the rises in energy prices in the 2021-2022 heating season, and again following the Russian invasion of Ukraine in 2022, highlight that **volatile energy prices can affect a wide range of households**, and put economic strain on both low- and middle-income households. This poses a significant challenge against policy measures which provide flat-rate subsidies for energy

²⁶² Simcock, Jenkins, Lacey-Barnacle, Martiskainen, Mattioli and Hopkins (2021).

costs, as these amounts will make up a proportionally smaller part of energy costs. It also indicates that, if the situation persists, top-ups through minimum income schemes may also be insufficient if they are capped at a certain price and/or only include energy costs as part of a broader basket of goods.

Lack of definition of energy poverty

The lack of a definition of energy poverty (and indicators to measure it), which makes it difficult to target vulnerable consumers with targeted measures, has been identified as a barrier in four EU Member States (Austria, Bulgaria, Poland and Sweden).

Financial services

Gaps in the application and provisions of the PAD

While all EU Member States have transposed the PAD and therefore formally guarantee access to low-cost basic accounts to all citizens, **several Member States (Malta, Croatia and Sweden) report that there are tensions between the PAD and other legislation relating to money laundering.** This imposes strict requirements on the identification of account holders and the purposes for which they seek to acquire the account. In some cases, this can lead to non-nationals being unable to open bank accounts before they have been able to retrieve documentation such as personal identification numbers or national ID cards – processes which can be lengthy. The problems this can cause in terms of individuals being able to access bank accounts have been raised both in the 2021 Study on the EU payment accounts market²⁶³ and by some national institutions, e.g., the Swedish Financial Supervisory Authority (*Finansinspektionen*)²⁶⁴.

Furthermore, from an affordability perspective, the overall application of the PAD was found in the 2021 Study on the EU payment accounts market to lead to a number of inefficiencies which damage vulnerable consumers' access to basic bank accounts. More specifically, while the PAD provides a definition of how to establish reasonable fees (i.e. by relating these to at least average earnings and fees for bank accounts), this is not always applied and is in some Member States left to the private institutions. This in turn risks leading to high costs for the most vulnerable consumers²⁶⁵.

Decreased availability of physical bank offices and services

An increased use of electronic means of payment at the expense of cash can lead to an **increasing number of establishments not accepting physical means of payment**²⁶⁶. This acts as a further barrier to those – especially older people and those living in rural areas – who are not familiar and/or comfortable with digital payments. In many instances this is coupled with a steady **decrease in the availability of physical bank branches** (as indicated above), and this can act as a barrier to access to financial services for people who have low digital skills or who lack the transport means to travel for errands.

Finally, the lack of information and awareness on basic bank accounts is also mentioned as a barrier by three Member States.

²⁶³ European Commission (2021f), Ch. 4.5.

²⁶⁴ Swedish Financial Supervisory Authority (*Finansinspektionen*) (2020), 'Redovisning av betalkontodirektivets genomförande i Sverige', Swedish Financial Supervisory Authority, Stockholm.

²⁶⁵ Hoffman (2019), 'Implementation of the Payment Accounts Directive (PAD)', *ERA Forum*, 20(2), 237-248.

²⁶⁶ In Sweden, which has a high level of digitalisation in the banking and payments sector, this has also been highlighted by the Central Bank: Central Bank of Sweden (Riksbanken) (2020), 'Payments in Sweden 2020', Stockholm, Riksbanken.

Transport

Structure of public transport systems and pricing

The way in which public transport systems are structured shapes both the experience of individuals, and the actions which public bodies and governments can take to address access issues. As public transport systems generally are managed on a subnational level by regions or municipalities, a range of different systems can be in place within the same country. Where services are delivered through public procurement and carried out by one or a few operators, the strong position of incumbents increases the risk of **fragmented and sub-optimally functioning transport markets**, and a **deterioration of the passengers' experience**²⁶⁷.

The fragmentation of transport systems within EU Member States also means that the pricing and availability of public transport varies significantly. **Passengers in regions or municipalities which have less funding available, or which are more geographically spread out, may have significantly fewer services available to them.** In regions with strained funding situations, the feasibility of implementing access-promoting measures such as subsidised tariffs or free access are also constrained. With some studies having found that pricing is a core determinant in predicting satisfaction with – and subsequently use of – public transport²⁶⁸, this is likely to lead to decreases in public transport.

People living in rural and peri-urban areas

Public transport relies on a relatively predictable flow of users, and benefits from being able to service clusters of households at the same time. Consequently, **people living in rural areas are often under-served by public transport**, and risk not being able to access transport. **Low-income households in rural areas are a particularly vulnerable group**, especially if they have other conditions or disabilities. This is considered as the major barrier to access in 16 out of 27 Member States. However, a circumstance which might improve this situation is that those living in rural areas may also have lower house prices, and therefore have more financial means to own and use a personal car. At the same time, households in under-served rural areas might still be 'forced' to own cars, despite their limited economic resources and this can lead them to reduce expenditure on other necessities and/or to reduce travel activity to the bare minimum, which can in turn result in social exclusion (the so-called phenomenon of 'forced car ownership')²⁶⁹. It is also found in the literature that households who move to rural areas where housing costs are lower, tend to underestimate the associated increase in the cost of transport, and often find themselves worse-off at the end of the day²⁷⁰.

These problems are further aggravated if public transport services are not connected between different modes of transport (i.e. whether there is a synchronisation between buses, trains, etc., in terms of stops and timetables).

The literature²⁷¹ also informs that people living in peri-urban and sub-urban areas are particularly vulnerable to access to transport services, though this has not been found as a barrier in the national reports. In particular, these areas seem to be characterised

²⁶⁷ European Commission (2019d), 'Transport in the European Union: Current Trends and Issues', European Commission (DG TRAN), Brussels, p. 6.

²⁶⁸ E.g. Minelgaite, Dagiliute and Liobikiene (2020).

²⁶⁹ Low-income households in rural areas are a particularly vulnerable group, especially if they have other conditions or disabilities. This is considered as the major barrier to access in 16 out of 27 Member States. See: Mattioli (2017)..

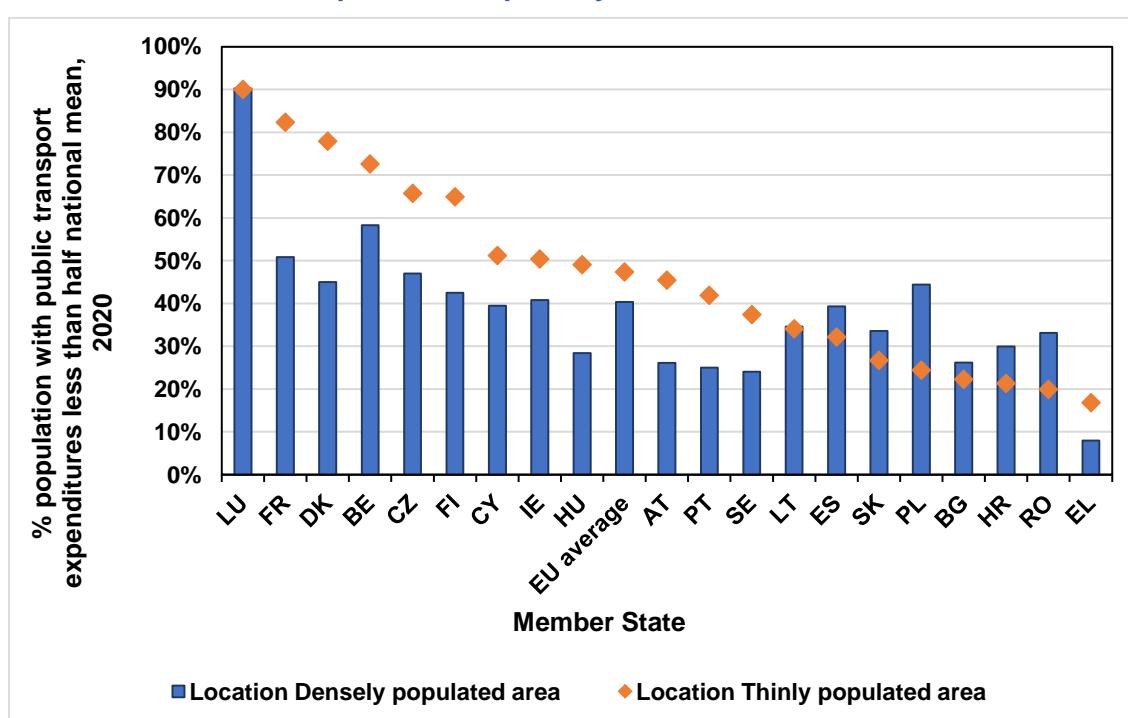
²⁷⁰ Mattioli, Lucas and Marsden (2017), 'Transport poverty and fuel poverty in the UK: From analogy to comparison', *Transport Policy*, 59, 93-105.

²⁷¹ Simcock, Jenkins, Lacey-Barnacle, Martiskainen, Mattioli and Hopkins (2021).

by more infrequent and fragmented public transport systems (compared to inner-city neighbourhoods), as well as longer travel distances to key services. Because of this, journey times are longer and people tend to depend more on car transport, therefore raising transport costs and vulnerability to access transport.

From the regression results in Table 22 (section 6.2.1.) it is clear that households living in rural areas tend to spend less on public transport services and more on private transport, relative to their income, compared to urban households. This gives indeed hints of bottlenecks in the public transport system and of a higher use of private cars in rural locations. Figure 11 further confirms this for most EU Member States; the share of people spending less than half the national mean is higher in thinly populated areas than densely populated ones for most Member States.

Figure 11 - Share of population spending less than half of national mean on public transport, by location, 2020



Source: EU-SILC 2020, Milieu calculations.

Note: EU weighted average. No data for DE, EE, IT, LV, MT, NL, SI.

Other barriers

Low digital literacy has also been mentioned as a barrier in this case, whereby people are unable to purchase tickets for public transport online. The restrictive eligibility criteria for access to reduced tariffs and low amount of the benefits have also been mentioned as barriers in a limited number of Member States.

Water and sanitation

Insufficient infrastructure

As noted under individual barriers, **a lack of public infrastructure (e.g. toilets and water taps) adversely affects homeless individuals**. In some EU Member States, the existing infrastructure also affects some groups of residents: **in Hungary, a significant number of older condominium buildings have old metal pipes which affect drinking water quality and taste**. Water quality appears to be an issue in Spain as well. As water companies are only responsible for the water up until the moment it reaches

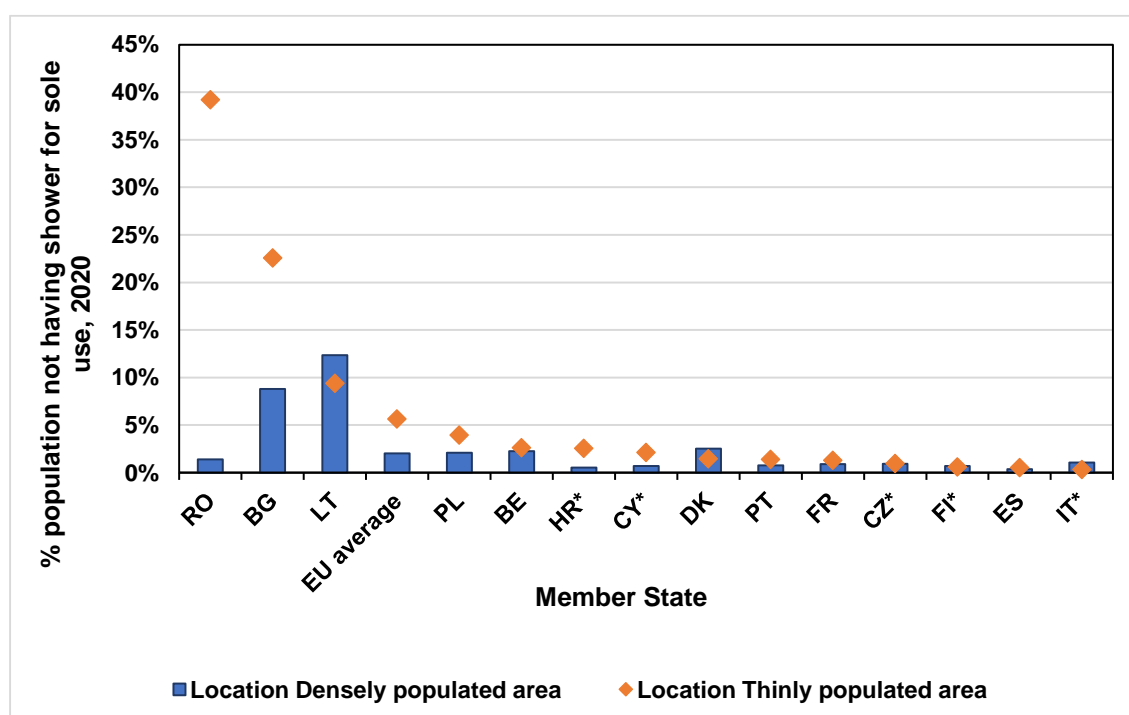
the building, the responsibility for renovations (and costs thereof) falls on the consumer²⁷².

Rural communities with unsecure water supplies

In a few countries – notably Romania – the number of households connected to water mains is significantly lower than for the rest of the EU. **In Romania, 31 % of rural households are connected to water mains.** While rural connection rates are lower also in other EU Member States, and residents are generally required to supply their own water and sewerage solutions, the problem in Romania is aggravated by a high level of poverty risk. In some Member States, these territorial inequalities in terms of infrastructure quality and availability lead to substantial price differences among regions.

To complement this with visuals, Figure 12 depicts that not having a shower for own use also seems a significant issue in rural areas of Romania. Indeed, while in urban areas 93 % of people own a private shower, this number drops to 61 % in rural areas. The gap is large also in Latvia, Bulgaria and Estonia.

Figure 12 – Share of population without shower/bath for sole use, by location, 2020



Source: EU-SILC 2020, Milieu calculations.

Note: EU weighted average. No data for EE, LV, MT, NL, DE and SI. IT data from 2019. Lack of access to own shower also includes bathtubs. * indicates low data reliability (observations between 20 and 49). AT, EL, HU, IE, LU, SE and SK excluded due to low number of observations (below 20) in either category.

²⁷² Hungarian National Institute of Environmental Health (2012), 'Ivóvíz kiskáté: Lakossági tájékoztató a gyakran ismételt kérdésekről', Budapest, Hungarian National Institute of Environmental Health.

6.4. Drivers to increased access

6.4.1. Cross-cutting drivers

As discussed above, low income and poverty risk is the main cross-cutting barrier to being able to access essential services. Therefore, a significant measure to improve access would be to **increase the levels and ease the eligibility requirements of social benefits**. This would both ensure that awarded benefits are closer to the poverty line and able to meet the service needs of households (i.e. the amount of the benefit is sufficient to meet the need), and increase coverage to households that may be struggling, but not yet at such a level that they qualify for assistance (e.g. the working poor, or increasingly middle-class households in some Member States following energy price increases).

The feasibility of carrying out such a reform will vary significantly between Member States depending on their current welfare landscape and their economic ability to finance it (and whether there is political will to implement it). [Table 24](#) shows that, even though progress has been made in all Member States to ensure access for households at risk of poverty across all essential services, having a low income remains a significant barrier.

Table 24 – EU average share of people AROP without access to essential services, 2015 and 2020

	Digital Communications	Energy	Utilities	Water & Sanitation
2015	18%	22%	23%	11%
2020	10%	17%	15%	8%

Source : EU-SILC 2020, Milieu calculations.

Note: EU weighted average. *How to read the table:* on average, around 18% of households that were at risk of poverty could not afford internet in 2015. This share dropped to 10% in 2020.

As is further discussed in Section 7, there is significant variation in the welfare state policy mix of EU Member States. Broadly, a distinction can be made between Member States that deliver aid to ensure essential services affordability through broader policy measures such as minimum income and social assistance benefits, and those that deliver assistance more through targeted, service-specific measures. A number of Member States also use a combination of the two forms of measure.

Each Member State's situation in terms of the main access issues, the number of vulnerable households, and the measures already in place is different. Consequently, any reform of policy measures in terms of levels and eligibility requirements also needs to consider the national circumstances, and evaluate what measures are most effective in ensuring that households can afford essential services.

This complexity means that the present report is not able to identify an ideal policy design to ensure access and affordability, as a number of confounding variables affect what will work in a specific Member State, but not in another. For instance, disaggregating benefits to refer to individual services is not always feasible: in a locality where households generally pay their water, energy and sanitation bill through their rental payment, it may be easier to deliver this assistance through a housing allowance. Likewise, in Member States where only specific and narrowly-defined groups face an issue of access, a broader policy measure such as minimum income benefits may not be the most effective in reaching the households in need.

In addition, **increasing awareness on the availability of benefits, as well as diffusion of information** on application procedures (including eligibility criteria), in particular among vulnerable groups, is also identified as a key driver for the uptake of benefits, together with the simplification of application procedures. In some cases, eligible households do not apply for the benefits nor use them because of a lack of awareness, or because the information is difficult to get, administrative procedures are complex or require a certain level of upfront investment that vulnerable households are not able to cover. In this context, the implementation of “automatic” allocations of benefits is considered to facilitate take up of benefits.

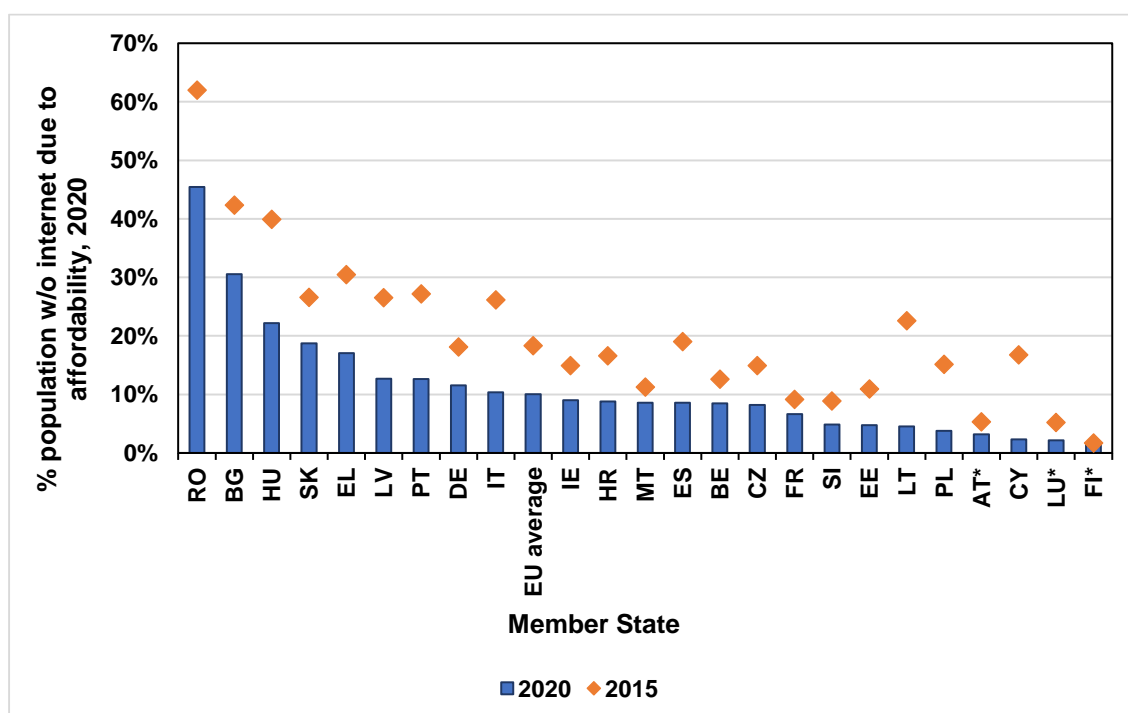
6.4.2. Service-specific drivers

Digital communications

A driver which would improve internet access is to **name internet access a right**, and ensure that all households that desire access to internet infrastructure can get it. This has been implemented in a few countries, including Finland, Germany and Sweden, and can also serve to specifically assist rural households who would otherwise find it difficult to afford connection to internet infrastructure. The improvement of the infrastructure and the provision of ‘free internet’ are also identified as drivers in some of the EU Member States.

Figure 13 confirms that countries have managed to reduce the share of people living in households at risk of poverty that are not able to access the internet between 2015 and 2020.

Figure 13 – AROP population without internet (2015 vs 2020)



Source: EU-SILC 2020, Milieu calculations.

Note: EU weighted average. DE and IT data from 2019. * indicates low data reliability (observations between 20 and 49). DK, NL and SE excluded due to low number of observations (below 20) in either year.

Comprehensive training programmes in digital skills appear to make a significant difference in tackling the digital skills gap, with the digital skills of Europeans rising on a

yearly basis. Whether this is financed nationally or regionally, training would be most effective if targeted at specific groups and their needs, rather than attempting to cover all groups in one go.

Energy

In the light of rising and volatile energy prices, **energy price caps** or similar policy measures can act as a way of protecting consumers against sudden rises, whether they are persistent or not. However, depending on how the measure is designed, there is a risk for prolonged and significant costs for the state or the competent authority. **Longer-term investments in sustainable energy and energy efficiency-improving measures** are required, to move the burden of payment from consumers to public authorities, as well as to protect vulnerable consumers in the long term against future price increases. This could provide more long-term and sustainable change.

Another measure which is in place in, for example, the Netherlands and Sweden is **the offer of consultation with trained ‘energy coaches’ from local authorities**, who can help navigate available benefits as well as advise households on energy-saving measures they can take.

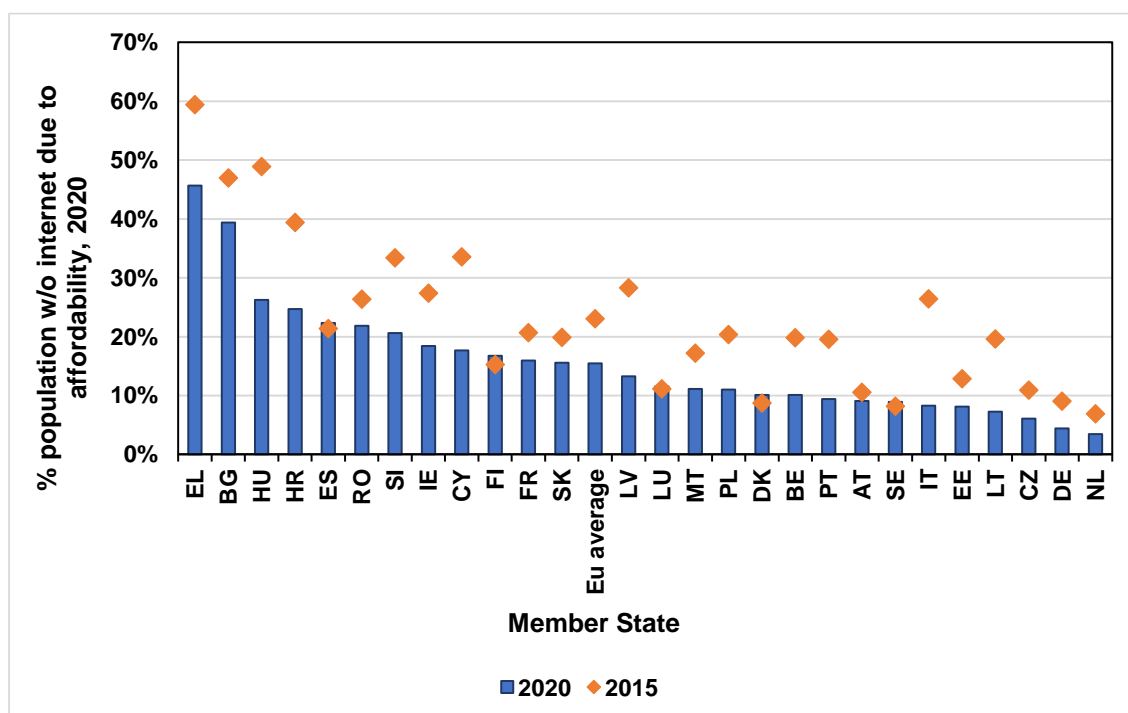
EU Member States generally have strict provisions to ensure that disconnections from energy and electricity supplies do not occur easily, and that reminders, offers of payment plans, and direct contact with social authorities and debt advisors are preferred. Being cut off from energy due to non-payment serves as an ultimate deprivation of access to the service, and **banning disconnections in their entirety** would provide stronger protection. This is what EDF (energy supplier) did in France in 2022, by putting an end to electricity supply cuts on residential customers who are in arrears throughout the year, past the winter truce period of 2021/2022. EDF committed to replacing the disconnection with a guaranteed minimum power reduction to 1 kVA²⁷³. In return, non-payment could be covered by social authorities in liaison with the energy provider and the consumer, to attempt to get to the root of the consumer’s payment problems in a non-punitive manner.

Lastly, **improving the mapping of energy poverty** at the national level, as well as adopting a nationally-relevant definition for it is identified as a relevant driver. This could support the recognition of the issue as a distinct phenomenon in need of monitoring and targeted measures. According to EPOV²⁷⁴, besides Austria, Spain and Cyprus, most EU Member States do not provide an explicit and official definition of energy poverty.

Figure 14 depicts that most countries have managed to sharply decrease the share of the population at risk of poverty with arrears on utility bills in the past 12 months between 2015 and 2020.

²⁷³ EDF (2021).

²⁷⁴ Bouzarovski and Thomson (2020).

Figure 14 – AROP population with arrears on utility bills (2015 vs 2020)

Source: EU-SILC 2020, Milieu calculations.

Note: EU weighted average. DE and IT data from 2019.

Financial services

In order for the PAD's aim of securing basic bank accounts for all consumers to be effective, **aspects of the PAD may need to be strengthened**. This comes in particular with regard to three aspects: implementing a stricter definition of 'reasonable fees' rather than leaving it to the financial institutions; making it compulsory for financial institutions to inform about these products; and to address gaps where other laws relating to e.g. money laundering impose significant ID restrictions on applicants.

Investments in programmes aimed at **improving financial literacy**, in particular among vulnerable groups are also identified as drivers, in particular when coupled with the provision of information on available financial services and benefits.

As highlighted elsewhere, **continuing monitoring and work on access** is also imperative to ensure that new digital banking services remain accessible also to people who have disabilities or conditions which may make it difficult for them to fully access the service.

Transport

Similar to financial services, **continued efforts to make public transport more inclusive** (i.e. in terms of increasing access for people with physical impairments for instance) are important to ensure that all are able to access it. In many EU Member States active efforts are being made towards this goal.

However, access as with other issues, the differing economic circumstances of subnational public authorities means that they have significantly different abilities to address issues of inequity or non-accessibility. **Central funding mechanisms towards dedicated public transport reforms** may therefore be needed to ensure that vulnerable populations in low-income regions and municipalities are not disadvantaged. This is

especially important in relation to rural areas, where a lack of public transport makes it even more difficult to lead a normal life than in the city.

The provision of social tariffs and targeted ticket subsidies can help many transport users. However, the blanket allocation of reduced tariffs to individuals based on blunt socio-demographic characteristics – e.g. being above a certain age – risks being socially regressive and economically ineffective. **Including or strengthening a means test aspect of social tariffs could target resources to the most vulnerable** while saving public funds. In order to facilitate greater access, it is important that such means-testing would not be punitive, but directly intending to reach individuals in need. However, it should also be noted that such a move may nevertheless lead to significant administrative costs, given the more complex procedure of identifying eligible recipients²⁷⁵.

Water and sanitation

The drivers for access regarding water and sanitation fundamentally overlap with those of energy. While in most countries it remains a last resort move to disconnect a household, **banning disconnection from water mains and sewerage services due to non-payment** would further safeguard vulnerable and low-income individuals.

Additionally, **increasing the provision of public water and sanitation infrastructure such as water taps and cost-free public toilets** would be an important measure to improve access for the homeless population in Europe, who may otherwise struggle to access the services in any form. Here too, central government or supranational funding may be required to ensure that lower-income regions are also able to make the required investments.

²⁷⁵ The extent of savings – or whether an alternative operation may be even more expensive – is likely to vary significantly between Member States. Further evaluation, taking into account the circumstances of specific groups and Member States, would be required to identify which measure is better suited to a specific case.

7. Policy measures supporting access

This section elaborates on the policy measures that are in place to address the barriers to accessing essential services that have thus far been identified. It does so in three steps. Section 7.1 discusses the different types of policy measures, and maps out which policy measures have been identified as in place in various EU Member States. Section 7.2 proceeds to discuss monitoring and evaluation measures that are in place, and Section 7.3 presents policies which have been identified as possible good practices, based on effectiveness in addressing their goals, efficiency of resource utilisation, and transferability between Member States.

7.1. Types of policy measures

Generally, there are two main categories of policy measures which reoccur in the Member States:

- **Means-tested social assistance programmes** targeted at low-income households. In some, but not all EU Member States, these include components which are explicitly reserved for financing all or some essential services. In the others, the benefit generally tops up household income to a guaranteed minimum or subsistence level, which may or may not be adequate to finance purchases of essential services.
- The other category of measures applies to **categorical benefits based on socio-demographic traits**. These are benefits which directly relate to a particular service. In most cases, these are allocated not through income means-testing but from belonging to a certain group. A typical example is found in reduced transport tariffs for groups such as school children and pensioners.

However, EU Member States employ a range of other measures to support access and affordability to services, as discussed further in this chapter. A summary is presented in Table 25.

Table 25 – Grouping of countries according to the type of measures in place facilitating access to the six essential services

	Reduced tariffs	Cash benefits	In-kind benefits	Provision of a basic supply	Subsidy/cost reimbursement/tax rebate
Digital communications	BE, BG, CY, EE, FR, HU, IT, MT, PT, SI	FR, PL, SK, SI	DK, HU, IT, LT, MT, PL, PT	DK	AT, EL, IT, SE
Energy	BE, CZ, EE, EL, IT, LT, MT, PT, ES	AT, BE, BG, CZ, FR, EL, IE, IT, LV, LU, SI	BU	-	BE, DK, EE, DE, HU, LT, NL, PL, RO, SE
Financial services	All Member States	-	-	-	-
Transport	All Member States ²⁷⁶	ES	ES	-	ES, IT, SK
Water and Sanitation	AT, BE, BG, HR, CY, FR, IT, PT, ES	AT, BE, FR, ES	IT	AT	CZ, FI, PL, RO

²⁷⁶ Except Finland, Germany, Greece, Hungary, Netherlands, Poland, Romania.

Source: Milieu elaboration based on national reports.

Digital communications

Reduced tariffs

Measures to increase access to digital communications vary across the EU Member States, with the main ones being **reduced tariffs (for vulnerable groups)** (implemented in 11 out of 27 Member States) and the provision of digital devices and free access to the internet. Vulnerable groups that are generally targeted are households in rural areas, low-income families, old-age people and in some cases, disabled people.

In Belgium, the people on minimum income, low-income older people and disabled people can benefit from a social tariff that gives reductions of 40 % on their fixed telephony and fixed internet subscription (maximum EUR 8.40) and a reduction on their call charges of EUR 3.10. In Cyprus, vulnerable groups have access to 60 % discount on the home tariff packages (including broadband services and mobile telephony). Malta has a national measure in place which provides internet service discounts (from 17 % to 22 % discount) for old-age people (over 60). In Portugal, consumers from vulnerable socio-economic backgrounds or with special social needs can access a social tariff of EUR 6.15 (EUR 5 + VAT) monthly for Internet services with 12 megabits per second (Mbps) download speed and 2 Mbps upload speed, with a monthly traffic limit of 15 gigabytes (GB). There might be a cost for service activation and/or access equipment that will never exceed EUR 26.38 (EUR 21.45 + VAT) and can be paid in parcels up to a maximum period of 24 months. In Slovenia, disabled customers without the means to meet basic needs at the subsistence level are entitled to a 50 % discount on connection to a public communications network at a fixed location and a 50 % discount on a monthly subscription for publicly available telephone services at a fixed location (that is, a basic-access telephone subscription).

In some Member States, the **services operators offer discounts** on specific telephony and internet packages. In France, low income households can benefit from a tariff reduction on a landline phone of EUR 4.21 excluding VAT/month, set by ministerial order, supplemented by a voluntary top-up by Orange of EUR 5.35 (excluding VAT) per month, which in practice amounts to EUR 6.49 per month, including VAT. In Hungary, socially vulnerable citizens can obtain a package offered by the universal services operator (Hrvatski telekom) at a reduced rate (50 % discount). In Italy, holders of a 'social card' can access a rebated phone account from provider TIM. This entails a 50 % reduction on the price of a basic service.

Estonia established a **cap on the price** for joining the high speed broadband network to a maximum of EUR 200 for end user.

Cash benefits

Several Member States offer **cash benefits to enable specific population groups to purchase IT equipment, installation or activation of an internet connection**. For instance, France offers a governmental premium of EUR 150 (and from April 2020 from EUR 300 to EUR 600 based on resources) for residents of badly connected rural areas (white areas) which can be used to finance the equipment, installation or activation of high-speed wireless connection (4G box, wireless local loops, satellite). To get the support, one of the 17 operators labelled 'digital cohesion' must be selected.

Poland has a programme called 'Active self-government' aimed at the elimination of barriers in access to information society. Under this programme, citizens can obtain **cash benefits for purchasing hardware or software**, co-financing of training in digital competences, for the maintenance of hardware. The maximum support in 2021 varied depending on the type, from PLN 1 500 to PLN 24 000.

Slovenia has put in place **digital vouchers** that can be used to purchase computer equipment or participation in educational programmes aimed at improving digital competences. The target population are pupils from seventh grade of primary school and students as well as persons over 55 years of age who are included in programmes of digital literacy. Digital vouchers are available since June 2022 and amount to EUR 150.

In 2021, the Spanish Government launched the **ÚNICO-Bono Social** to improve the fixed broadband connection for individuals or families identified as vulnerable. The maximum amount of the social voucher is EUR 240 year. The objective is to grant at least 125 000 connectivity vouchers to individuals or families classified as vulnerable for the acquisition of a broadband connection package with the most appropriate technology. There is no information available on the criteria to establish which persons belong to these vulnerable groups and can therefore receive this new bonus. It is likely that this identification will be left to the Autonomous Communities.

Provision of a basic supply

In Denmark, the government has put national measures in place which aim to ensure that every citizen has access to the internet and digital government services. This includes the **Broadband Pool**, which provides the infrastructure for citizens to buy internet and mobile phone services and **specifically targets households in rural areas**.

In-kind benefits

In Hungary, a temporary measure was put in place to ensure that **internet access was provided free of charge to families with at least one child mandated to study online** during the closure of secondary schools in the COVID-19 pandemic. In March-May 2021, elementary school students were also eligible. In Italy, qualifying households can access a **free loan** of a mobile phone, PC or desktop computer for one year. Similarly, Malta provided access to free laptops and internet for 2 300 households to seek to bridge the digital divide.

In Poland, with the National Education Network schools all over Poland can **connect to the internet free of charge**. In this way, the programme contributes to the improvement of educational opportunities and digital literacy for pupils and students on a nation-wide scale - also in digitally excluded areas.

In Portugal, the measure **Digital School** (Escola Digital) was approved and entered in force in September 2020, in the beginning of the school year 2020/2021. This measure is part of the Action Plan for Digital Transition and aims to guarantee access, free of charge and without additional cost, to equipment and connectivity to all students from first cycle of education to secondary level. However, students from vulnerable socio-economic backgrounds are prioritised in this process, especially those who do not have access to a computer or internet at home. This specific group of students are already identified by the respective schools through the schooling social service.

In Malta, low-income or vulnerable households are targeted with the **Digital Connect** measure, which has offered free laptops and internet access to thousands of households with the aim of bridging the digital divide.

Subsidy/cost reimbursement/tax rebate

In Austria, people living in low-income households, who at the same time receive at least one social benefit, can apply for a **special allowance covering (parts of) their telephone and internet costs**. The allowance amounts to EUR 12 per month and is directly transferred to the telephone and internet service provider contracted by the beneficiary. Many service providers for this purpose offer specific social tariffs, only applicable for people receiving the Telephone Fee Grant.

In Italy, low-income families are targeted using **social bonuses for telecommunications** and a **digitalisation kit**, which allows eligible households to borrow a mobile phone or a (desktop) PC for one year.

In Sweden, cost reimbursements are used to ensure there is sufficient **compensation for high costs relating to connecting a household's dwelling to the internet**.

Greece also provides a subsidy (of EUR 200) for the purchase of technological equipment (tablet, laptop, desktop), to support citizens meet their needs on access to educational services.

In Poland, municipalities can apply for support from the **national Broadband Fund** to obtain subsidies for the purchase of telecommunication services and equipment for various beneficiaries including consumers. Individual consumers cannot be direct beneficiaries of the Fund, they can receive support through municipalities or other organisations such as foundations.

Energy

In terms of energy, most EU Member States have implemented various measures to reduce the energy bill for households. In general, cash benefits and cost compensations or tax rebates are the preferred measures. Notably, many additional actions were taken recently due to the rapidly rising gas and electricity prices.

Cash benefits

In most cases, governments provided cash benefits to support vulnerable consumers in paying their energy bills.

In this field, it is possible to identify both “traditional measures” that have been in place for a long time, and “additional measures”, that have been introduced only recently specifically to address the recent spike in gas and electricity prices.

Within the first category falls the measure adopted in Austria, where all federal provinces (Bundesländer) provide a specific **means-tested allowance for heating costs** for low-income households. The benefit varies between EUR 110 per year in Carinthia and EUR 270 per year in Vorarlberg. Bulgaria provides targeted aid for heating, either as a cash benefit or in-kind. Priority for the aid is given to retired persons living alone, single parents and persons with disabilities, and it is distributed over the heating period, in the winter. In 2019, France established an **energy voucher** (the amount ranges from EUR 48 to EUR 277) aimed to support low-income households to pay their energy bills and carry out renovations. The Greek government provides a heating benefit in the form a grant, that benefits on average 600 000 vulnerable households. In Latvia, access to electricity and gas is facilitated for so-called “protected users”, which receive a specific allowance for electricity. The allowance ranges from EUR 20 per month for large families to EUR 15 per month for other groups of people, including people with disabilities, low-income household(person) or a family (person) who takes care of a child with a disability. In Malta, energy benefits are used to assist low-income or vulnerable households with the payment of utilities, including gas and electricity.

Among the additional measures, Bulgaria paid an additional voucher in 2021 to help low-income households cope with the exceptional rise in energy prices. Greece provided a **one-off payment to repay the debts** of low-income consumers that were disconnected from their electricity supply due to overdue debts (for total debts up to EUR 6 000, 75 % was paid by the government, in a lump sum). Germany implemented a large **relief package** in 2022, of which around EUR 15 billion has been spent, which comprises a set of different ad hoc measures. This includes cash benefits for all private households on both the national and regional level. In addition, there is a one-off **heating allowance** available, mainly for beneficiaries of housing allowance, students and apprentices. In

January 2022, Belgium provided a one-off intervention of EUR 80 for households that were entitled to the social tariff on 30 September 2021, which affected approximately 900 000 families. In April 2022, the government granted a federal heating bonus of EUR 100 to holders of a residential electricity contract. These measures were addressed to all citizens.

Subsidy/cost reimbursement/tax rebate

In Finland, an ongoing policy measure was last reformed in 2016 to make more subsidies available for low-income and vulnerable households (especially old age and disabled people) to **reimburse costs for the abandonment of oil heating and improvements in energy efficiency**.

In Hungary, the government has put in place an extensive network of bonuses and reimbursements since 2018 to lower energy bills. This was mainly done in the form of cost reimbursements for different vulnerable groups, such as one-off **utility vouchers, price reductions** when using gas and district heating, **reimbursement for purchases of wood and coal for heating** by local governments, and a **public utility fee average** for home office workers.

In terms of special measures implemented to address the recent spike in energy prices, a number of EU Member States have opted for compensation schemes and tax rebates – that mostly addressed all households without distinction. For instance, Belgium has **reduced VAT on electricity bills** from 21 % to 6 % from March 2022 to September 2022. The government also announced it would lower the VAT on natural gas to the same extent, from 1 April 2022. This reduction will also apply to heating networks. The Netherlands also provided a tax rebate on energy taxes. Estonia set a cap on energy prices paid by consumers (EUR 0.12 per kW/h up to a consumption of 650 kW/h) for the heating season 2021/2022 and provided a **reimbursement** for the exceedance directly to service providers. In Lithuania families or single residents were **compensated for a part of home heating costs** (or costs of other approved types of energy or fuel) exceeding 10 % of the difference between the average monthly income per family (or single person) and two amounts of SSI (since 1 June 2022 – EUR 297) per person, or three amounts of SSI (since 1 June 2022 – EUR 441) for a single person. The compensation covered all the actual costs of heating in excess of 10 % of this difference. In Romania, there was a **compensation scheme for the 2021-2022 heating season** targeting low-income households. Similarly, in Sweden, there was an **energy price rebate** for the same season, but this compensation was applied universally, based on energy consumption.

Reduced tariffs

Different Member States have established social tariffs for electricity, aimed at supporting low-income households. For instance, Belgium offers a social tariff for electricity and natural gas for certain target groups who are in a vulnerable situation, which is cheaper than the average market price. The tariff is calculated four times a year by the federal energy regulator, the Commission for Electricity and Gas Regulation, and it is allocated to beneficiaries automatically. In Greece, such discounts on electricity charges (between 45 % or 75 % discounts) are available to low-income households' parents with three vulnerable children, the long-term unemployed, persons with disabilities and persons who require life support since 2011. In Portugal, the social tariff for electricity and gas was created in 2010-2011. The discount for electricity amounted to 33.8 % (without fees and taxes) for 2020 (Dispatch 8900/2019 of 7 October) and remained the same in 2022. The discount on the social gas tariff was 31.2 % (without fees and taxes) for 2019-2020 and remained the same in 2022. In Spain, an energy VAT reduction from 21 % to 10 % was implemented as early as summer 2021, it was then reduced further in June 2022.

Some of the tariff reductions have been increased or adopted to support citizens with the recent increase in energy prices. In Czechia, a regulation was allowing the EAC to reduce the price of electricity by 10 % (excluding VAT and other charges), to take place in two-month intervals. The continuation of the above reduction will be reviewed and decided before the end of each two-month period based on the latest information and developments regarding COVID-19. During this period, the EAC shall not disconnect customers for non-payment of bills. Spain put in place an Electricity Social Bonus providing a 25 % discount for vulnerable consumers who meet the established requirements. There is also a 60 % reduction for "vulnerable consumers" and 70 % for "very vulnerable consumers", on an exceptional basis, until 30 June 2022. If the person is classified as a "consumer at risk of social exclusion" - as long as they are assisted by the social services of a regional or local administration, paying at least 50 % of the household electricity bill - they will not have to pay the rest of the bill. In the event that consumers in any degree of vulnerability are unable to pay their energy bills, their household will not suffer power cuts. Similar reductions were implemented in Lithuania and Malta.

Financial services

The **Payment Account Directive (2014/92/EU)** is transposed in all Member States and therefore formally guarantees access to basic accounts to all citizens for free or for a reasonable fee²⁷⁷. Only a limited number of national experts indicated the presence of additional measures to make access to financial services more affordable – including from private actors.

For instance, in Italy, there is a **basic zero-cost bank account** available since 2018 for low-income people which also includes a number of free-of-charge services. Slovakia similarly provides free bank accounts for the lowest incomes, while in France a free basic account is available to all applicants. In Austria, Erste Group Bank initiated, in 2006, the "Zweite Sparkasse" ("Bank für Menschen ohne Bank" – the bank for people without a bank), which is a fully licensed independent bank, run by volunteers who have their main job with the Erste Bank. The Zweite Sparkasse cooperates with debt counselling services and other social services and offers different types of basic payment accounts, as well as providing basic accident and household insurance. The service fee for their basic account is usually EUR 3 per month, but if the client changes to a normal account within the first three years of having a basic account this service fee is refunded.

Many EU Member States have put in place additional initiatives to make vulnerable groups more financially literate that are not, however, reported here as this is not the main focus of the report.

Transport

Reduced tariffs

Reduced tariffs or social cards are by far the preferred measure implemented in Member States to improve access to public transport for vulnerable groups. These are mostly implemented at the sub-national and municipal level, and the discount ranges and target groups can vary substantially. Concerning ranges, these can go from free tickets and transport cards (e.g. for people aged 65 or above, in Spain) to different percentages (25 %, 50 %, 75 %) – usually assigned to specific target groups. Table 26 provides an overview of the main target groups targeted by reduced tariffs in EU Member States.

²⁷⁷ Only some Member States define what counts as a reasonable fee. This is outlined in detail in Section 4.1.

Table 26 – Overview of target groups for reduced tariffs

Low-income/ Recipients of minimum income etc./Unemployed	Members of large households	Older/Retired persons
AT, CY, FR, IT, PT, ES	CY, LV, ES	AT, BE, BG, CY, DK, IE, PT, SK, SI, SE
Children/Pupils	People with disabilities	War veterans/Military staff
AT, BG, HR, CY, DK, IE, LV, SK, SI, SE, ES	CY, CZ, IE, LV, SI, ES	CY, SI

Source: Milieu elaboration based on national reports.

In addition to the above, in Hungary, reduced tariffs for **essential workers** were implemented during the COVID-19 pandemic. Additional reduced tariffs were also implemented in Germany, where a EUR 9 discounted monthly ticket for local public transport was implemented nationwide (for a period of three months).

In some EU Member States, **free transport for all** is provided – either across States (Luxembourg and Malta) or in specific cities (e.g. Tallin, Estonia).

Subsidy/cost reimbursement/tax rebate

In a limited number of Member States, additional measures are also implemented. For instance, Spain provides a **mobility allowance and compensation for transport costs** for people with disabilities, and subsidies for students with special educational needs and who belong to large households. Similarly, Slovakia provides a transport allowance to reimburse the pupils' travel costs directly to their parents on a monthly basis. In Italy, a **tax deduction for public transport costs** has been available at a national level since 2018 for all households, but the tax schedule is set up to benefit low-income households more.

Moreover, in some cases there is a community transport for vulnerable groups such as disabled people, including in Czechia, Malta, and Sweden.

Water and sanitation

Access to water and sanitation is mainly regulated at the sub-national/regional/municipal level, and therefore few measures have been reported by national experts. The policy measures pertaining to water and sanitation are substantially similar to the ones for energy, including **water benefits** (Italy, Malta, Romania) and **bonuses for (drinking) water** (Italy) targeting low-income and vulnerable groups.

Reduced tariffs

Among the EU Member States for which evidence was available, reduced tariffs are the most utilised measure to support access to this service.

Social tariffs / discounts are provided for low-income households in Austria, Belgium, Bulgaria, Croatia, Cyprus, France, Italy, Portugal and Spain. Reductions go from an 80 % discount in Belgium (in the Flanders region, for people benefiting from the integration income) to up to 50 % in Italy (discount on the bill for purification, filtering and mineralisation of domestic water). Shares of discounts are not available for other Member States.

In France, **social water** pricing is implemented in a number of municipalities and it takes the form of a modulation of the fixed price part and/or the variable part of the water bill. For instance, the municipality of Saint-Paul-lès-Dax in the Landes region has suppressed

the fixed part and decreased by half the variable part for beneficiaries of the supplementary universal health insurance (complémentaire santé solidaire). In other municipalities, the price is modulated according to certain consumption bands (progressive tariff linked to the volume of water consumed). The municipality of Dunkerque implemented this option with three different tariffs for three consumption bands. Beneficiaries of the supplementary universal health insurance benefit from a reduced tariff for the first band.

Cash benefits

In Austria, cash benefits are provided from different social insurance schemes and means-tested benefits, in the form of the minimum pension and minimum income, that are also designed to cover the costs of sanitation, or instalment payments are also possible, which are billed by municipalities in the form of service fees.

In Brussels, Belgium, the **Social Fund for Water** (Fonds Social de l'Eau) assists people in precarious water affordability situations. The Fund is a financial mechanism developed in 1998, now run by the 19 public centres of social welfare of the Region of Brussels and funded by financial contributions from Brussels households for every m³ of water consumed. As a result of the Fund, the PCSW can pay all or part of the water bill, pay a flat-rate amount consisting of granting people in difficulty the necessary social and budgetary support and guidance, or cover the costs of repairing or improving water installations at home. Similarly, in Spain, **Solidarity funds** have been established to support low-income households in meeting the costs of supply and sanitation services.

In some municipalities in France, a flat-rate aid for the payment of water bills is provided. For instance, **water vouchers** are distributed by municipal social action centres, or a **water allowance** is directly paid into the recipient's bank account. This type of water allowance was introduced in Nantes and Grenoble for households whose water bill exceeds 3 % of their income.

Other measures

Evidence of in-kind benefits provided in this field have only been identified in Italy, where eligible individuals receive 50/18.25 cubic metres of water per day and per household member, free of charge, to alleviate cost concerns.

In Poland, many local authorities provide a subsidy to partially cover the costs of water provision and sewerage services. The subsidies are universal and in general they cover the whole local population, and decisions on implementation of subsidies to lower the costs of water tariffs for the inhabitants are taken by each municipality individually.

In Finland, there are additional national measures for sanitation. For example, adjustments were made to the regulations of the **wastewater system for older persons** to provide a basic supply and free advice. Moreover, tax deductions are available for household-related services the possibility to connect houses to sewerage plants and sanitation service.

7.2. Monitoring and evaluation of the policy measures

Generally, there is either a few or no monitoring instruments in place in EU Member States. This is in part due to the fact that many of the policy measures are relatively new. Whenever there is monitoring available, this is often conducted by government institutions and/or national statistics offices, and it does not specifically monitor the effects of the single measures, but rather general indicators that relate to the essential service (e.g. connectivity to the internet). When monitoring of specific measures is available, this mostly targets the number of applicants/beneficiaries to specific measures and budget allocated. Evaluations of specific measures are rarely available, and therefore it is not possible to provide an overview of the effect of the measures aimed at

improving access to essential services in the context of this report. An overview of identified evaluation or monitoring practices is presented in Table 27.

Table 27 – Monitoring and evaluation in place per Member State and essential service

	General	Digital comms.	Energy	Financial services	Transport	Water and Sanitation	Not reported
AT		X					
BE		X	X			X	
BG							X
CY							X
CZ	X	X	X	X	X	X	
DE	X		X				
DK		X			X	X	
EE		X	X			X	
EL		X					
ES							X
FI				X	X	X	
FR		X	X			X	
HR			X		X	X	
HU		X	X			X	
IE							X
IT							X
LT		X	X		X		
LU							X
LV		X					
MT		X	X		X	X	
NL		X	X	X	X	X	
PL		X	X				
PT		X	X		X	X	
RO			X				
SE	X	X	X		X		
SI		X	X				
SK							X

Source: Milieu elaboration based on national reports.

7.3. Good practices

Some good practices have been identified in the national reports based on three criteria: **effectiveness** in achieving the goals of increased access; **efficiency** in terms of costs and resources; and **transferability** to other regions and EU Member States.

Generally, these relate to ensuring a minimum level of provision, expanding the reach of existing policies by easing eligibility requirements, or through targeted ad hoc measures. In most cases, evidence of the impact of these measures is not available, and therefore the identification of such measures as good practice relies on **expert knowledge of the national experts** drafting the national reports, combined with the input provided by national-level interviewees.

A long list of measures is presented in this section. The good practices with most potential in terms of effectiveness, efficiency and transferability are further developed upon in Section 8.3 in the concluding chapter of this report.

Digital communications

Physical access – IT equipment

In Austria, **free laptops** were provided to students in the 5th and 6th grade in 2021, to enable them to access digital learning opportunities. More than 150 000 students benefited from this measure.

In Italy, the **digitalisation kit** was introduced for low-income households with at least one person in school or at university offering a one-year loan of equipment (smartphone, laptop or desktop PC), which has helped to increase access to internet through direct provision of equipment.

Finally, under the Operational Programme Digital Poland, subsidies are provided to municipalities for the **installation of public hotspots**. It is estimated that this initiative will result in the creation of approximately 19 000 of hotspots in municipalities across the whole country.

Physical access – Internet connection

In Denmark, the **Broadband Pool** is considered a good practice to provide **high-speed internet access in rural areas**. In 2016-2018, 12 000 households were provided with high-speed internet access as a result. However, applicability will depend on other countries' infrastructure, and their ability to identify relevant households based on their register data.

In Croatia, the identification of a **universal services operator** for digital communications is highlighted as a good practice. This is due to the fact that the universal services operator has the **legal obligation to enable internet access** and provide a data transfer speed of at least 4 Mbit/s, at a tariff which has been previously approved by HAKOM (Croatian Regulatory Authority for Network Industries), to all citizens in Croatia, no matter what their geographical location is, provided their request is reasonable.

In Ireland, digital communications are considered to be a **universal service**. As such, anyone who makes a request has a right to be connected to the network, although the official minimum speed of 28.8kbps is far too slow for any form of modern digital communication.

Digital Skills

In Hungary, the National Coalition for Digital Skills and Jobs had an initiative on providing **training to enhance digital competencies** of teachers, students, and parents.

In Lithuania, the **Connected Lithuania: An Effective, Secure and Responsible Lithuanian Digital Community** project was considered a success. The project was implemented by the Information Society Development Committee in April 2018 – September 2021 and it targeted 500 000 people in the country not using the internet or with poor digital skills.

In Poland, different projects supporting digital inclusion have been identified as good practices. For instance, with the **National Education Network** (Ogólnopolska Sieć Edukacyjna, OSE) schools all over Poland can connect to the internet free of charge. In this way, the programme contributes to the improvement of educational opportunities and digital literacy for pupils and students on a nation-wide scale - also in digitally excluded areas. Moreover, a number of **educational and information campaigns to popularise the use of digital technologies** have been implemented jointly by the NASK National Research Institute, the Chancellery of the Prime Minister, and the Copernicus Science Center.

Other: cooperation and effective policy-making

In Finland, the **Digital Areas Advisory Board** provides a channel for cooperation and dialogue between NGOs, researchers, authorities, and the Ministry of Finance, to collaborate on the digitisation of public services.

In Germany, the annual **Digital Index Report** shows the extent of digitalisation in the country, based on computer-assisted personal interviews. The report supports policy-makers in designing effective policies based on comprehensive data.

Energy

Affordability – Reduced tariffs

In Vienna, Austria, low-income households facing financial constraints can receive support under the “Assistance in Special Circumstances – a Programme of the City of Vienna”. One part of this programme is the **Vienna Energy Assistance**, which addresses the concerns of energy-poor households. It is in the Municipal Department for Social Affairs and Health and offers energy consultations. The City of Vienna (the Municipal Department of Energy) covers the costs for energy-poor households, both for the consultation and for the measures recommended afterwards, up to and including the installation of district heating. A special feature of Vienna Energy Assistance is the close cooperation with the municipal energy supplier Wien Energie.

In Bulgaria, the **targeted aid for heating** is considered a best practice, as: a differentiated approach for different vulnerable groups is applied in the consideration of their eligibility for the aid, the cost of energy for a minimum amount of energy needed for heating is also taken into account allowing the aid to be adapted when energy prices vary without compromising the provision of minimum comfort in the dwellings, it is closely linked and complements the monthly social assistance and is administered by the same administration allowing for synergies and efficiency to be achieved.

Affordability - Automatic allocation of cash benefits

In Denmark, the **targeted heating cheque** is considered a good practice as it is automatically applied, and does not require an application from eligible households. Similarly, in Italy, **social bonuses** for energy are automatically granted to households that are entitled to them. This reduces bureaucratic costs and increases take-up. However, these are made possible by high-quality register data, which may not be possible in all EU Member States. In Malta, the energy and water benefit also applies automatically.

Physical access - Bans on disconnection and re-connection

In France, EDF (energy supplier) put an **end to electricity supply cuts** on residential customers who are in arrears throughout the year 2022, past the winter truce period of 2021/2022. EDF committed to replacing the disconnection with a guaranteed minimum power reduction to 1 kVA²⁷⁸. This measure was initially implemented as a temporary action to help customers during the winter period 2021/2022, but its extension throughout the year (past the critical period) is considered a good practice.

In Greece, special social assistance was provided in the years 2017 and 2020 to **reconnect to the grid vulnerable households that had been disconnected** due to unpaid bills. Vulnerable households are also protected from disconnection in Cyprus, Poland and Romania.

Physical access – Connection to electricity network

In Croatia, a special programme has been established to ensure the **Connection to Electricity Network of Households in Roma Settlements**. For the purpose of the implementation of this Programme, the Ministry has secured funds to the amount of 2 million kunas with which will be used by Hrvatska elektroprivreda (HEP) to connect the users to the electricity network. The plan is to create 500 electricity connections.

Awareness raising

In Finland, the **ASSIST programme** was implemented with Horizon 2020 funding to fight energy poverty by actively engaging consumers in the energy market and generating positive changes through their behaviour. Several reports were produced on measures to address vulnerable consumers and energy poverty. This was used to train 'energy tutors' who communicated the findings to relevant audiences, including low-income pensioners in rural areas.

Awareness-raising can also be seen in relation to e.g. the **energy tutors** in the Netherlands and the **climate and energy advisers** in Sweden, which are in place in municipalities to assist households in cutting their energy usage and making them aware of what assistance is available to them.

Energy efficiency / energy saving measures

Some Member States use various forms of reimbursements or tax deductions to encourage more effective energy consumption, and thereby indirectly lower energy costs. In some instances, these are framed around affordability:

- In Germany, the **Electricity Savings Check**, which calculates the energy consumption of individual domestic appliances and provides recommended courses of action, also provides information about how to change energy providers via a web application since 2021. Additionally, **ad hoc relief measures** are being implemented in 2022 to support low-income households with rising living costs, including energy.
- In Hungary, the 2020 **home renovation subsidy** for families with children provided households the possibility to install more energy effective infrastructure, such as solar panels (ca. 1% of households benefited from the fund).
- In Lithuania, the main measure to increase the affordability of energy services (in particular home heating and hot water) is the **compensation for the costs of home heating** and hot water for people on low incomes provided for in Law No IX-1675. This measure has been implemented in Lithuania since 1995 and is one of the most significant in ensuring affordability of energy services in Lithuania, targeted at poor residents.

²⁷⁸ EDF (2021).

- In Poland, the **shielding allowance** introduced from January 2022 can be seen as a good practice compared to the energy allowance that existed prior to the implementation of this instrument. The scope of this policy instrument has been broadened, and this is seen as a positive improvement.
- In Andalucia, Spain, the Confia project makes use of **blockchain technology to detect customers at risk of exclusion** earlier so that they are not affected by energy supply cuts and can benefit from the Bono Social. The use of blockchain technology facilitates a real-time view of the process and speeds up the procedures between the different participating agents, since it eliminates many of the procedures and facilitates the immediate flow of information.

Financial services

Physical access

In Ireland, the Credit Union system is well developed and is central to developing **community banking and financial/social inclusion** in the country. Many Credit Union staff will also act as community liaison, provide debt and credit advice, or simply be someone to talk to. This makes CU services very accessible, and certainly more so than the commercial banks. The presence of CU branches across the country also improves access. Credit Unions are core community concerns, and often keep a physical presence in towns and villages after banks close branches. As mentioned earlier, the willingness of CUs to offer unprofitable loans to its customers and actively take the loss as a moral obligation to the communities they serve is indeed an essential service.

Initiatives have been put in place in Spain to improve “physical” access to financial services, to counter the effect of the reduction of ATMs in several areas. In particular the Barcelona City Council launched the **"Telephone against Bank Neglect"** to help and provide information on how to process complaints or claims linked to financial entities. The service is a direct line of attention to people affected by the reduction of ATMs of banking entities and their lack of face-to-face attention. In 2021, with similar objectives, Correos, the Spanish post service, **installed around 130 ATMs** in offices and in towns with fewer than 3 000 inhabitants to enable people to withdraw money even in remote areas – even customers of other banks (with which Correos has established special agreements).

Financial literacy

Most of the initiatives highlighted as good practices in the field of financial services relate to the **improvement of financial literacy**. In Belgium, different organisations hold training sessions for people with low financial or digital skills to help them access digital banking. In the Netherlands, the **Money Wise initiative** has worked together with international organisations to improve financial literacy in a cost-efficient manner. Similarly, in Sweden, **training sessions in financial literacy** are held with populations at risk of exclusion (e.g. the elderly) to ensure that they have the requisite skills, especially with regard to digital banking. In Slovakia, the **5 money initiative** aims to raise awareness on creating a financial reserve in the domestic budget, sensible investment, the area of crypto currency investments and the risks of financial fraud.

Other initiatives have also been identified. For instance, in Denmark, there is a strong link between digitalisation and financial services. **Only a personal identification number is required** (not bank details) for public authorities and companies to transfer wages and benefits. In Finland, the **'Good banking practice'** is an industry code of conduct, based on practical experience, which emphasises the relationship between customer and bank and the effects on trust, efficiency and transparency in banking.

Other – Monitoring

In Latvia, the FCMC performs an **annual monitoring** of the fee applicable for the basic account opening and services, making sure that the fee for the basic account would not exceed by more than 25 % the average fee charged by credit institutions in Latvia to consumers for services related to a payment account.

Transport

Affordability – Reduced tariffs

In Denmark, there is a **tariff increase ceiling** for public transport in place, which creates pricing stability. This benefits low-income households through providing pricing stability.

In Germany, **ad hoc relief measures** are being implemented in 2022 to support low-income households with rising living costs, including transport. As part of the package, a EUR 9 discounted monthly ticket for local public transport was implemented nationwide (for a period of three months)²⁷⁹.

In Malta, there is **free bus transport** for young people and older people. This is being extended to all individuals in the second half of 2022.

Physical access

In Latvia, **public transport on demand** is provided in certain areas of the country. This allows a person/group of persons or an organisation to request a special route of public transport from point A to B. The request for this service shall be made to the local government/municipality 24 hours before the planned service. This service is widely used by the associations of people with invalidity as well as in the regions where population density is very low.

Along similar lines, in Finland, **service transport** replaces withdrawn regular bus services in many rural areas, which is targeted and used mainly by low-income pensioners and people with disabilities. Service transport is a form of transport that can be categorised as somewhere between taxis and buses. Service transport is targeted and used mainly by low-income pensioners and people with disabilities. Service routes are often run using smaller vehicles and in addition to passengers, it is also used to transport, within the city or municipality, school food and other cargo. Often service traffic is carried out as purchase traffic. The route of modern service traffic consists of both fixed stops and call-to-call operations between stops. This operating model enables a door-to-door service, for example directly to the courtyards of sheltered and/or residential housing complexes inhabited by the elderly etc.,. Service transport can only be ordered by telephone, which is a useful feature for those persons not equipped with an internet-capable mobile device. Service transport can also be part of a travel service centre, in which case the travel service centre also uses the capacity provided by the other service lines. National calculations have shown that service transport is a cost-effective way to increase the affordability of transport and at the same time generate savings for the public sector. Experience in small and medium-sized cities has shown that the automated service line makes it possible to drive the majority, about 90 % of journeys - paid for by the city – as public transport journeys. This is a cost-efficient way to increase affordability while retaining flexibility.

In Greece, measures have been implemented to improve socioeconomic conditions and promote the **solidarity of island territories, particularly for remote insular regions** that were severely impacted by the economic recession. The **Island Transport Equivalent** aims to improve the access and growth potential of islands as well as their

²⁷⁹ Deutsche Bahn (2022), *9-Euro-Ticket* [Online]. Available online: <https://www.bahn.com/en/offers/regional/9-euro-ticket-en> [Accessed 2 August 2022].

quality of life and allure. This measure equates the cost of transporting passengers and goods by sea and air with the cost that would apply to land transport. Beneficiary permanent residents of the islands can use the Unique Islander Number (MAN) when issuing their tickets, to be financed by the difference in transportation costs.

Other – Monitoring and evaluation

In Sweden, there is **regular and effective evaluation** for the progress towards the national transport goals, ensuring real time monitoring and expert feedback.

Water and sanitation

Affordability – Reduced tariffs

In Belgium, the Flemish **social tariff** and the Brussels' and Wallonia's **Social Water Funds** can be considered as a good practice to support people who need financial help to pay for their water bills, and to make sure as many people as possible have access to water in Belgium. In addition, Flanders and Wallonia have helped the households living in these regions with a **one-time payment** during the COVID-19 emergency situation.

In Denmark, the **'rest in itself' principle** ensures that revenues and costs of water and sanitation must be balanced, and so profits must equal zero. This means that consumers do not pay more than the actual cost of the service. **Cooperation with social authorities** in case of non-payment was also highlighted.

In Finland, there were guidelines in place in 2011-2019 on water and wastewater, providing water-related information to **increase literacy on water issues**. Also, **fees for wastewater management and sanitation are similar** across Finland, regardless of whether households are in rural or urban areas.

In Greece, access to water is considered a fundamental human right and therefore local public water management authorities apply **tiered tariffs with low prices** in the first scales and offer social tariffs to vulnerable groups.

In Lithuania, the compensation for people on low incomes for cold water is considered to be a best practice. An important aspect related to the affordability of water and sanitation services is the **annual review of the price for drinking water and sanitation** carried out by the NERC, i.e. the price paid by consumers for water supply and wastewater treatment is determined according to the consumers' ability to pay and should not exceed 4 % of the average monthly household's income.

In Poland, the **reform of the process for setting tariffs for water and sewerage** has promoted access to this service. In particular, the institution of an independent central regulator, provides a better protection for the consumers against excessive tariffs that are not justified with robust calculation of costs.

Affordability – Automatic allocation of benefits

In France, **support for water and sanitation services is directly paid to beneficiaries** without them having to claim financial assistance. This increases take up and therefore effectiveness of the financial support measure in reaching the target population, as shown by the experiments of water allowances (directly paid to the recipient's bank account or the energy voucher which has a take-up rate of 80 %). Similarly, in Italy social bonuses for electricity, gas and water are **automatically granted** to family units who are entitled to them. This reduces bureaucratic costs and increases take-up.

In Italy, similar to energy, **social bonuses for water have been automatically granted** to households that are entitled to them since 2021.

Physical access

In Poland, the increasing popularity of **free-of-charge points providing access to drinking water in public space** is also considered as a best practice in this field.

Awareness and information

In Spain, Aguas de Barcelona provided the city with Solidarity Funds to guarantee access to the vulnerable. The **'A Porta' communication programme** is aimed at the most vulnerable groups and low-income households. It allows volunteers to visit potentially targeted people at their home to explain how to access social aid for water and sanitation supply.

Recognition of the right to drinking water or related obligations

In Sweden, the councils' **obligation to provide water when a collection of households exceeds a certain size**²⁸⁰ ensures that infrastructure access is always available. Costs to the households for connection are either none, or one-off levies.

Along similar lines, the inclusion of the **right to drinking water** in the Constitution in Slovenia sets a direction for further legislative activities with respect to access to water. Based on Article 70a, water resources in Slovenia shall be as a priority used to supply the population with drinking water and water for household use. In this respect water shall not be a market commodity. Moreover, such supply shall be ensured by the state through self-governing local communities directly and on a not-for-profit basis.

²⁸⁰ No firm guideline is in place on what counts as a significant context' in which this needs to be provided, but qualitative evidence indicates that it generally is ca. 20-30 households.

8. Conclusions

This report has combined quantitative and qualitative evidence to assess the levels of access to six essential services in the EU (digital communications, energy, financial services, transport, water and sanitation). In doing so, it has considered policy developments since the proclamation of the EPSR in 2017; individual and structural barriers to access; drivers of greater access; the main measures in place to increase access; and good practices in place in EU Member States.

The evidence gathered is synthesised in this section to answer five main questions:

- What are the **main drivers to greater essential services access and barriers to access** in EU Member States?
- What are the **main measures in place to support increased access**, and how can these be clustered?
- What are the **most efficient strategies and measures in supporting greater access**?
- What **good practices** can be highlighted based on the survey of measures in place in the EU Member States?
- Based on the findings of the report, what **avenues for future research** can be identified?

8.1. Assessment of main drivers and barriers

Barriers (individual and structural)

Section 6 discussed the barriers and drivers identified in EU Member States based on the national reports and the analysis of microdata. Some barriers are identified throughout and should be highlighted as cross-cutting themes before being further discussed below.

Of the individual barriers, the consequently most-identified ones are **being at risk of poverty or having a low income, being in a household with very low work intensity and being homeless or lacking a fixed address**. Except in some circumstances, the essential services listed in Principle 20 of the EPSR require payment and/or a home in which the service can be accessed²⁸¹: those who are either not able to pay, or do not have a fixed abode, face an upfront barrier to access.

Another cross-cutting theme is that **‘essential services’ generally are not understood and treated as a unified category in EU Member States**; ‘access’ and ‘affordability’ are also generally not systematically defined. The **absence of clear and operational definitions at EU level** means that there is no clear monitoring mechanism of how Member States approach the issue, and what qualifies as a requisite level of service in different Member States. One exception to this conclusion is for financial services, where the PAD *de facto* acts as a measure to ensure access to basic bank accounts (even if this is generally not formulated in the language of *essential services* specifically).

While these are cross-cutting themes, there are also a number of risks that apply to one or a few services. As discussed in the report, policy-making requires an identification of **how risk groups overlap**, and how similar risks may lead to (non-)access to services.

²⁸¹ Due to the nature of the phenomenon, it is fair to assume that poverty and low income is widespread among the homeless population. However, they are likely to be absent from conventional surveys and datasets as they are more difficult to reach: therefore, while the two risk groups can be considered to some extent overlapping, any cited numbers of households at poverty risk should not be interpreted as including homeless individuals.

The findings on how these barriers relate to each other are thus presented in Table 28 and further discussed below.

Table 28 – Summary of main barriers for the essential services listed in the EPSR

	Digital comms.	Energy	Financial services	Transport	Water and sanitation
<i>Individual barriers</i>					
Poverty risk or low income	X	X	/	X	X
Homelessness	X	X	X	X	X
Physical access	X			X	
Lack of skills or literacy	X		X		
Lack of required device or equipment	X		X	X	
<i>Structural and other barriers</i>					
No definitions of 'essential service'	X	X	/	X	X
Rural location	X	X	/	X	/
Low-quality housing	/	X			X
Price volatility		X			
Gaps in legal provision			X	/	
Lack of or distance to infrastructure			X	X	/
Fragmentation of service provision				X	

Source: Milieu elaboration based on national reports.

Note: 'X' indicates services where the barrier is directly relevant. '/' indicates services where the barrier is partly relevant, as elaborated further on in the remainder of this section.

8.1.1. Individual barriers

Poverty risk or low income

Throughout the study and the national research, the main barrier identified was **being at poverty risk or having a low household income**: as households need to pay to access services (and in some cases, to acquire them in the first place), a lack of financial

resources presents the most clear-cut barrier in terms of essential services' **affordability**.

The analysis of microdata furthermore showed that households at risk of poverty were at higher risk of not having access to a personal internet connection at home; not being able to adequately heat their home; having been in arrears of utility bills in the past 12 months; and not having access to a toilet or shower for own use (although this affected only a few households to begin with)²⁸². Moreover, households with the lowest incomes are also spending disproportionately more on transport, relative to households at the top of the income distribution²⁸³.

This barrier affects **all essential services** to some extent. It should, however, be noted that Article 18 of the PAD requires that basic banking accounts are provided 'free of charge or for a reasonable fee'; while not all EU Member States have made clear what counts as 'reasonable' in this context, it does provide some protection for low-income individuals in ensuring that they can access financial services.

It should, however, be noted that while low-income and at-risk-of-poverty households are at greater risk of not being able to access essential services, **not all low-income households are vulnerable**. There are several circumstances where these households may in fact not face access issues:

- Protections are in place to protect these households: for instance, in cases where EU Member States do not allow for or recommend disconnections from water or electricity due to non-payment, or through subsidised tariffs.
- The household has no need for the service. Examples of this are e.g. if there is no interest in accessing internet in the household, whether they could afford it or not²⁸⁴; another circumstance could be rural households who have water access through their own well, and hence do not have to pay municipal levies to access water in the home.
- As discussed extensively in the report, a number of factors affect whether a household faces access issues with regard to transport. Here, transport need and access overall appear to be more significant access barriers, although pricing nevertheless also plays a role.

Additionally, it is important to recall that **low-income households are not the only vulnerable group**. In terms of non-economic issues such as a physical access or lacking required skills, individuals higher up in the income distribution are also vulnerable. Furthermore, it is worth noting that the increases in energy prices during and following the 2021/2022 heating season have strained the finances of not only low-income, but also many middle-income households.

Physical access

Individuals with disabilities or conditions may face **physical access barriers** in interacting with essential services. This includes physical barriers for those who struggle with physical movement, but also for those with e.g. an impaired sense of sight or hearing.

Based on the desk research and national reports, this mainly applies to two services. In the case of **public transport**, special adaptations are required to ensure that vehicles

²⁸² Cf. Chapter 5.

²⁸³ Cf. Table 21 in Section 6.2.

²⁸⁴ In 2020, 45 % of households without internet access at home listed this as their reason, against 23 % who say that costs are too high; cf. Eurostat (2022f), *Reasons for not having internet access at home [TIN00026]* [Online]. Available online: <https://ec.europa.eu/eurostat/databrowser/view/tin00026/> [Accessed 19 August 2022].

are physically accessible for those with movement issues, but also that stations and platforms are navigable by individuals who may have, for example, decreased or impaired vision, hearing, or other conditions²⁸⁵.

The barrier also applies to **digital communications**, where providers need to ensure that websites, applications and user interfaces are adapted to individuals with these or other conditions. This in turn has knock-on effects for other services, as both utility providers and financial services institutions increasingly provide their services through digital interfaces.

While this is mainly a matter of access, there is – at least in the case of transport – also an affordability link: in the absence of accessible public transport, individuals with transport needs will need to arrange their own transport services. Where friends and family members are not available to assist with this, additional costs may be incurred through e.g. taxi services. Some Member States have paratransit and on-demand transport services available to assist individuals if they qualify for this assistance, but coverage and availability vary significantly both between and within Member States.

Lack of required skills

Some essential services require background knowledge or skills to fully access them, meaning that **a lack of required skills or literacy with regard to the service** presents a barrier. This can lead to a situation where an individual is physically and financially able to access a service, but a lack of knowledge about rules, rights or operative functioning nevertheless means that they cannot fully reap the benefits of the service.

The research found this to be a recurring barrier for two services in particular. For **financial services**, the concept of ‘financial literacy’ refers to knowledge of how financial products work and compare with each other; being able to adjust one’s spending and behaviour to match the financial situation; and being able to plan one’s finances long-term²⁸⁶. With the PAD at least technically guaranteeing that all should be able to access basic bank accounts (although, as this report has discussed, this is always not the case in Member States) financial literacy presents arguably the most significant barrier to accessing financial services.

Digital literacy is similarly important to be able to access services relating to **digital communications**²⁸⁷. This applies both to knowing how to operate access devices – i.e. smartphones, laptops or computers – and the software they use. There is also an aspect of being able to solve problems and keeping up to date with new technology as it arrives. Based on the DESI index, groups that lack at least basic digital skills are often older (aged 55 or above); many are also inactive in the labour market, and skills are overall lower in rural areas than urban areas²⁸⁸.

Lack of required device or equipment

In a few cases, **lacking the required equipment means that a household cannot access a service**. This is most apparently the case for **digital communications** where households need to acquire equipment such as routers, modems²⁸⁹, computers and

²⁸⁵ The microdata analysis also shows that households with at least one disabled member tend to spend less on public transport services, hinting at potential bottlenecks (see Section 6.2).

²⁸⁶ OECD (2020d).

²⁸⁷ As in the case of physical accessibility barriers, the issue of digital literacy also applies to other services that are accessed through various forms of digital interfaces.

²⁸⁸ European Commission (2020).

²⁸⁹ It should be noted that the cost of routers and modems will vary significantly between Member States and providers, and may in some cases be either included, or refunded upon closing of the account. It has not been possible to map to what extent different practices are in force in this regard, either in individual Member States or the EU at large.

smartphones in order to access the internet – this in addition to running costs and monthly bills. Households with low income, and to a smaller extent those lacking digital skills to navigate different types of equipment, may face affordability barriers where such an upfront investment is required. Where there is a low availability of physical bank branches and ATMs and banking has largely moved to a digital service, this also presents an access problem for **financial services**.

To an extent, households may also experience this barrier in relation to **transport** and whether they own a car. This is a less clear-cut access issue than for digital communications; however, for many households, alternative means of transport are available even if they do not have a personal vehicle available. However, in cases where public transport is not accessible for whatever reason – high cost, too long distance to public transport stop, lack of appropriate destination, or infrequency of departures – a car may be ‘required equipment’, depending on the household’s travel needs. In cases where a household requires a car but faces financial hardship either because of or prior to its acquisition, a situation of ‘forced car ownership’ may occur, where a household has to choose between lacking transport means or experiencing poverty risk²⁹⁰.

Homelessness or having no fixed abode

Those who are **homeless or lack a fixed address are one of the most significantly affected populations at risk**, as they are likely to struggle to access *any* of the six services. Apart from transport, all services tend to require a dwelling (in the case of the four household-bound services of digital communications, energy, water, and sanitation) or at least an address (in the case of any accounts that require billing, and generally also in the case of bank accounts). Homeless people are also often more difficult for social services to reach, meaning that they may miss out on assistance that otherwise is available to them.

8.1.2. Structural or other barriers

Lacking a clear governance framework or definition for ‘essential services’

The mapping of barriers through the national reports indicates that in almost all cases, **there are no national definitions in place for essential services**, and the way they are conceptualised in Principle 20 of the EPSR does not appear to have translated to national policymaking or discourse.

This is to some extent expected, as EU-level work on access to essential services remains at a relatively early stage and no EU-wide definitions or frameworks are in place for Member States to adopt. Nevertheless, this entails arguably the biggest structural barrier to increasing access to essential services: they are not present in national discourse, and there are currently no EU-level instruments requiring them to develop tools and indicators to address the issue. The lack of definitions of what characterises not just an ‘essential service’ but also ‘affordability’ increases the fragmentation in the EU, as national conceptions may differ significantly (cf. Sections 4.2 and 4.3).

In the absence of common definitions there is no structured monitoring or evaluation of existing policy frameworks, and no clearly defined indicators of access or affordability. It also means that there is no organised effort at EU-level to coordinate statistics and data gathering: while there are some relevant indicators available through the EU-SILC and

²⁹⁰ Mattioli (2017).

ICT surveys²⁹¹ these are not generally framed as essential services *per se*. Indicators are also lacking in these datasets for financial services and transport.

This barrier affects **all essential services** to some extent, although some monitoring structures are in place for financial services as Article 21 of the PAD requires monitoring of its application from national competent authorities.

Living in a rural location and/or prohibitive distance to infrastructure

For many of the services discussed in this report, **rural areas** risk being underserved by essential services. It should be noted upfront that this demographic category includes a wide range of households and circumstances. Much of the rural population in the EU is not necessarily at risk of poverty, and local living costs can be lower than in urban areas. Living in a rural area is therefore not on its own a risk factor. Nevertheless, there are circumstances which can overall decrease the availability of services due to a more sparsely distributed population or living in a more remote area.

This applies to a various extent for **all essential services**. In the case of **financial services**, it applies mainly to accessing physical bank offices and cash machines, which require a trip to a nearby urban area; however, in most Member States banks have cut down their presence in rural areas, decreasing access further. For households with low digital skills such as older individuals (themselves over-represented in many rural areas²⁹²), this can entail a significant access problem.

Access to public **transport** is complicated in sparsely populated areas for several reasons. First, it makes it more difficult to plan routes that serve the whole population of the area while also maintaining a sufficient customer base to maintain profitability²⁹³. Where routes exist, departures throughout the day are often few, and with a limited number of end destinations. Where public transport systems are fragmented or poorly linked, this may mean that for some individuals, even accessible public transport services are unable to take them to their destination in a reasonable time. These claims were corroborated by the microdata analysis that showed that households living in rural areas tend to spend less on public transport, compared to those in urban areas, hinting at potential bottlenecks in the public transport system (see Section 6.3).

Household-based services such as **energy** and **digital communications** also face difficulties in serving consumers in rural areas as infrastructure is more spread out. This means that, for example, in the case of disruptions or power cuts, it takes longer for the operator to locate the issue and ensure that it has been addressed for all households. Likewise, living in more remote areas can lead to new infrastructure arriving significantly later than in urban areas. This can be illustrated by the fact that in 2021, only 59 % of rural households had access to high-speed internet (above 30 Mbit/s), compared to the EU average of 87 %²⁹⁴. Some Member States have specific support in place to alleviate the costs households may face in accessing new infrastructure, but access is nevertheless more difficult than in built-up areas.

Based on the national research, it appears that **these problems are generally less severe for water and sanitation**. Here too, households will generally not be connected

²⁹¹ These are summarised in Table 4 and Table 5 in Section 2.3.

²⁹² Eurostat (2021a), 'Eurostat Regional Yearbook: 2021 edition', Publications Office of the European Union, Luxembourg, p. 26. Available online: <https://op.europa.eu/en/publication-detail/-/publication/b95b8f93-227b-11ec-bd8e-01aa75ed71a1/language-en>.

²⁹³ Furthermore, as public transport operators in many cases are private companies contracted through public procurement, a requirement of a certain level of profitability is often required for the maintenance of the service. The ability of local or regional government to add additional funds may therefore be limited, depending on the circumstances and regulations.

²⁹⁴ Communication COM(2021) 345 final.

to municipal infrastructure such as water mains and sewage systems if they are located too far away from other collections of dwellings. Instead, they generally rely on having their own wells and septic tanks. Specific access issues were only identified for a few countries based on analysis of EU-SILC data²⁹⁵.

Low-quality housing

For the household-bound services of **digital communications**, **energy**, and **water and sanitation**, the quality of housing can have a significant effect on both the quality of the service provided and the affordability of the service. Most notably, older housing may be worse insulated, leading to energy waste and higher energy bills. It was also reported in some Member States that old water mains had an adverse effect on water quality due to metals leaking into the water. To a slightly lesser extent, housing quality can also affect quality of digital communications, with some dwellings having worse connections due to e.g. thick walls or interference.

Some Member States use policy measures such as tax deductions, renovation cheques or other subsidies to encourage individuals to renovate their dwellings to be more energy effective, thus saving on costs and improving quality. However, these measures are often not targeted at the neediest households and tend to require up-front investment that may not be available to many. Additionally, not all individuals can renovate their housing: notably, renters are not generally able to make structural adjustments or renovations of the buildings in which they live.

Price volatility

The 2021/2022 heating season and subsequently the Russian war in Ukraine has led to increased energy prices in most of Europe, with significant consequences for households' energy bills. While much of this phenomenon falls outside of the time scope of this study, enduring **energy price volatility** appears likely to keep straining household finances and affect the affordability of **energy**. The negative impact of energy prices was also clear when looking at the quantitative data; an increase in the price of energy is associated with a sharp increase in the likelihood of not being able to adequately heat the home or have arrears on utility bills (see Section 6.2.1). While low-income households are the main group at risk of not being able to access essential services, this has also been shown to affect households in the middle of the income distribution.

In addition to widening the group at risk of not being able to afford adequate energy consumption in their home, this also presents a challenge in terms of policy measures: as many measures are targeted at low-income households, those in the middle of the income distribution may not be immediately eligible. There is a risk that significant additional resources are required from governments of various levels to address the increased living costs.

Gaps in legal provision

In some cases, it was identified that **existing laws and regulations are not always successful in reaching their aims of higher access to services**. This was particularly noticed in relation to **financial services** and the PAD: while transposed in all EU Member States and therefore technically guaranteeing low- or no-cost access to basic bank accounts, these provisions were found in several cases to conflict with other regulations, notably relating to money laundering. Where this occurs, increased ID requirements are in place to prevent financial crime and money laundering, but the requirements also

²⁹⁵ The highest rate of households at risk of poverty that lack access to own bath or shower in 2020 was found for Romania (56 %), Bulgaria (31 %), Latvia (25 %), Lithuania (24 %) and Estonia (16 %). In all other Member States the rate was below 10 %.

inadvertently target, for example, non-national applicants for bank accounts, who may not yet have access to the documentation required to prove their identity and their purpose of the account.

While a more dedicated survey may need to be carried out to identify in what Member States and instances this occurs, it nevertheless illustrates that laws and regulations can technically guarantee access to essential services, but their application falls short of the goal. To a smaller extent, a similar issue can be identified in relation to **transport** and paratransit or on-demand transport services for disabled individuals: in the Member States where this is in place, several national experts reported that availability of the service is de facto quite scarce.

This issue is interlinked with the lack of systematic monitoring of essential services with a view towards assessing access, as noted above. The lack of this data in most Member States means that it is difficult to identify the extent to which the identified policy measures are successful in reaching their goals and ensuring access.

Fragmentation of service provision

As **transport** is generally managed on a local or regional level, there is a risk of **fragmentation of service provision and governance** which may make reform difficult. This can for instance be the case where the transport needs of various subnational units vary significantly, and the governmental units are not equally able to sufficiently finance the service. Given the complexity of transport as a service and the lack of comparable data, some Member States may additionally find it difficult to assess where resources need to be directed.

8.1.3. Drivers of greater access and good practices

In addition to surveying barriers, the study has also considered **drivers of greater access to essential services**. These are to some extent related to the identified good practices (discussed further below in Section 8.3), but also take into account more general concepts.

More directly, the drivers tend to relate closely with the barriers discussed above: for instance, as a lack of systematic monitoring is found to be a barrier to ensuring access to essential services, improved monitoring is found to be a driver for greater access.

The main identified drivers are summarised in Table 29 and developed on further below.

Table 29 – Summary of drivers of greater access

	Digital comms.	Energy	Financial services	Transport	Water and sanitation
Systematic monitoring	X	X	X	X	X
'Automatic' allocation of benefits	X	X	X	X	X
Price caps	X	X			X
Measures to increase literacy and skills	X	/	X		

	Digital comms.	Energy	Financial services	Transport	Water and sanitation
Banning disconnection due to non-payment		X			X
Central funding for subnational investment	X	X		X	
Increased public infrastructure	X				X

Source: Milieu elaboration based on national reports.

Note: 'X' indicates services where the barrier is directly relevant. '/' indicates services where the barrier is partly relevant, as elaborated further on in the remainder of this section.

Systematic monitoring of policies and targets

As noted previously in this section, **systematic monitoring of policies and targets** ensures that governments can identify vulnerable populations and whether the policy measures address access issues. While the absence of EU-level definitions means that comparable monitoring across Member States is more difficult to come by, some Member States nevertheless have organised efforts to monitor policy performance. Generally, this is carried out by a government agency or associated organisation and may include information such as allocated versus spent budget; number of recipients; the demographic breakdown of recipients; and qualitative evidence based on the feedback of both caseworkers and recipients.

Bringing EU-level definitions – e.g. on how an essential service is defined, what counts as an affordable price to pay, and how access is to be conceptualised – would help Member State-level efforts to improve monitoring. However, their ability to do so will be determined in part by the institutional set-up and the data available to state institutions: factors which may make this more difficult include where registers which are not connected to each other, strict privacy rules preventing the linking of data or identification of recipients, and where benefit receipt is not tied to a social security number²⁹⁶.

This driver affects **all essential services**.

'Automatic' allocation of benefits

In addition to there being sufficient policy measures to ensure that individuals are able to access essential services, governments must also ensure that these benefits and support packages reach the intended recipients. Benefit non-takeup is a widely discussed topic in social policy literature, with causes ranging from administrative complexity, lack of knowledge of one's rights, and stigmatisation of benefit recipients²⁹⁷.

One way to improve benefit uptake is to **grant benefits automatically based on data already held**: most commonly this is linked to receipt of another benefit such as social assistance or guaranteed minimum income, old-age pension or child benefit. This means that households at risk of non-access receive the intended support without requiring application and evaluation.

²⁹⁶ While this entails an important aspect of benefit design, a survey of national data and register structures is beyond the scope of this study. It should however be borne in mind as a complicating factor when recommending action.

²⁹⁷ Goedemé and Janssens (2020).

As for the monitoring measures discussed above, Member States' ability to implement this will depend significantly on the structure and interlinking of their existing registers. However, some of this can likely be addressed by ensuring that the support measures are administered by the same department or agency as the 'qualifying' benefit.

This driver affects **all essential services**.

Price caps

The increase in **energy** prices in 2021/2022 has prompted a discussion in policy circles and some Member States on **price caps** as a means to reduce costs for end-users. This ensures that prices remain predictable for households, and that price shocks are absorbed by the government and state actors. Similar measures have been put in place in some Member States for **digital communications**, **water** and **sanitation**.

This acts as a driver towards greater access by ensuring that households avoid being caught unprepared by price increases which may strain their finances (severely, for the most needy households). However, implementation on a national level will depend on regulations relating to the free operation of the utilities market. In times of high wholesale prices (in the case of energy) or low supply (in the case of water in times of drought), the cost implications may also be significant for Member State governments. If the measure does not include targeting in some fashion, it may not be the most cost-efficient way of ensuring that at-risk households maintain access.

Measures to increase digital skills and financial literacy

In the case of **digital communications** and **financial services**, literacy and skills relating to the service were identified as a significant barrier to individuals accessing the services. To address this, some Member States offer **workshops, courses, or other tools** to increase digital skills and/or financial literacy. The exact design of these measures varies extensively with some being provided by subnational governmental levels through central funding, and others provided on the initiative of subnational government in collaboration with private actors such as banks.

To a smaller extent, this can also apply to **energy**: some Member States provide 'climate coaches' or 'energy advisers' in municipalities which can advise households on measures they may take to decrease their energy consumption – and implicitly save costs – and what support is available to them.

Banning disconnection due to non-payment

A last-resort measure to ensure service access is to **ban or heavily discourage disconnection from infrastructure due to non-payment**. Disconnection from **energy** or **water** can have severe consequences for households, and to avoid such a situation arising, some Member States have put in place measures to involve third parties to solve the situation. This can come in the form of, for example, contacting a municipally appointed debt adviser or through the operator getting into contact with social services and welfare authorities to ensure that the households can access help. While disconnection may still occur if the household is unwilling to cooperate or follow the guidance provided, this nevertheless entails an important measure to ensure access even when households may face economic strain.

Central funding to enable subnational investment

For services that are provided by subnational or private actors, or where there is significant regional disparity in both resources and the requirements of the service, **central funding can ensure that necessary investment is available to build out infrastructure in the whole country**. This notably applies to **transport**, where

subnational transport needs and costs differ significantly within most Member States, and **digital communications**, where expansion of new infrastructure such as high-speed internet may be unprofitable to private companies without subsidies. This is a way of counter-acting some of the disparities that may otherwise emerge between urban and more rural areas.

Increased public infrastructure

Homeless individuals and those without a fixed address rely more than any other group in society on the **availability of public infrastructure**. This particularly applies in the case of **water and sanitation**, with water fountains and (accessible) public lavatories filling an important function. This infrastructure is not only used by homeless individuals though: while all in the population may benefit from it, it is of particular use to groups such as parents with small children or those with disabilities.

To a lesser extent this also applies to **digital communications**, where public authorities such as local government or libraries may provide – cost-free or subsidised – public Wi-Fi connections for the benefit of inhabitants. For individuals who are unable to afford internet for personal use in the home, this is an important service.

8.2. Main measures to support increased access

There is **significant variation in the support available in different Member States**. While some rely primarily on general social support, others have in place policies that are more service-specific. Along these lines, three main clusters can be identified:

- Member States in which the main provision is through **general minimum income or social assistance benefits** which seek to cover living costs, but do not necessarily refer to essential services specifically;
- Member States that rely more on **measures specific to the different essential services**, either provided universally to at-risk groups (e.g. free or subsidised public transport passes for old-age pensioners), or through means-testing based on personal circumstances or income (e.g. fuel allowances or energy cheques); and
- Member States that have in place a **mix** of the two approaches.

Figure 15 below shows the mapping of these countries according to the three clusters. It should be noted that this clustering does not seek to identify a preferred approach, and that a systematic evaluation of the approaches and their effectiveness is not possible within the scope of this report. The figure should instead be read as an illustrative way of highlighting where there is a greater proportion of targeted policy measures, and where the emphasis is on more conventional welfare policy measures.

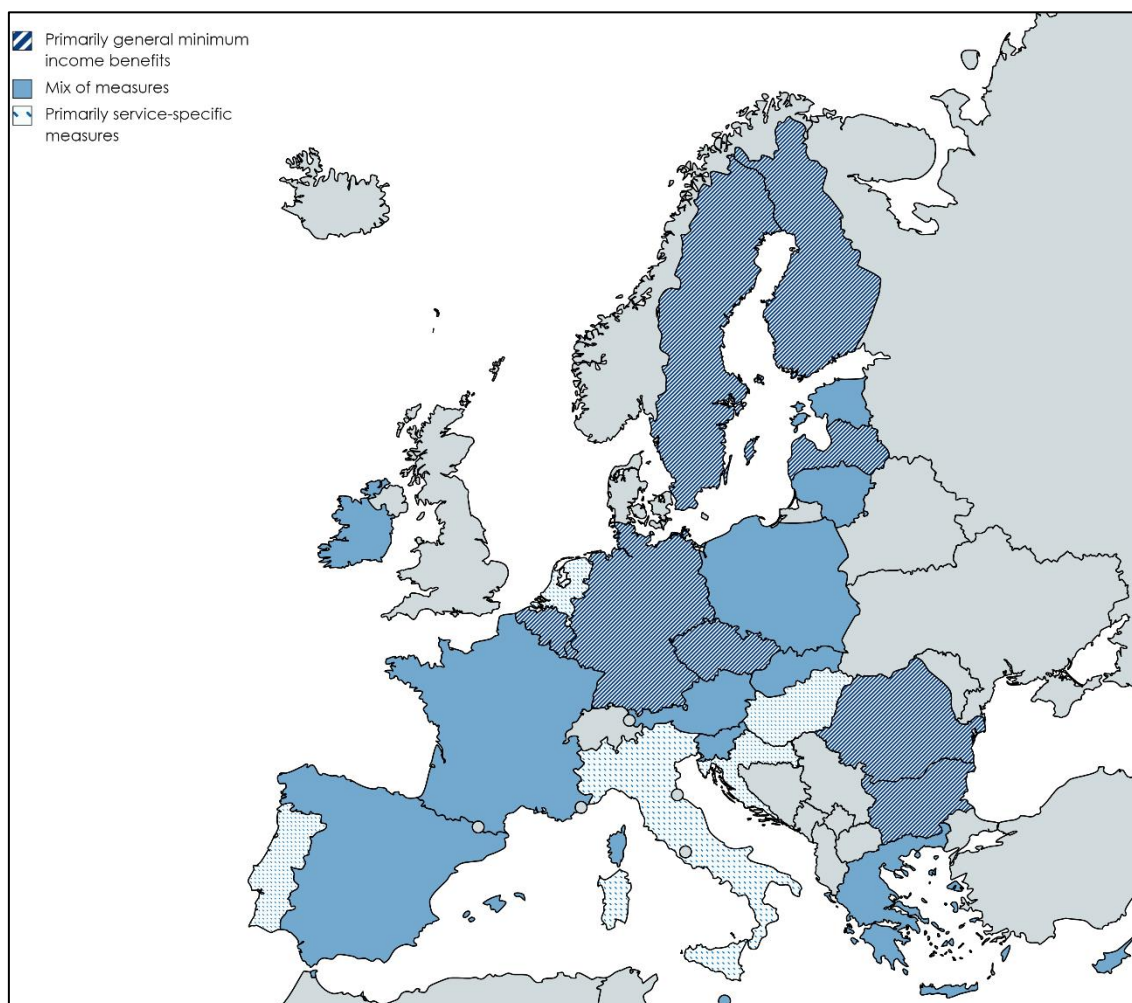
A primarily general approach is used in **Nordic countries** (Finland, Denmark and Sweden), where citizens are mainly supported via strong welfare services and social safety nets that are universal for all. More service-specific measures are, however, taken where barriers to access are more significant. For instance, those countries are particularly affected by the risk of energy poverty in rural areas, given their expansive and sparsely populated countryside, which also has higher heating needs during the colder months of the year. In this regard, Denmark for instance has in place national measures (e.g. Broadband Pool) that provide the infrastructure for citizens in rural areas to buy internet and mobile phone services.

On the opposite hand, **Mediterranean countries** (such as France, Italy, Portugal, Spain and Greece), have either primarily service-specific measures or a mix between general and specific social assistance. Italy and Portugal for instance tackle access to essential services primarily via service-specific measures, such as special tariffs and discounts, which to an extent are targeted towards low-income households. In countries such as

France and Spain, instead, both service-specific and general measures play an important role in supporting access to essential services for vulnerable groups.

Central and Eastern European countries are divided between a primarily general approach (e.g. Germany, Romania, Bulgaria, Czechia) and a mixed approach (e.g. Austria, Slovakia, Slovenia, Poland and some Baltic States). Similarly to Nordic countries, those with a primarily general approach support their citizens mainly via general social assistance or minimum income benefits. In Germany, for instance, the main social assistance benefit is made up of components which are notionally intended for the payment of a range of goods, including the six essential services discussed here.

Figure 15 – Mapping of countries according to policy measures in place



Source: Milieu elaboration based on national reports.

In terms of service specific policies, reduced tariffs are frequently used by Member States to increase access of low-income individuals or households and other vulnerable groups (see Table 30). Subsidies, costs reimbursements or tax rebates, together with cash benefits, are other common measures across Member States. Besides increasing access among low income or at risk of poverty households, those measures are also addressing other main barriers. In the realm of energy, water and sanitation, several policies aim to incentivise investments towards the improvement of the quality and efficiency of dwellings. In regard to digital communications, cash benefits have been used extensively to enable the purchase of IT equipment and installation or activation of an internet connection. In addition, training and educational programmes are also offered in conjunction with the IT tools (e.g. in Poland and Slovenia) with the aim of improving digital competences and facilitating usage and maintenance.

Table 30 - Policies and main barriers addressed

Policy type	Member States	Main barriers addressed
Digital communication		
Reduced tariffs	BE, BG, CY, EE, FR, HU, IT, MT, PT, SI	Poverty risk or low income Rural location
Cash benefits	FR, PL, SK, SI	Lack of skills or literacy Lack of required device or equipment
In-kind benefits	DK, HU, IT, LT, MT, PL, PT	Lack of required device or equipment
Provision of a basic supply	DK	Rural location
Subsidy / cost reimbursement / tax rebate	AT, EL, IT, SE	Poverty risk or low income Lack of required device or equipment
Energy		
Reduced tariffs	BE, CZ, EE, EL, IT, LT, MT, PT, ES	Poverty risk or low income Price volatility
Cash benefits	AT, BE, BG, CZ, FR, EL, IE, IT, LV, LU, SI	Poverty risk or low income Price volatility Low-quality housing
In-kind benefits	BG	Poverty risk or low income
Subsidy / cost reimbursement / tax rebate	BE, DK, EE, DE, HU, LT, NL, PL, RO, SE	Poverty risk or low income Price volatility
Financial services		
Reduced tariffs	All Member States	Poverty risk or low income
Transport		
Reduced tariffs	All Member States	Poverty risk or low income
Cash benefits	ES	Poverty risk or low income
In-kind benefits	ES	Poverty risk or low income
Subsidy / cost reimbursement / tax rebate	ES, IT, SK	Poverty risk or low income Physical access
Water and Sanitation		
Reduced tariffs	AT, BE, BG, HR, CY, FR, IT, PT, ES	Poverty risk or low income
Cash benefits	AT, BE, FR, ES	Poverty risk or low income Low-quality housing
In-kind benefits	IT	Poverty risk or low income
Provision of a basic supply	AT	Poverty risk or low income

Policy type	Member States	Main barriers addressed
Subsidy / cost reimbursement / tax rebate	CZ, FI, PL, RO	Poverty risk or low income Low quality housing

Source: Milieu elaboration based on national reports.

Most of the policy measures identified are structural and aim at offering continuous support. However, recent events, such as the COVID-19 pandemic or the recent spike in energy prices, called for temporary measures in order to alleviate the negative impacts. In the case of energy for instance, a number of Member States have opted for compensation schemes and tax rebates that mostly addressed all households without distinction. In regard to transport, some countries (such as Hungary) reduced public transport tariffs for essential workers during the COVID-19 pandemic. Lastly, in terms of digital communications, temporary measures were put in place to support households to cover the costs associated with working or studying from home (such as in-kind measures to provide free internet, laptops and mobile phones).

Turning to monitoring and evaluation, those are key practices when it comes to policy implementation, in that they facilitate accountability, transparency and provide insights on the progress towards achieving the targets. Specifically, systematic monitoring and evaluating ensures:

- **The efficient use of resources** by lowering the risk of wasting money on actions that do not tackle the real root causes of the issues, or targeting investments towards the most efficient and effective measures;
- **The identification of gaps** in implementation or areas for improvement, which facilitate prompt corrections when needed;
- **The understanding of whether the policy is fulfilling the targets** by systematically following the progress, which also holds government accountable for their actions and decisions.

According to the national reports, **Member States often do not have in place systematic monitoring**. It is therefore not possible to give insights on the effects and efficiency of the measures and on the extent to which they are improving access to the different services.

8.3. Identified good practices

In the course of the country research, national experts were asked to consider whether any good practices could be identified in their Member State. This research was based on a combination of the national experts' own knowledge, additional desk research, and input from national stakeholders interviewed throughout the project. The following criteria were prescribed in order to identify good practices:

- That the practice has been **demonstrated as effective in reaching its targets** of increased access to essential services;
- That the practice has been **demonstrated as efficient and sustainable from an economic perspective**; and
- Whether the practice is **easily transferable and adaptable to other EU countries and regions**.

Substantially, measures focusing on the drivers to greater access discussed in Section 8.1.3 can generally be considered good practices in at least some of these ways. However, the transferability of many of the measures may be limited depending on either

the resources or institutional set-ups of Member State services. Highlighted below are the practices which fulfil the criteria listed above. Note that Member State examples are illustrative and not exhaustive.

8.3.1. Support during and following the COVID-19 pandemic

The COVID-19 pandemic posed unprecedented challenges for the EU and elsewhere, with many Member States implementing partial or full lockdowns and restrictions on the movement of people. This had significant consequences for households, with many working from home during the pandemic. Additionally, with school closures in a number of Member States, many pupils and students undertook remote learning for part or all of the pandemic. This led to increased energy usage (and thus expenditure) and, in the case of remote work and schooling, requiring adequate equipment and internet connectivity.

Member States rolled out a number of **support measures to address the pressures faced by households in the pandemic**. While many of these were temporary, they nevertheless illustrated the ability of Member States to respond to issues of essential service affordability and access. The main support measures are summarised below.

Providing free smartphones or computers to pupils and students

The transition to remote learning presented a potentially difficult situation for households with low income who may not have adequate equipment available to ensure that their children are able to fully partake. To address this, Member States including Austria, Malta and Romania provided free laptops to students in need. Although not motivated solely by the pandemic, Italy and Malta also offer a 'digitalisation kits': in Italy this entails a one-year loan of a smartphone, laptop or desktop computer to households with at least one member in school or at university, while in Malta low-income households were offered free laptops and internet in an aim to bridge the digital divide.

Overall, this measure directly targets an affordability issue relating to equipment. As the measures are generally targeted at low-income households, the total costs are also generally not prohibitive for Member States.

Assistance with energy and internet bills

The increased use of internet and energy in the home during pandemic lockdowns and remote working presented yet another challenge for households. To address this, Hungary implemented a temporary measure to provide free internet access in remote learning households during school closures. Similar measures were in place in Portugal.

On the energy side, the national energy regulator of Cyprus was tasked with decreasing the electricity price by 10 % during the pandemic, evaluated every two months. Portugal also expanded the use of their social tariff to guarantee access for vulnerable households. During this period, disconnections due to non-payment were also not in practice in the two countries.

While in the longer-term measures such as these may carry a significant cost for governments, their use in emergency situations – or in response to hardship faced by specific categories of households – provides a direct response to access problems. However, this study has not surveyed the full extent of regulations surrounding the internet and energy markets in Member States, and it should not be ruled out that measures such as these may not be possible in all Member States.

8.3.2. Avoiding disconnections due to non-payment

As discussed in Section 8.1.3, many Member States tend to try to avoid disconnections of essential services due to non-payment, and instead refer households to debt advisers or social services to address affordability issues. This leads to a situation where public authorities may end up taking responsibility for households' non-ability to pay, and ensure that vital energy and water access is maintained. This measure has been implemented in several Member States in response to the COVID-19 pandemic and the 2021-2022 increase in energy prices, including in Belgium and Portugal for water, and Cyprus, France, Poland and Romania for energy. Taking this step ensured that supply can be maintained even in the face of a significant extraneous event.

While exact statistics have not been identified, the national research carried out in the course of this study generally indicates that disconnections due to non-payment are rare in the first place. It should therefore not be an insurmountable undertaking for Member State authorities to act as a form of guarantor in this instance, especially if assistance is provided in relation to social assistance or other welfare schemes which generally target the most economically vulnerable households. However, it is possible that Member States with less generous welfare states may require more work to organisationally set up such an arrangement.

8.3.3. Deductions and cheques for home improvement

If designed correctly, deductions and tax incentives for energy-saving home improvement can serve as a way to help households decrease their energy bills, thus contributing to affordability. Not all measures in this category are necessarily access-enhancing; however, in some cases they are designed in such a fashion that any home improvement or renovations require upfront investment and the availability of capital. This can lead to the measure not only being ineffective in expanding access, but also being socio-economically regressive by targeting subsidies at more well-off households.

However, there are instances where the allowances or subsidies specifically target groups that are in need of assistance. For instance, Austria has a measure which specifically aims to assist low-income private households to replace fossil fuel heating systems and shift to more sustainable and energy-efficient solutions. Ireland provides a similar benefit to households that qualify through being in receipt of other designated social benefits.

The cost of these interventions can vary significantly depending on, for example, the overall quality of housing in the Member State and the energy needs based on climate. If specifically directed at households that would otherwise lack the funds to make energy- and cost-saving interventions, the measure will be more financially sustainable than if targeted more broadly at all private homeowners.

8.3.4. Improvement of digital skills and financial literacy

Workshops, courses and resources are made available in some countries to target populations that may otherwise struggle to access or fully utilise digital communications and financial services²⁹⁸. While no evaluation has been made of how these interventions should be specifically designed in order to maximise the social benefits, they provide an important measure to assist groups such as old-age individuals or those far from the labour market. Where the measures are provided on a subnational basis with funding or assistance from the central government, regional disparities in the resources available

²⁹⁸ Several Member States have strategies in place to provide such training. Bulgaria, Estonia and Italy have strategies in place for financial services, while digital communications skills improvement is promoted in Belgium, Czechia, Estonia, Finland, France, Greece, Ireland, Latvia, Lithuania, Poland, Slovakia and Spain.

to municipalities and regions can also be overcome. In the long term this would not be expected to incur significant costs: digital skills in the EU are rising, and are generally high among younger population groups. With time, the measure may therefore become less needed.

8.3.5. Reduced and social tariffs

For all services, there are reduced tariffs in place in various Member States²⁹⁹. The target groups and extent of the rebate vary. For instance, reduced transport tariffs are generally targeted at socio-demographic groups such as old-age individuals or students, whereas social tariffs for digital communications, energy, water and sanitation apply to low-income households or those already in receipt of certain benefits. In the few Member States where the price of basic bank accounts are regulated by law (e.g. Austria), this reduced tariff applies to all who would acquire the bank account.

The efficiency and effectiveness of reduced tariffs can be discussed, and requires a deeper survey than is possible within the scope of this report. Factors such as the size of the target group, actual uptake, administrative costs of targeting and the make-up of other welfare measures all influence whether they are the most suitable measure to expand access. A core tension is found in the following: universal award of the tariff to a specific group (e.g. old-age individuals) avoids complicated and administratively arduous targeting, and should technically increase take-up as there is no risk of stigma. However, in doing so the award also benefits a number of individuals who are not in fact in economic need. Whether the cost of targeting outweighs the extra cost of expanding the benefit to potentially non-needing recipients is a matter for careful consideration.

8.4. Suggested future research

8.4.1. Implementation of EPSR Principle 20

Since the proclamation of the EPSR at the Gothenburg Summit in 2017, several measures have been adopted at different level of governance: EU, national, regional or local levels. However, national research undertaken in the context of this study has revealed that the enactment of the EPSR does not appear to have contributed to significantly elevating the debate in the public and political sphere regarding access to essential services.

Shared political commitment and responsibility to deliver on EPSR Principle 20

As underlined by the European Commission, delivering on the EPSR is a shared political commitment and responsibility of the EU institutions, national, regional, and local authorities and other stakeholders such as the civil society and trade unions³⁰⁰.

Further research is needed to enhance the governance of the implementation of the EPSR Principle 20 between the different decision-makers and other stakeholders at the EU, national, regional, and local levels. This entails understanding the causes of the weak appropriation of EPSR Principle 20 beyond EU institutions. This also implies the definition of a clear division of responsibilities among these above actors based on the identification of their respective competencies, resources, and means for intervention (e.g. financial and fiscal measures, non-financial measures including guidelines and

²⁹⁹ For a full summary of the results of this mapping, cf. Table 25 in Section 7.

³⁰⁰ <https://op.europa.eu/webpub/empl/european-pillar-of-social-rights/en/#chapter4>.

charters). Finally, it necessitates a clear appropriation of EPSR Principle 20 in broader national strategies on the fight against social exclusion and national recovery and resilience plans.

Appropriate policy-mix to deliver on EPSR Principle 20

The present study reveals the broad range of policy measures implemented at the national and regional levels to enhance affordability of the different essential services. These measures are of different types including reduced tariffs, cash benefits, in-kind benefits; the provision of a basic supply, as well as subsidy/cost reimbursement/tax rebate. These measures may be means-tested social assistance programmes targeted at low-income households, including components which are explicitly reserved for financing all or some essential services. They may also be categorical benefits based on socio-demographic traits, directly related to a particular service. In most cases, these categorical benefits are allocated not through income means-testing but from belonging to a certain group and specific.

Further research is needed to better understand the synergies (and potential non-complementarities) between these policy measures to ensure an effective and efficient policy-mix to deliver on EPSR Principle 20.

Monitoring and evaluation of individual policy measures

This study sheds some light on what the main policy measures in place to address issues of affordability to the different services are. However, it is silent on the efficiency and effectiveness of such policies, precisely due to the lack of monitoring and evaluation instruments in the vast majority of EU Member States.

Further research is needed in order to understand the extent to which these policy measures have been relevant for different vulnerable population groups as well as the extent to which they have been effective and efficient in achieving their objectives (e.g. reaching the right vulnerable groups. Finally, further research would be needed to identify the gaps and needs in monitoring and evaluation practices.

8.4.2. Service-specific research

Transport

This report already gives a flavour of what the vulnerable groups are when it comes to transport services. However, access to transport services is a multi-faceted concept, which goes beyond mere affordability issues, and requires the analysis of several sources of information. Further research could expand this concept in several directions: i) a clearer definition of vulnerable transport users and its measurement; ii) the identification of the appropriate measures to tackle transport access issues at different levels of governance, i.e. EU, national, regional and local; iii) the determinants, in particular socio-economic ones, to vulnerable transport users and impacts of access to transport on the achievement of broader objectives, including education and employment and the fight against social and gender inequality.

Energy

The EU Member States have been facing an unprecedented energy crisis following Russia's invasion of Ukraine, resulting in a soar of energy prices for businesses and households. Further research is needed to: i) understand the extent of these increasing energy prices on existing vulnerable population groups and potentially new at-risk ones; ii) the effectiveness and efficiency of temporary policy measures set at different levels of governance to mitigate these risks.

It should also be noted that indicators on monetary poverty (such as AROP), which are based on disposable income, do not take into account the purchasing power of households and the rise in prices, and would thus give a biased picture in a period of high inflation. Future research on this topic should thus look at indicators that include real standards of living or calculate the AROP indicator based on disposable income after expenses on essential goods and services, such as energy, food and transport.

8.4.3. Lack of data

To enable a deeper investigation of the affordability of and access to essential services in the EU, further data is needed. This report utilised microdata from Eurostat and showed that the variables that can be used to capture such issues are limited. For instance, no EU-SILC data was identified as proxy for access to financial services, and variables related to access to transport allow only for a broad understanding of the issues. The development of new indicators, and the extension and diversification in data collection, are needed to dig deeper into the issues of access to essential services. This will also allow a better monitoring and evaluation of the progress of policy measures towards the policy objectives and EPSR Principle 20.

List of sources

Legislation, regulations and government acts

- Council Directive 91/271/EEC concerning urban waste-water treatment (the Urban Waste-Water Treatment Directive UWWTD).
- Council of the European Union of 13 February 2019, Cohesion Policy Legislative Package 2021-2027 - Partial mandate for negotiations with the European Parliament', 6147/19 ADD 1.
- Communication COM(2001) 140 final from the Commission on eEurope 2002: Impact and Priorities.
- Communication COM(2002) 263 final from the Commission on eEurope 2005: An information society for all.
- Communication COM(2005) 229 final from the Commission on i2010 – A European Information Society for growth and employment.
- Communication COM(2007) 386 final from the Commission, Towards a European Charter on the Rights of Energy Consumers.
- Communication COM/2007/0551 final on the Commission Green Paper Towards a new culture for urban mobility.
- Communication COM(2009) 0490 final from the Commission on an Action Plan on Urban Mobility.
- Communication COM(2010) 245 final from the Commission on A Digital Agenda for Europe.
- Communication COM(2011) 144 final on the Commission White Paper on the Roadmap to a Single European Transport Area – Towards a competitive and resource efficient transport system.
- Communication COM(2015) 192 final from the Commission on A Digital Single Market Strategy for Europe.
- Communication COM/2015/080 final from the Commission on A Framework Strategy for a Resilient Energy Union with a Forward-Looking Climate Change Policy.
- Communication COM(2015) 339 final from the Commission on Delivering a New Deal for Energy Consumers.
- Communication COM/2015/0630 final on the Commission Green Paper on retail financial services Better products, more choice, and greater opportunities for consumers and businesses.
- Communication COM(2017) 250 final from the Commission on Establishing a European Pillar of Social Rights.
- Communication COM/2017/0139 final from the Commission on the Consumer Financial Services Action Plan: Better Products, More Choice.
- Communication COM/2018/293 final from the Commission on Sustainable Mobility for Europe: safe, connected, and clean.
- C(2020) 9600 final, Annex to the Commission Recommendation on energy poverty.
- Communication COM(2020) 591 final from the Commission on a Digital Finance Strategy for the EU.
- Recommendation (EU) 2020/1563 of 14 October 2020 on energy poverty.

- Communication COM(2021) 345 final from the Commission on a Long-term Vision for the EU's rural areas – Towards stronger, connected, resilient and prosperous rural areas by 2040.
- Communication COM/2021/142 final from the Commission on an EU strategy on the rights of the child.
- Communication COM/2021/660 final from the Commission on Tackling rising energy prices: a toolbox for action and support.
- Communication COM/2021/102 final from the Commission on the European Pillar of Social Rights Action Plan.
- Communication COM(2022) 108 final from the Commission on REPowerEU: Joint European Action for more affordable, secure and sustainable energy.
- Proposal COM(2021) 801 final for a Council Recommendation ensuring a fair transition towards climate neutrality.
- Proposal COM/2021/137 final for a Council Recommendation Establishing a European Child Guarantee.
- Proposal COM(2021) 568 final for a Regulation establishing a Social Climate Fund.
- Report COM(2020) 492 final from the Commission: Tenth report on the implementation status and programmes for implementation (as required by Article 17 of Council Directive 91/271/EEC, concerning urban waste water treatment).
- Council Directive 98/83/EC on the quality of water intended for human consumption (the Drinking Water Directive, DWD).
- Council Conclusions 11721/2/20 of 9 October 2020 on Strengthening Minimum Income Protection to Combat Poverty and Social Exclusion in the COVID-19 Pandemic and Beyond.
- Regulation (EU) No 531/2012 on roaming on public mobile communications networks within the Union.
- Regulation (EU) 2017/1953 amending Regulations (EU) No 1316/2013 and (EU) No 283/2014 as regards the promotion of internet connectivity in local communities.
- Directive 2000/60/EC establishing a framework for Community action in the field of water policy (the Water Framework Directive, WFD).
- Directive 2003/54/EC concerning common rules for the internal market in electricity.
- Directive 2003/55/EC concerning common rules for the internal market in natural gas.
- Directive 2009/72/EC concerning common rules for the internal market in electricity.
- Directive 2009/73/EC concerning common rules for the internal markets in natural gas.
- Directive 2009/110/EC on the taking up, pursuit and prudential supervision of the business of electronic money institutions.
- Directive 2010/31/EU on the energy performance of buildings.
- Directive 2012/27/EU on energy efficiency.
- Directive 2014/17/EU on credit agreements for consumers relating to residential immovable property.
- Directive 2014/65/EU on markets in financial instruments.
- Directive 2014/92/EU on the comparability of fees related to payment accounts, payment account switching and access to payment accounts with basic features ('the Payment Accounts Directive, PAD').

- Directive (EU) 2015/2366 on payment services in the internal market.
- Directive (EU) 2018/1972 establishing the European Electronic Communications Code (Recast).
- Directive (EU) 2019/944 on common rules for the internal market for electricity.
- Directive 2019/882 on the accessibility requirements for products and services.
- Directive (EU) 2020/2184 on the quality of water intended for human consumption.
- Directive 2022/22/EC on universal service and users' rights relating to electronic communications networks and services.
- Government Offices of Sweden (2022), 'Uppdrag att belysa tillståndsgivningen för färdtjänst', in Ministry of Infrastructure (ed.). Stockholm.
- Hungarian Government Act LXXXVI of 2007 on electricity.
- Hungarian Government Act XL of 2008 on the supply of gas.
- UN General Assembly Resolution A/RES/70/1 of 21 October 2015, Transforming our world: the 2030 Agenda for Sustainable Development.
- Romanian Law 196/2016 on the minimum inclusion income.
- Slovak Republic Ministry of the Interior (2021), *Stratégia pre rovnosť, inklúziu a participáciu Rómov do roku 2030* [Online]. Available online: <https://www.minv.sk/?strategia-pre-rovnost-inkluziu-a-participaciu-romov-do-roku-2030> [Accessed 1 September 2022].

Academic sources and grey literature

- Autorità Di Regolazione Per Energia Reti E Ambiente (Arera) (2022), *A quanto ammontano i bonus sociali* [Online]. Rome: ARERA. Available online: https://www.arera.it/it/consumatori/bonus_val.htm [Accessed 11 May 2022].
- Autorità Per Le Garanzie Nelle Comunicazioni (Agcom) (2020), *Agevolazioni per utenti a basso reddito* [Online]. Rome: AGCOM. Available online: <https://www.agcom.it/agevolazioni-per-il-servizio-universale> [Accessed 11 May 2022].
- Bank for International Settlements (2018), 'Implications of fintech developments for banks and bank supervisors', Bank for International Settlements, Basel. Available online: <https://www.bis.org/bcbs/publ/d431.pdf>.
- Baptista, I. & Marlier, E. (2020), 'Access to essential services for people on low incomes in Europe: An analysis of policies in 35 countries', European Social Policy Network (ESPN), Brussels, European Commission.
- Batsaikhan, U. & Demertzis, M. (2018), 'Financial literacy and inclusive growth in the European Union', *Bruegel Policy Contribution*, 08, 1-18. Available online: https://www.bruegel.org/wp-content/uploads/2018/05/PC-08_2018.pdf.
- Berry, A., Jouffe, Y., Coulombel, N. & Guivarch, C. (2016), 'Investigating fuel poverty in the transport sector: Toward a composite indicator of vulnerability', *Energy Research & Social Science*, 18, 7-20. Available online: <https://www.sciencedirect.com/science/article/abs/pii/S2214629616300123>.
- Bouzarovski, S. & Thomson, H. (2020), 'Towards an inclusive energy transition in the European Union', European Energy Poverty Observatory (EPOV), Brussels. Available online: <https://op.europa.eu/en/publication-detail/-/publication/4a440cf0-b5f5-11ea-bb7a-01aa75ed71a1/language-en>.

- Cantillon, B., Goedemé, T. & Hills, J. (eds.) (2019), *Decent Incomes for All: Improving Policies in Europe*, Oxford, Oxford University Press.
- Caradaica, M. (2021), 'Digital Divide in the European Union', *Politics and Knowledge: New Trends in Social Research - Proceedings of the 7th ACADEMOS Conference 2020*, Bucharest, SNSPA, 99-106. Available online: https://www.researchgate.net/publication/348365501_Digital_Divide_in_the_European_Union.
- Caritas (2019), 'Belgium Country Report: Access to services by vulnerable groups - barriers, obstacles and good practices', Caritas, Brussels. Available online: https://www.caritas.eu/wordpress/wp-content/uploads/2020/01/Caritas-Cares-Report-Belgium_singles.pdf.
- Central Bank of Sweden (Riksbanken) (2020), 'Payments in Sweden 2020', Stockholm, Riksbanken.
- Chzhen, Y. & Bradshaw, J. (2012), 'Lone parents, poverty and policy in the European Union', *Journal of European Social Policy*, 22(5), 487-506.
- Civitas (2016), 'Transport Poverty', *Civitas Thematic Policy Note*, European Commission, Brussels. Available online: https://civitas.eu/sites/default/files/civitas_policy_note_transport_poverty.pdf.
- Coady, D., Jahan, S., Matsumoto, R. & Shang, B. (2021), 'Guaranteed Minimum Income Schemes in Europe: Landscape and Design', *IMF Working Paper*, IMF, Washington, D.C.
- Cochez, N., Durieux, É. & Levy, D. (2015), 'Vulnérabilité énergétique: Loin des pôles urbains, chauffage et carburant pèsent fortement dans le budget', Institut national de la statistique et des études économiques (Insee), Paris. Available online: <https://www.insee.fr/fr/statistiques/fichier/version-html/1283764/ip1530.pdf>.
- Council of Europe Moneyval Committee (2021), 'Anti-money laundering and counter-terrorist financing measures: Malta', Committee of Experts on the Evaluation of Anti-Money Laundering Measures and the Financing of Terrorism (Moneyval), Strasbourg, Council of Europe.
- Council of the European Union (2021), *Lisbon Declaration on the European Platform on Combatting Homelessness*, Lisbon, Portuguese Presidency of the Council of the European Union.
- Criado Perez, C. (2019), *Invisible Women: Exposing Data Bias in a World Designed for Men*, London, Vintage.
- Danisman, G. O. & Tarazi, A. (2020), 'Financial Inclusion and Bank Stability: Evidence from Europe', *The European Journal of Finance*, 26(18), 1842-1855. Available online: https://www.researchgate.net/profile/Gamze-Danisman/publication/341626777_Financial_Inclusion_and_Bank_Stability_Evidence_from_Europe/links/5ecc55aa458515626ccc584e/Financial-Inclusion-and-Bank-Stability-Evidence-from-Europe.pdf.
- Datta, A., Bhatia, V., Noll, J. & Dixit, S. (2019), 'Bridging the Digital Divide: Challenges in Opening the Digital World to the Elderly, Poor, and Digitally Illiterate', *IEEE Consumer Electronics Magazine*, 8(1), 78-81. Available online: <https://ieeexplore.ieee.org/document/8570906/>.
- Deutsche Bahn (2022), *9-Euro-Ticket* [Online]. Available online: <https://www.bahn.com/en/offers/regional/9-euro-ticket-en> [Accessed 2 August 2022].

- Digital Success Programme (Digitális Jólét Program) (2022), *About Digital Success Programme* [Online]. Budapest: Ministry for Innovation and Technology. Available online: <https://digitalisjoletprogram.hu/en/about> [Accessed 11 May 2022].
- EDF (2021), 'EDF will no longer request that electricity be cut off to its residential customers', press release of 12 November 2021. Paris: EDF. Available: <https://www.edf.fr/sites/groupe/files/eypresspack/1927/46d73d5eefa09162d46a07a25e304eb3.pdf>.
- Eureau (2020), 'The governance of water services in Europe', EurEau, Brussels. Available online: <https://www.eureau.org/resources/publications/eureau-publications/5219-the-governance-of-water-services-in-europe-2020-edition>.
- Eurofound (2021), 'Distributional impacts of climate policies in Europe', Publications Office of the European Union, Luxembourg. Available online: https://www.eurofound.europa.eu/sites/default/files/ef_publication/field_ef_document/ef20037en.pdf.
- European Banking Authority (EBA) (2020), 'EBA report on financial education 2019/2020', EBA, Paris. Available online: [https://www.eba.europa.eu/sites/default/documents/files/document_library/Corner/Financial education/EBA Financial Education Report 2019-2020 - FINAL - Combined.pdf](https://www.eba.europa.eu/sites/default/documents/files/document_library/Corner/Financial%20education/EBA%20Financial%20Education%20Report%202019-2020-FINAL-Combined.pdf).
- European Banking Authority (EBA) (2021a), 'EBA Consumer trends report 2020/21', EBA, Paris. Available online: [https://www.eba.europa.eu/sites/default/documents/files/document_library/Publications/Reports/2021/963816/EBA Consumer trend report.pdf](https://www.eba.europa.eu/sites/default/documents/files/document_library/Publications/Reports/2021/963816/EBA_Consumer_trend_report.pdf).
- European Banking Authority (EBA) (2021b), 'Report on the use of digital platforms in the EU banking and payments sector', EBA/REP/2021/26, EBA, Paris.
- European Banking Federation (EBF) (2015), 'The digital transformation of banks and the Digital Single Market', *EBF Discussion Paper*, EBF, Brussels.
- European Banking Federation (EBF) (2021), 'Banking in Europe: EBF Facts & Figures 2021', EBF, Brussels.
- European Commission (2015), 'Vulnerable Consumer Working Group: Working Paper on Energy Poverty', European Commission (DG ENER), Brussels. Available online: [https://ec.europa.eu/energy/sites/ener/files/documents/Working Paper on Energy Poverty.pdf](https://ec.europa.eu/energy/sites/ener/files/documents/Working_Paper_on_Energy_Poverty.pdf).
- European Commission (2019a), 'Clean Energy for all Europeans', Luxembourg, Publications Office of the European Union.
- European Commission (2019b), 'Employment and social developments in Europe 2019 – Sustainable growth for all: choices for the future of Social Europe', European Commission (DG EMPL), Brussels.
- European Commission (2019c), 'Reflection Paper towards a Sustainable Europe by 2030', European Commission, Brussels. Available online: https://ec.europa.eu/info/sites/default/files/rp_sustainable_europe_30-01_en_web.pdf.
- European Commission (2019d), 'Transport in the European Union: Current Trends and Issues', European Commission (DG TRAN), Brussels.
- European Commission (2021a), *Affordable housing initiative* [Online]. Brussels: European Commission (DG GROW). Available online:

- https://ec.europa.eu/growth/sectors/proximity-and-social-economy/social-economy-eu/affordable-housing-initiative_en [Accessed 1 August 2022].
- European Commission (2021b), 'Employment and social developments in Europe 2021', European Commission (DG EMPL), Brussels. Available online: <https://ec.europa.eu/social/main.jsp?catId=738&langId=en&pubId=8402&furtherPubs=yes>.
- European Commission (2021c), 'European Pillar of Social Rights Action Plan', European Commission, Brussels.
- European Commission (2021d), 'European platform to combat homelessness is launched', press release of 21 June 2021. Brussels: European Commission. Available: https://ec.europa.eu/commission/presscorner/detail/en/IP_21_3044.
- European Commission (2021e), 'Questions and Answers: Commission Communication on Energy Prices', press release of 13 October 2021. Brussels: European Commission.
- European Commission (2021f), 'Study on EU payment accounts market: Final report', European Commission (DG FISMA), Brussels. Available online: <https://data.europa.eu/doi/10.2874/45634>.
- European Commission (2022a), *The Digital Economy and Society Index (DESI)* [Online]. Brussels: European Commission (DG CONNECT). Available online: <https://digital-strategy.ec.europa.eu/en/policies/desi> [Accessed 28 July 2022].
- European Commission (2022b), *Map: UN SDG 11.2.1 – Access to public transport* [Online]. Brussels: European Commission (DG REGIO). Available online: https://ec.europa.eu/regional_policy/mapapps/public_transport/sdg-city-accessibility.html [Accessed 21 January 2022].
- European Commission (2022c), *Social procurement: Updated guidance and awareness-raising to make socially-responsible purchases* [Online]. Brussels: European Commission. Available online: https://ec.europa.eu/info/policies/public-procurement/tools-public-buyers/social-procurement_en [Accessed 13 January 2022].
- European Parliament (2017), 'Gender perspective on access to energy in the EU: Study for the FEMM committee', PE 596.816, Brussels, European Parliament Directorate-General for Internal Policies. Available online: [https://www.europarl.europa.eu/RegData/etudes/STUD/2017/596816/IPOL_STU\(2017\)596816_EN.pdf](https://www.europarl.europa.eu/RegData/etudes/STUD/2017/596816/IPOL_STU(2017)596816_EN.pdf).
- Eurostat (2021a), 'Eurostat Regional Yearbook: 2021 edition', Publications Office of the European Union, Luxembourg. Available online: <https://op.europa.eu/en/publication-detail/-/publication/b95b8f93-227b-11ec-bd8e-01aa75ed71a1/language-en>.
- Eurostat (2022b), *European Union Statistics on Income and Living Conditions (EU-SILC)* [Online]. Luxembourg: European Commission. Available online: <https://ec.europa.eu/eurostat/web/microdata/european-union-statistics-on-income-and-living-conditions> [Accessed 28 July 2022].
- Falavigna, C. & Hernandez, D. (2016), 'Assessing inequalities on public transport affordability in two latin American cities: Montevideo (Uruguay) and Córdoba (Argentina)', *Transport Policy*, 45, 145-155. Available online: <https://www.sciencedirect.com/science/article/abs/pii/S0967070X15300548>.
- Feantsa (2022), *Resources database* [Online]. Brussels: FEANTSA. Available online: <https://www.feantsa.org/en/resources/resources-database> [Accessed 2 August 2022].

- Frazer, H. & Marlier, E. (2016), 'Minimum Income Schemes in Europe: A Study of National Policies 2015', European Social Policy Network (ESPN), Brussels, European Commission (DG EMPL).
- Gábos, A. & Tomka, Z. (2022), 'Developments in minimum income benefits levels in Europe', *EUROSHIP Working Paper*, Oslo, Oslo Metropolitan University.
- Goedemé, T. & Janssens, J. (2020), 'The concept and measurement of non-take-up: An overview, with a focus on the non-take-up of social benefits', *InGRID Deliverable 9.2*, KU Leuven, Leuven.
- Gómez-Lobo, A. (2011), 'Affordability of Public Transport: A Methodological Clarification', *Journal of Transport Economics and Policy*, 45(3), 437-456. Available online: <https://repositorio.uchile.cl/bitstream/handle/2250/143936/Affordability-of-Public.pdf?sequence=1&isAllowed=y>.
- Gouveia, J. P. & Palma, P. (2019), 'Harvesting big data from residential building energy performance certificates: retrofitting and climate change mitigation insights at a regional scale', *Environmental Research Letters*, 14(095007). Available online: <https://iopscience.iop.org/article/10.1088/1748-9326/ab3781>.
- Gouveia, J. P., Palma, P. & Simoes, S. (2019), 'Energy poverty vulnerability index: A multidimensional tool to identify hotspots for local action', *Energy Reports*, 5, 187-201. Available online: <https://www.sciencedirect.com/science/article/pii/S2352484718303810>.
- Guyet, R. (2021), 'The impact of the energy price crisis on vulnerable households: a new test for EU unity?', *CIFE Policy Paper*, 123. Available online: [https://www.cife.eu/Ressources/FCK/files/publications/policy paper/2021/CIFE_PP_Guyet_Energy_Price_Crisis_December2021.pdf](https://www.cife.eu/Ressources/FCK/files/publications/policy%20paper/2021/CIFE_PP_Guyet_Energy_Price_Crisis_December2021.pdf).
- Halkos, G. E. & Gkampoura, E.-C. (2021), 'Coping with Energy Poverty: Measurements, Drivers, Impacts and Solutions', *Energies*, 14(10), 1-14. Available online: <https://www.mdpi.com/1996-1073/14/10/2807>.
- Hernández, D. & Bird, S. (2010), 'Energy Burden and the Need for Integrated Low-Income Housing and Energy Policy', *Poverty & Public Policy*, 2(4), 5-25.
- Hoffman, J. (2019), 'Implementation of the Payment Accounts Directive (PAD)', *ERA Forum*, 20(2), 237-248.
- Hübgen, S. (2018), '"Only a Husband Away from Poverty"? Lone Mothers' Poverty Risks in a European Comparison' in Bernardi, L. & Mortelmans, D. (eds.), *Lone Parenthood in the Life Course*, Cham, Springer.
- Hungarian National Institute of Environmental Health (2012), 'Ivóvíz kiskaté: Lakossági tájékoztató a gyakran ismételt kérdésekről', Budapest, Hungarian National Institute of Environmental Health.
- International Telecommunications Union (ITU) (2021), 'The affordability of ICT services: 2020', ITU, Geneva. Available online: https://www.itu.int/en/ITU-D/Statistics/Documents/publications/prices2020/ITU_A4AI_Price_Briefing_2020.pdf.
- Jorritsma, P., Berveling, J., De Haas, M., Bakker, P. & Harms, L. (2018), 'Mobiliteitsarmoede: vaag begrip of concreet probleem?', Kennisinstituut voor Mobiliteitsbeleid, Den Haag. Available online: <https://www.kimnet.nl/publicaties/rapporten/2018/10/31/mobiliteitsarmoede-vaag-begrip-of-concreet-probleem#:~:text=Of%20mobiliteitsarmoede%20in%20Nederland%20bestaat,wijzen%20die%20gebrekkige%20vervoersmogelijkheden%20hebben>.

- Kuivalainen, S. & Nelson, K. (2011), 'Eroding minimum income protection in the Nordic countries? Reassessing the Nordic model of social assistance' in Kvist, J. & Fritzell, J. (eds.), *Changing social equality: The Nordic welfare model in the 21st century*, Bristol, Policy Press.
- Lovelace, R. & Philips, I. (2014), 'The 'oil vulnerability' of commuter patterns: A case study from Yorkshire and the Humber, UK', *Geoforum*, 51, 169-182. Available online: <https://www.sciencedirect.com/science/article/abs/pii/S0016718513002480>.
- Lucas, K., Mattioli, G., Verlinghieri, E. & Guzman, A. (2016), 'Transport poverty and its adverse social consequences', *Transport*, 169(6), 353-365. Available online: <https://www.icevirtuallibrary.com/doi/10.1680/jtran.15.00073>.
- Mackett, R. (2014), 'Has the policy of concessionary bus travel for older people in Britain been successful?', *Case Studies for Transport Policy*, 2(2), 81-88. Available online: https://discovery.ucl.ac.uk/id/eprint/1443617/1/Mackett_B60%2526 CS in TP on concessionary travel.pdf.
- Magdalinski, E., Delair, M. & Pellerin-Carlin, T. (2021), 'Europe Needs a Political Strategy to End Energy Poverty', *Jacques Delors Energy Centre Policy Paper*, 259. Available online: https://institutdelors.eu/wp-content/uploads/2021/02/PP259_210202_Precarite-energetique_Magdalinski_EN.pdf.
- Mattioli, G. (2017), 'Forced Car Ownership' in the UK and Germany: Socio-Spatial Patterns and Potential Economic Stress Impacts', *Social Inclusion*, 5(4), 147-160. Available online: <https://www.cogitatiopress.com/socialinclusion/article/view/1081>.
- Mattioli, G., Lucas, K. & Marsden, G. (2017), 'Transport poverty and fuel poverty in the UK: From analogy to comparison', *Transport Policy*, 59, 93-105.
- Mattioli, G., Wadud, Z. & Lucas, K. (2018), 'Vulnerability to fuel price increases in the UK: A household level analysis', *Transportation Research Part A: Policy and Practice*, 113, 227-242. Available online: <https://www.sciencedirect.com/science/article/pii/S0965856417304731>.
- Minelgaite, A., Dagiliute, R. & Liobikiene, G. (2020), 'The Usage of Public Transport and Impact of Satisfaction in the European Union', *Sustainability*, 12(9154), 1-13. Available online: <https://www.mdpi.com/2071-1050/12/21/9154>.
- Negreiro, M. (2015), 'Bridging the digital divide in the EU', PE 573.884, European Parliamentary Research Service, Brussels. Available online: [https://www.europarl.europa.eu/RegData/etudes/BRIE/2015/573884/EPRS_BRI\(2015\)573884_EN.pdf](https://www.europarl.europa.eu/RegData/etudes/BRIE/2015/573884/EPRS_BRI(2015)573884_EN.pdf).
- Nicolas, J.-P., Vanco, F. & Verry, D. (2012), 'Mobilité quotidienne et vulnérabilité des ménages', *Revue d'Économie Régionale & Urbaine*, 2012/1, 19-44. Available online: <https://www.cairn.info/revue-d-economie-regionale-et-urbaine-2012-1-page-19.htm>.
- OECD (2001), 'Understanding the Digital Divide', OECD, Paris.
- OECD (2020a), 'Financial Consumer Protection Policy Approaches in the Digital Age: Protecting consumers' assets, data and privacy', OECD, Paris. Available online: <https://www.oecd.org/finance/Financial-Consumer-Protection-Policy-Approaches-in-the-Digital-Age.pdf>.
- OECD (2020b), 'Financing Water Supply, Sanitation and Flood Protection: Challenges in EU Member States and Policy Options', OECD, Paris. Available online:

<https://www.oecd.org/environment/financing-water-supply-sanitation-and-flood-protection-6893cdac-en.htm>.

- OECD (2020c), *HC3-1: Homeless population* [Online]. Paris: OECD. Available online: <https://www.oecd.org/housing/data/affordable-housing-database/housing-conditions.h> [Accessed 7 July 2022].
- OECD (2020d), 'OECD/INFE 2020 International Survey of Adult Financial Literacy', Paris, OECD. Available online: <https://www.oecd.org/financial/education/oecd-infe-2020-international-survey-of-adult-financial-literacy.pdf>.
- Paritätischer Wohlfahrtsverband (2020), 'Arm, abgehängt, ausgegrenzt: Eine Untersuchung zu Mangellagen eines Leben mit Hartz IV', Berlin, Paritätischer Wohlfahrtsverband.
- Penne, T., Hufkens, T., Goedemé, T. & Storms, B. (2020), 'To what extent do welfare states compensate for the cost of children? The joint impact of taxes, benefits and public goods and services', *Journal of European Social Policy*, 30(1), 79-94.
- Petrova, S. (2017), 'Encountering energy precarity: Geographies of fuel poverty among young adults in the UK', *Transactions of the Institute of British Geographers*, 43(1), 17-30. Available online: <https://rqs-ibg.onlinelibrary.wiley.com/doi/epdf/10.1111/tran.12196>.
- Poelman, H., Dijkstra, L. & Ackermans, L. (2020), 'How many people can you reach by public transport, bicycle or on foot in European cities?', *DG REGIO Working Papers*, WP 01/2020, European Commission (DG REGIO), Brussels. Available online: https://ec.europa.eu/regional_policy/sources/docgener/work/012020_low_carbon_urban.pdf.
- Ritchie, H., Roser, M., Mispy, J. & Ortiz-Ospina, E. (2018), *Measuring progress towards the Sustainable Development Goals – Target 11.2: Affordable and sustainable transport systems* [Online]. Oxford: Oxford Martin School. Available online: <https://sdg-tracker.org/cities#11.2> [Accessed 21 January 2022].
- Samek Lodovici, M. & Torchio, N. (2015), 'Social Inclusion in EU Public Transport', European Parliament (DG IPOL), Brussels.
- Sgaravatti, G., Tagliapietra, S. & Zachmann, G. (2022), *National policies to shield consumers from rising energy prices* [Online]. Brussels: Bruegel. Available online: <https://www.bruegel.org/dataset/national-policies-shield-consumers-rising-energy-prices> [Accessed 28 July 2022].
- Swedish Financial Supervisory Authority (*Finansinspektionen*) (2020), 'Redovisning av betalkontodirektivets genomförande i Sverige', Swedish Financial Supervisory Authority, Stockholm.
- The Federal Government of Germany (2021), 'Relief for electricity consumers', press release of 27 April 2022. Berlin: Press and Information Office of the Federal Government. Available: <https://www.bundesregierung.de/breg-en/news/renewable-energy-sources-act-levy-abolished-2011854>.
- Thema, J. & Vondung, F. (2020), 'EPOV Indicator Dashboard: Methodology Guidebook', Wuppertal Institut für Klima, Umwelt, Energie GmbH, Wuppertal. Available online: https://energy-poverty.ec.europa.eu/system/files/2021-09/epov_methodology_guidebook_1.pdf.
- Titheridge, H., Mackett, R., Christie, N., Oviedo Hernández, D. & Ye, R. (2014), 'Transport and poverty: A review of the evidence', University College London Transport Institute, London. Available online: <https://discovery.ucl.ac.uk/id/eprint/1470392/>.

- Transport Analysis (2019), 'Kartläggning av hinder i kollektivtrafiken för personer med funktionsnedsättning', Stockholm, Transport Analysis.
- Transport Analysis (2021), 'Transporternas ekonomiska överkomlighet – hur mäter vi det?', PM 2021:3, Stockholm, Transport Analysis.
- Ugarte, S., Van Der Ree, B., Voogt, M., Eichhammer, W., Ordoñez, J. A., Reuter, M., Schlomann, B., Lloret, P. & Villafáfila, R. (2016), 'Energy Efficiency for Low-Income Households', Brussels, European Parliament (DG IPOL).
- Van Deursen, A. & Helsper, E. (2021), 'Mediawijsheid: Conceptualisering en belang in een gemedieerde samenleving. Lacunes in bestaand onderzoek en beleid', Universiteit Twente, Enschede. Available online: <https://www.utwente.nl/en/centrefordigitalinclusion/Files/mediawijsheid-conceptualisering-en-belang-vandeursen-helsper.pdf>.
- Verry, D., Dy, K. & Nicolas, J.-P. (2017), 'Vulnérabilité énergétique et mobilité quotidienne : quelle mesure ?' in Dussud, F.-X., Lepoittevin, D. & Riedinger, N. (eds.), *Les ménages et la consommation d'énergie*, Paris, Ministère de l'Environnement, de l'Énergie et de la Mer.
- Von Platten, J. (2021), *Energy Poverty in Sweden* [Online]. ENGAGER COST Action. Available online: <https://www.eppedia.eu/article/energy-poverty-sweden> [Accessed 10 May 2022].
- Whitney, G., Hara, S. & Whitney, L. (2018), 'Study on risks and opportunities of digitalisation for financial inclusion', European Commission (DG FISMA), Brussels. Available online: https://ec.europa.eu/info/sites/default/files/business_economy_euro/banking_and_finance/documents/fsug-study-181001-digitalisation-financial-inclusion_en.pdf.
- World Bank (2014), 'Global Survey on Consumer Protection and Financial Literacy: Oversight Frameworks and Practices in 114 Economies', The World Bank, Washington, DC. Available online: <https://openknowledge.worldbank.org/bitstream/handle/10986/18978/887730WP0v20P10port0CPFL0Box385258B.pdf?sequence=1&isAllowed=y>.
- World Bank (2022), *The Global Findex Database 2021: Financial Inclusion, Digital Payments, and Resilience in the Age of COVID-19* [Online]. Washington, DC: The World Bank. Available online: <https://www.worldbank.org/en/publication/globalindex> [Accessed 28 July 2022].
- World Bank & International Monetary Fund (IMF) (2018), 'Romania Financial Sector Assessment', The World Bank, Washington, DC. Available online: <https://openknowledge.worldbank.org/bitstream/handle/10986/30221/128959-FSAP-P164039-PUBLIC-SecM2018-0237-002.pdf?sequence=1&isAllowed=y>.
- Wrigley, K. & Crawford, R. H. (2017), 'Identifying policy solutions for improving the energy efficiency of rental properties', *Energy Policy*, 108, 369-378.
- Zajac, A. (2016), 'City Accessible for Everyone – Improving Accessibility of Public Transport Using the Universal Design Concept', *Transportation Research Procedia*, 14, 1270-1276. Available online: <https://www.sciencedirect.com/science/article/pii/S2352146516302010>.

Statistics and data

- European Commission (2020), 'Digital Economy and Society Index (DESI) 2020: Human Capital', Brussels, European Commission.

- Eurostat (2021b), *Persons who cannot afford a personal car [ILC_MDDU05]* [Online]. Available online: https://ec.europa.eu/eurostat/databrowser/view/ilc_mddu05/default/table?lang=en [Accessed 19 January 2022].
- Eurostat (2021c), *Persons who cannot afford a regular use of public transport by age, sex and income group [ILC_MDES13A]* [Online]. Available online: https://appsso.eurostat.ec.europa.eu/nui/show.do?dataset=ilc_mdes13a&lang=en [Accessed 19 January 2022].
- Eurostat (2022a), *Electricity prices for household consumers - bi-annual data [NRG_PC_204]* [Online]. Available online: https://ec.europa.eu/eurostat/web/products-datasets/-/NRG_PC_204 [Accessed 7 September 2022].
- Eurostat (2022c), *Final consumption expenditure of households by consumption purpose (COICOP 3 digit) [nama_10_co3_p3]* [Online]. Available online: https://appsso.eurostat.ec.europa.eu/nui/show.do?dataset=nama_10_co3_p3&lang=en [Accessed 14 January 2022].
- Eurostat (2022d), *Population connected to public water supply [ENV_WAT_POP]* [Online]. Available online: https://ec.europa.eu/eurostat/databrowser/view/env_wat_pop/default/table?lang=en [Accessed 19 August 2022].
- Eurostat (2022e), *Population connected to urban wastewater collecting and treatment systems, by treatment level [TEN00020]* [Online]. Available online: <https://ec.europa.eu/eurostat/databrowser/view/ten00020/default/table?lang=en> [Accessed 19 August 2022].
- Eurostat (2022f), *Reasons for not having internet access at home [TIN00026]* [Online]. Available online: <https://ec.europa.eu/eurostat/databrowser/view/tin00026/> [Accessed 19 August 2022].

Uncategorized References

- Simcock, N., Jenkins, K., Lacey-Barnacle, M., Martiskainen, M., Mattioli, G. & Hopkins, D. (2021), 'Identifying double energy vulnerability: A systematic and narrative review of groups at-risk of energy and transport poverty in the global North', *Energy Research & Social Science*, 82(102351). Available online: <https://www.sciencedirect.com/science/article/pii/S2214629621004424?via%3Dihub>.

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Annex A: National research template

NATIONAL RESEARCH TEMPLATE – INFORMATION TO COLLECT

Introduction and overview

Main policy developments

- *Please provide a brief overview of the evolution of the policy developments surrounding the access to the essential services listed in principle 20 of the EPSR and other essential services beyond this list over the past decade, including in response to the COVID-19 pandemic and the growing importance and acceleration of the green and digital transitions.*
- *Please discuss how/whether the enactment (i.e. publication) of the EPSR at the EU level in 2017 has contributed to elevating the debate in the public and political sphere in your country regarding access to essential services.*
- *Please specify how such policy developments have concerned specific groups of population in need (e.g. low-income people, Roma, refugees, homeless population)*

Main influencing stakeholders

- *Where possible, please identify key stakeholders (e.g. NGOs, public authorities, service operators, consumer organisations) who have been instrumental in encouraging public action to promote access to essential services for populations in need, and to specify which type of essential service is covered.*

Legal and policy framework for each of the essential services

- *(To be repeated for each essential service)*

A right to access essential services

Governance of the access to essential services

- *(To be repeated for each essential service)*
- *Please identify whether there are clear national and regional strategies towards supporting the access (affordability) to the essential services listed in principle 20 of the EPSR and other services considered as essential in your country. If not, please describe if there are plans to develop a national/regional strategy.*
- *If such strategies exist, please explain briefly when they have been formulated, what their rationale is, what their overarching goals and (quantitative) objectives are, and what the scope (in terms of essential services) of these strategies is. You should cover the period 2017-2021.*
- *If such strategies exist, please identify the organisations at the national/regional level in charge of formulating and implementing them. Have they been changed from 2017 to 2021?*
- *If such strategies exist, please identify whether these strategies are based on formal needs assessments? Has the size of the problem been properly defined through quantitative indicators (e.g. population affected)? If so, which indicators and data have been used?*
- *If such strategies exist, please identify whether they have been evaluated on a regular basis using both qualitative and quantitative information and how they are monitored using quantitative indicators. If they have been monitored and/or evaluated, what have*

been the results?

- *Precise references to such strategies, covered population (i.e. vulnerable population/population in need such as low-income groups, migrants/refugees, Roma, homeless population), evaluation/monitoring plans, and indicators (including their sources) should be provided, if they exist.*
- *If there are no clear national/regional strategies towards supporting the affordability of the essential services listed in principle 20 of the EPSR and other services considered as essential in your country, please identify whether other strategies have focused on alternative dimensions of access to essential services such as accessibility, adequacy (quality), availability, etc.*
- *'Accessibility' covers 'distance', 'physical access', 'knowledge/ skills'. 'Availability' covers 'infrastructure' and 'equipment'.*

Definition of the 'essential services'

- *(To be repeated for each essential service)*
- *Please explain how each of the six essential services listed in principle 20 of the EPSR and other services considered as essential are currently defined at the national/regional level in your country. You should identify whether these services are defined through national or regional regulation (e.g. legislation including the Constitution, binding directives, decrees, decisions), soft law (e.g. guidelines, recommendations, declarations, charters), ad hoc initiatives from specific stakeholders (e.g. energy providers, transport companies, including public enterprises) other than public authorities, etc.*
- *You should identify whether each of the six essential services are currently uniformly defined across the above interventions (in the case of multiple interventions covering the same services) or whether such definition varies according to the interventions or their level of governance (i.e. national, regional).*
- *Please mention whether these definitions have changed since 2017, whether some services (those listed in principle 20 of the EPSR and other services) have been considered as 'essential' only after 2017, and the reasons behind these evolutions.*
- *Based on the above interventions (i.e. regulation, soft law, ad hoc initiatives), you should precisely identify the current scope of each of the six essential services considered (e.g. types of transport, types of financial services) and whether this scope has evolved since 2017 and the reasons behind these evolutions, including the impact of the COVID-19 pandemic and the acceleration of the green and digital transitions.*
- *Precise references to the definitions should be provided, if they exist.*

Definition of the 'affordability' of essential services'

- *(To be repeated for each essential service)*
- *Please explain precisely how the concept of 'affordability' is defined/understood in your country at the national/regional level for each of the six essential services listed in principle 20 of the EPSR through the above regulation, soft law, and ad hoc initiatives. If such concept is not defined, how 'access' is understood?*
- *Please mention whether this concept of 'affordability' has changed since 2017 and the reasons behind these changes.*
- *Please identify, if any, the quantitative indicators that are used to measure the affordability of the essential services listed in principle 20 of the EPSR. Have these indicators evolved since 2015? If yes, why? If such indicators do not exist, please explain the reasons why (e.g. lack of public data). If such indicators exist, what have been the evolutions regarding the access to each of essential services in principle 20 of*

the EPSR and what are the demographic and socio-economic characteristics of the population affected?

- *Precise references to the definitions should be provided, if they exist.*

Policy measures supporting access to essential services

Characteristics of the policy measures

- *(To be repeated for each essential service)*
- *Please describe the main policy measures that have been implemented at the national/regional level in your country to support access (affordability of) to each of the essential services listed in principle 20 of the EPSR since 2017 (ongoing policy measures in 2017 should also be reported). Initiatives from stakeholders (e.g. water operators, public transport companies, energy providers, large telecom operators) other than public authorities/administration should be covered. In doing so, you should examine whether the policy measures identified in the ESPN report covering your country are exact, still ongoing, and up to date.*
- *For each policy measures, you should identify, where possible:*
- *The type of the policy measure (reduced tariffs, cash benefits, in-kind benefits, advice/training or information services, the provision of a basic/uninterrupted basic supply, other);*
- *The period (years) covered by each policy measure;*
- *The organisation in charge of implementing the policy measure;*
- *The (quantitative) objectives set for each policy measure;*
- *The annual budget allocated to the policy measure;*
- *The annual budget spent for implementing the policy measure; and*
- *The target population (individuals/households), in particular its demographic and socio-economic characteristics.*
- *Eligibility criteria to access the support measures: is there a definition of the ‘target group’ (e.g. low-income people, Roma, homeless population, refugees) (principle 20 EPSR refers to “people in need”), which is used to assess eligibility for such support? Is eligibility to other social assistance benefits used to automatically grant access to support measures in the field of essential services? Is there any support (cash or in-kind) specifically provided to minimum income recipients?*
- *Precise references to the policy measures should be provided (in footnotes), if they exist.*

Monitoring and evaluation of the policy measures

- *(To be repeated for each essential service)*
- *For each of the above policy measure, you should identify, where possible:*
- *Their rationale (has the size of the problem to address been measured, e.g. the population not been able to afford the essential services? If so, what indicators and data sources were used) and the existence of a proper needs assessment;*
- *Their monitoring mechanisms to follow their implementation, in particular the use of quantitative indicators to measure access to essential services from the angle of affordability (if so, please identify the indicators and the data sources used to measure them);*
- *Eligibility criteria and the characteristics of their effective beneficiaries (individuals/households), in particular its demographic and socio-economic characteristics;*
- *The evaluations to assess the extent to which each policy measure responds to the*

needs of the population, the extent to which each policy measure achieve its objectives, and the extent to which each policy measure is cost-effective; and

- *The main barriers encountered to achieve its objectives.*
- *If they exist, you are expected to report on the quantitative data (indicators) and their source(s) used to assess the size of the problem, to monitor and to evaluate each policy measure. The data should be reported from at least 2017 to 2021.*

Good practices

- *(To be repeated for each essential service)*
- *From the above policy measures, you should identify good practices implemented at the national/regional level in your country for each of the essential services listed in principle 20 of the EPSR since 2017 (ongoing policy measures in 2017 should also be reported).*
- *For the purpose of the study, a ‘good practice’ is defined accordingly:*
- *A policy measure or a set of policy measures that, based on quantitative and/or qualitative evidence, has been demonstrated in practice to have had a positive and tangible impact on a given access issue, problem or challenge, thus resulting in enhanced access to essential services;*
- *A policy measure that is sustainable from an economic perspective; and*
- *A policy measure that is a priori easily transferable and adaptable to other EU countries/regions.*
- *To ease the identification of good practices at the national/regional level, you are encouraged to rely on interviews with key stakeholders.*

Identification of barriers and drivers to access to essential services

Individual barriers

- *(To be repeated for each essential service)*
- *For each of the six essential services listed in principle 20 of the EPSR in your country, you should identify the individual barriers to afford them. Individual barriers relate to the demographic and socio-economic characteristics of the population. For instance, some policy measures are too restrictive in terms of how they define the target population.*
- *Other individual barriers associated with other dimensions of access (e.g. minimum skills required) which have an impact on affordability should also be mentioned.*
- *To ease the data collection process, the identification of these barriers can rely on the interviews with key stakeholders.*

Other barriers

- *(To be repeated for each essential service)*
- *For each of the six essential services listed in principle 20 of the EPSR in your country, you should identify the other barriers (e.g. lack of institutional support) to afford them. Additional barriers associated with other dimensions of access (e.g. accessibility, adequacy/quality, availability) which have an impact on affordability should also be mentioned.*
- *To ease the data collection process, the identification of these barriers can rely on the interviews with key stakeholders.*
- *‘Accessibility’ covers ‘distance’, ‘physical access’, ‘knowledge/ skills’. ‘Availability’ covers ‘infrastructure’ and ‘equipment’.*

Identification of drivers

- *(To be repeated for each essential service)*
- *Please identify the main driving forces (i.e. the factors) that can enhance the affordability of essential services for the population that is at risk of poverty or social exclusion. These drivers are likely to derive from certain characteristics of policy measures such as financial incentives, training, information campaign, reduction of territorial inequalities.*
- *To ease the data collection process, the identification of these drivers can rely on the interviews with key stakeholders.*

Annexes

Summary of interviews (service concerned, contact details, affiliation, and date of interview)

- *Please fill in the table below, and add additional rows if necessary. Also ensure that an agreement for data processing is collected for each interview in line with Milieu's data privacy guidelines.*

Service	Interviewee contact details	Affiliation	Date of interview	Other notes
Digital comms.				
Energy				
Financial services				
Sanitation				
Transport				
Water				

Reference list

Statistical sources and indicators

- *Please ensure that sufficient details are included for the core research team to access the data, including institutional source and link to the website. If possible and available, link to the English language version of the website/dataset.*

Annex B: Supplementary tables

Table 31 - Summary of responses from national statistical institutes in response to Milieu survey

Member State	Response	Comments
AT	Survey returned	For the essential service of water & sanitation, the national statistical office of Austria does not collect data as the provision is at 99 to 100 per cent. In the area of Transport, the office collects some information on private care use and transport mode via the Environmental conditions and behaviour micro census and the Energy Consumption of households micro census. When it comes to digital communications, the Austrian statistical office mentioned the EU-wide survey ICT usage in households and by individuals. For the remaining services, the office relies on data from EU-SILC and the Household Budget Survey.
BG		Through the decennial national Census survey (2011), the national statistical office of Bulgaria collects some data on sanitation and water, without reference to affordability. The office also refers to the ICT usage in households survey as well as to the national Census. No separate data is collected on transport and financial services.
CY		Similar to Bulgaria, the national statistical office of Cyprus covers water and sanitation in the national census (2011) without reference to affordability. Beyond the EU-SILC and HBS, the Census 2011 includes questions energy.
CZ		The Czech national statistical office collects additional information on water and sanitation and takes note of water charges and invoiced water amounts. However, the data is only available for regions without socio-demographic breakdowns. Likewise, for energy a broad range of data is available, including consumption expenditure on energy, but only with geographic and type of dwelling breakdown. Data on financial service provision, transportation and digital communication does not include concept of affordability and is not available in all required socio-economic breakdowns.
EE		Supplementary statistical data collection in Estonia covers water and sanitation and digital communications but does not address the question of affordability. Data on energy expenditure is only available at the household level and does not include socio-demographic information. No national additional statistical data is collected for the services transport and financial services.
HU		For Water and sanitation and transportation no breakdown by socio-demographic characteristics is possible and affordability is not addressed. For financial services no data on affordability is collected.

Member State	Response	Comments
		For digital communication services, the Hungarian national statistical office refers to the ICT usage in households and by individual survey.
IE		The Irish national statistical office informed about some data on energy and water and energy access and use for household level. No reference to socio-demographic characteristics were mentions.
IT		The Italian national statistical office only provided information on the question about digital communications but it does not account for affordability.
LT		In Lithuania the only other relevant potentially relevant source is the national census from 2011. No specific data has been collected for transport, but one survey on access to financial services dates back to 2008.
LV		The statistical office in Latvia reports that there is no additional specific information available for water & sanitation, energy affordability, transport and financial services. For digital communication information at household level is available but not covering affordability.
RO		The statistical office in Romania does not have relevant additional surveys, that both, have the socio-demographic breakdown and cover affordability.
SI		No information on affordability of water and sanitation is provided in the census in Slovenia. No required information is available for transport and financial services. For digital communication services, the Slovenian statistical office provides information, including breakdown by some socio-demographic characteristics and affordability.
SK		In Slovakia, information on water and sanitation is available only at regional and district level. Beyond HBS and EU-SILC, no other sources are available. Financial and transport services are not covered by the work of the Slovakian national statistical office. Regarding digital communication services, Slovakia refers to the Survey on the use of ICT in households and of individuals.
DK, EL, FI, HR, LU, MT, SE	Receipt confirmed; no further response	
DE, NL, PL	Receipt confirmed; referred to public information on website	While additional information may be available, this generally requires a custom request from the National Statistical Institutes.
BE, ES, FR, PT	No confirmation of receipt	

Source: Milieu survey to national statistical institutes, March-June 2022.

Table 32 presents an overview of minimum income schemes and social assistance programmes in place in Member States, based on the survey in the national reports³⁰¹.

Table 32 – Overview of main social assistance schemes present in Member States

	Social assistance benefit	Guaranteed Minimum Income	Housing allowance
AT		"Minimum income" ³⁰²	"Housing assistance" ³⁰³
BE	"Social assistance benefit" ³⁰⁴		
BG	"Social assistance benefit" ³⁰⁵	"Guaranteed Minimum Income" ³⁰⁶	
CY	"Public assistance benefit"	"Guaranteed Minimum Income"	
CZ	"Social assistance benefit"		"Housing contribution" ³⁰⁷
DE	"Social assistance" ³⁰⁸	"Basic income for jobseekers" ³⁰⁹	"Housing allowance" ³¹⁰

³⁰¹ A full discussion of social assistance and minimum income schemes is beyond the scope of this report. For additional information on these schemes, see e.g. Coady, Jahan, Matsumoto and Shang (2021); Frazer and Marlier (2016).

³⁰² Income security via minimum income schemes is implemented by the federal provinces (Bundesländer) in Austria.

³⁰³ The housing assistance ("Wohnbeihilfen") are aimed at supporting people with low incomes by providing a subsidy for their rent: For this purpose, there is a fixed reasonable housing expense. Generally, housing assistance is granted for two years. A shorter period is also possible when receiving unemployment or sickness benefits, etc.

³⁰⁴ All Belgian citizens are entitled to social assistance from the public social welfare centres (PCSW/OCMW/CPAS).

³⁰⁵ Social assistance is granted after assessment of criteria such as the applicant's income, housing, employment status or health, and after comparison with the 'guaranteed minimum income' (Art. 12). The social assistance can be monthly (usually for low-income criteria), targeted (for specific reasons or conditions, see 'energy' below) or one-time

³⁰⁶ The Guaranteed Minimum Income (GMI) was last updated in December 2017 and was defined as BGN 75 (or EUR 38) per month. Based on the GMI a 'differentiated minimum income' (DMI) is calculated for different vulnerable groups, eligible beneficiaries are those whose monthly income is below the DMI and who meet several other requirements defined in the social legislation. Originally the GMI was based on the cost of basket of basic goods. While it is considered a good and effective approach for social assistance, a common criticism is that it is not updated sufficiently regularly to adequately address changes in prices and remains too low. Furthermore, its coverage is reported to be only 1% of the population and only 4.6% of the population living under the poverty line.

³⁰⁷ A social benefit provided under Section 24 of the Act No. 117/1995 Coll., the State Social Support Act to families whose housing costs cover more than 30-35% of their net income and who meet further requirements set by the law. The additional housing contribution (in Czech *doplatek na bydlení*): a social benefit provided under Section 33 of the Act No. 111/2006 Coll., the Act on Help in Material Need, to individuals facing poverty facing issues to cover their housing costs if they meet further requirements set by the law.

³⁰⁸ Social assistance according to Social Code Book XII (Grundsicherung im Alter und bei Erwerbsminderung) is granted to people in need who are not able to work. It can be seen as a benefit of last resort. In principle, it steps in when persons are ineligible for any other benefits, such as the basic income. The basic cash benefit components of social assistance are equivalent to those of the basic income for job seekers described above. In addition, social assistance also includes cash benefits in case of need for impediments such as need of nursing care or health.

³⁰⁹ Basic income for jobseekers according to Social Code Book II (Grundsicherung für Arbeitsuchende, "Hartz IV"). The basic income support includes different support elements for job seekers. Both passive elements (e.g., cash and in-kind benefits) as well as activating elements (support to find a job or educational training)

³¹⁰ Housing allowance under Social Code Book I (Wohngeld). Low-income people whose income exceeds the basic income support for jobseekers and social assistance can be eligible for housing allowances. The allowance is a subsidy for the total housing costs, including some ancillary costs. The housing allowance was reformed in 2020. In this context, the circle of eligible households was expanded. Since 1. January 2021, the housing allowance also accounts for the new CO2 pricing in line with the Climate Action Programme 2030 (Klimaschutzprogramm 2030) by

	Social assistance benefit	Guaranteed Minimum Income	Housing allowance
DK		“Minimum income benefits” ³¹¹	“Housing support”
EE		“Minimum income support”	
EL		“Social Solidarity Income”	“Housing benefit” ³¹²
ES	“Social assistance aid”	“Minimum income” ³¹³	
FI	“Social assistance” ³¹⁴	“Minimum income benefits”	“Assistance with housing costs” ³¹⁵
FR	“Solidarity allowance” ³¹⁶	“Active solidarity income” ³¹⁷	“Housing benefits” ³¹⁸
HR			“Housing compensation”
HU	“Social assistance/income replacement benefits” ³¹⁹		“Housing allowance”

compensating recipients for higher energy prices with a higher allowance. The rise constituted additional €15 per month in 2021. Since 1. January 2022, the level of housing allowances is rising dynamically along with income and rent development.

³¹¹ A system of minimum-income benefits (kontanthjælpssystemet) which includes social assistance, housing support and family allowances.

³¹² Beneficiaries receive monthly payments, depending on the eligibility criteria the payments vary between 70 € to 210

³¹³ The ‘Ingreso Mínimo Vital’ (IMV), a new minimum income managed by the Social Security, aimed especially at households with no income and in situations of extreme poverty (30% of the poverty threshold).

³¹⁴ Basic social assistance (income support) is paid by the Social Insurance Institution of Finland (Kela). It covers expenses associated with basic assistance including food, clothing and minor healthcare costs, money for personal hygiene and cleanliness of the home, the use of local transport, a newspaper subscription, a TV licence, the use of a telephone, hobbies and recreational pursuits and the comparable everyday living expenses of the person and family. The supplementary social assistance benefit paid by municipalities is granted to cover living expenses that are not covered by basic social assistance. In addition, preventive social assistance is also paid by municipalities. This is intended to promote social security and self-sufficiency and to prevent social exclusion. Preventive social assistance is usually granted to secure housing and provide help in cases of sudden economic hardship and to otherwise promote independent living.

³¹⁵ Assistance with housing costs is paid by the Social Insurance Institution of Finland (Kela). It is available for rental, right-of-occupancy, part-ownership and owner-occupied homes situated in Finland.

³¹⁶ Specific solidarity allowance (ASS): granted to persons seeking employment who have exhausted their unemployment rights on a means-tested basis (monthly income must not exceed a net ceiling of € 1 204.70 for single persons or € 1 893.10 for couples) for 6 months renewable (subject to meeting the means test). The daily amount of the specific solidarity allowance is EUR 17.21 (amount on 1 April 2022).

³¹⁷ Active solidarity income (RSA): ensures that people with no or little resources have a minimum level of income, which varies according to the composition of the household and income (i.e. the household's resources must be less than an amount calculated according to the composition of the household). It is open, under certain conditions, to people aged 25 or over and to people aged 18 to 24 if they are single parents or have worked for a certain length of time.

³¹⁸ The Family Allowance Fund grants several types of housing benefits to tenants assistance (in their main residence) to reduce the amount of the rent: the Personalized housing assistance (APL), allocated on a means-tested basis in accordance with set thresholds varying according to the composition of the household and the location of the accommodation. In addition, the accommodation must be covered by an agreement between the State and the owner of the accommodation which gives entitlement to housing benefits. The Family Housing Allowance (ALF) is paid based on family situation (recipients of family benefits, dependent family members) and on a means-tested basis. For tenants who cannot perceive any of the two abovementioned benefits, they can apply for the Social housing allowance (ALS), allocated on a means-tested basis.

³¹⁹ Social assistance/income replacement benefits are typically set at a certain percentage of the minimum old-age pension.

	Social assistance benefit	Guaranteed Minimum Income	Housing allowance
IE	"Social assistance benefits"		
IT	"Social allowance" ³²⁰	"Citizenship Income / Citizenship Pension" ³²¹	
LT	"Social assistance" ³²²		
LU	"Social aid" ³²³	"Minimum income scheme" ³²⁴	"High cost of living allocation" ³²⁵
LV	"Social assistance benefit" ³²⁶		"Housing allowance"
MT	"Social security benefits" ³²⁷		"Affordable Housing Benefit" ³²⁸
NL	"Social assistance" ³²⁹		
PL	"Social assistance" ³³⁰		"Housing allowance" ³³¹

³²⁰ This is the "assegno sociale".

³²¹ The Citizenship Income was established as of April 2019. The citizenship income provides for a monthly economic subsidy (ranging from a minimum of EUR 400 to a maximum of EUR 840 per month), based on the number of family members (with ISEE less than EUR 9,360 per year), with the obligation for unemployed members aged up to 64 to undertake a path of re-employment. Citizenship Pension (Pensione di Cittadinanza – PdC) if the household consists exclusively of one or more members aged 67 or over. It can also be granted in cases where the member or members of the household aged 67 or over live exclusively with one or more persons of a lesser age who are seriously disabled or non-self-sufficient (as defined by Annex 3 to the ISEE regulations, as per Prime Ministerial Decree no. 159 of 5 December 2013).

³²² In the Law on Cash Social Assistance, the right to compensations for heating, drinking and hot water costs, as well as to social benefits, is linked to the assessment of a person's income and property.

³²³ Social aid provides people in need and their families with access to goods and services that are adapted to their specific situation, in order to help them acquire or preserve their autonomy. This assistance may be palliative, curative, or preventive. It may be provided in the form of short-, medium-, or long-term social support and, where necessary, can include material aid in kind or in cash. Social aid is a supplementary measure, and may be used to complement other social measures and financial aid provided for by other laws and regulations, which the recipient must first exhaust. It is organised by municipal social aid office (or groups of offices).

³²⁴ The Law on the minimum income scheme ('revenu d'inclusion sociale' hereafter referred to as 'REVIS') provides all legal residents who meet household-specific thresholds and criteria with basic resources.

³²⁵ The cost-of-living allowance is intended to provide a specific allowance for low-income households. It is based on the number of people constituting the household and is subordinated to a limit of annual gross income per household.

³²⁶ Law on Social Services and Social Assistance stipulates that the local authority should pay a benefit to ensure the guaranteed minimum income level and a housing allowance from its basic budget, but without specifying its content.

³²⁷ Social security benefits are granted to groups with difficulty accessing full-time employment whose income falls below a certain bracket, either because of age, disability, caring responsibility etc. The following benefits are provided: age pension, full-time carers allowance, single unmarried parent allowance, unemployment assistance, social assistance, drug addict assistance, disability assistance.

³²⁸ Affordable Housing Benefit, introduced in 2019. The benefit is means tested. The benefit is available to households whose income is below a certain threshold, and whose rental rate exceeds the benchmark rate for that family. The benefit aims to cover middle-income as well as low-income families.

³²⁹ This is the "bijstand". See: <https://www.government.nl/topics/social-assistance/applying-for-social-assistance>

³³⁰ Social assistance in Poland is provided both in the form of cash benefits (multi-purpose and special purpose), and in the form of non-pecuniary benefits (meals, shelter) and services (care services, crisis intervention, counseling etc.). The basic condition for applying for financial support in the social assistance system is meeting the income criterion. Three main types of social assistance exist in Poland: permanent allowance, temporary allowance and dedicated allowance.

³³¹ Housing allowance is another social assistance instrument dedicated to persons who have difficulties with covering the costs of renting apartments.

	Social assistance benefit	Guaranteed Minimum Income	Housing allowance
PT	*Not reported		
RO		"Minimum inclusion income/ Guaranteed Minimum Income" ³³²	
SE	"Social assistance benefit" ³³³		"Housing allowance/Housing benefit" ³³⁴
SI	X		
SK		X	X

Source: Milieu elaboration based on national reports.

Table 33 - Share of people without access to the different services across Member States (in %), 2020

Member State	Inability to afford internet	Inability to adequately heat home	Having arrears on utility bills	Not owning shower for sole use	Not owning toilet for sole use	High public transport	Low public transport
AT	0.9	1.3	2.6	0.5	0.7	8.7	34.3
BE	2.6	3.9	3.7	2.3	2.3	14.6	65.0
BG	14.8	26.8	21.6	15.4	21.6	4.7	24.5
CY	1.2	18.6	8.5	0.9	0.9	14.3	46.1
CZ	1.5	2.2	1.5	0.9	0.5	16.6	60.4
DE	3.0	2,3	1,8				
DK	0.5	2.1	3.0	1.7*	0.3*	13.7	63.2
EE	1.7	2.3	4.6	7.7	5.9	14.1	71.7
EL	6.1	18.4	25.8	0.2	0.3	6.0	11.5
ES	3.1	9.6	8.2	0.4	0.7	9.3	37.4

³³² The minimum inclusion income will be a financial support provided by the state to families and single people to ensure a minimum standard of living. Specifically, according to the provisions of Law 196/2016, the authorities will combine the guaranteed minimum income and the allowance for supporting the family in a single aid: the minimum inclusion income. The latter will therefore consist of one or two of the following financial aids: inclusion aid and help for the family with children. Law of minimum income for social inclusion (Law 196/2016). Though adopted in 2016 and was originally scheduled to enter into force on April 1, 2018, through several ordinances, the application deadline was moved successively until it reached to be April 1, 2022. Recently, GEO 130/2021 established a postponement until September 1, 2023. At the moment, the Guaranteed Minimum Income is in force. According to Law no. 416/2001 regarding the guaranteed minimum income with subsequent amendments) families and lone persons are entitled to receive a benefit of guaranteed minimum income represents a social support benefit to guarantee a certain standard of living if no other means of income can be obtained.

³³³ The social assistance benefit is intended to provide a basic living standard for households and is divided into two parts: consumption items and "reasonable" costs relating to the dwelling.

³³⁴ The housing allowance has a more restricted scope than the social assistance benefit and is targeted at young people aged 18-28 and households with children. A separate allowance is targeted towards households that either derive sick pay or activity support (i.e. disability pay) to assist with their housing costs (bostadstillägg).

FI	0.3	1.5	6.5	0.6	0.5	6.9	51.4
FR	1.8	6.7	5.5	1.0	1.2	14.4	70.7
HR	2.9	6.6	13.7	1.5	2.2	10.3	26.1
HU	8.1	5.3	11.8	2.2	2.3	11.1	42.3
IE	2.8	3.6	6.7	0.6*	0.6*	15.6	40.6
IT	3.8	8.5	3.2	0.7	0.7		
LT	4.9	25.1	4.1	10.8	11.3	12.1	34.5
LU	0.6	3.1	2.7	0.5*	0.3*	5.4	90.3
LV	4.7	6.7	8.4	11.1	10.4	9.4	39.5
MT	3.6	7.1	6.0	0.5*	0.3*	8.9	51.2
NL	0.3	1.7	0.9	1.9	1.8	12.0	47.8
PL	1.6	3.9	4.8	2.9	2.6	11.0	36.4
PT	5.1	20.8	4.2	1.2	1.0	9.0	30.5
RO	25.7	8.4	12.9	20.5	21.5	10.3	27.1
SE	0.3*	2.2	2.0	0.6	0.6	12.5	30.0
SI	1.3	2.7	9.6	0.3	0.3	10.6	31.3
SK	5.6	6.6	5.2	1.6	1.9	11.5	30.8
EU avg.	4.0	7.7	7.0	3.4	3.6	10.9	43.8

Source: EU-SILC 2020, Milieu calculations.

Note. Empty cells indicate missing data. * indicates low data reliability (observations between 20 and 49).

Table 34 - Material deprivation items and access to the services (in %), 2020

Material deprivation items	Inability to afford internet	Inability to heat home	Having arrears on utility bills	W/o shower for sole use	W/o toilet for sole use	Low public transport expend.	High public transport expend.
Arrears on rent/mortgage or utilities	29	30		20	21	7	9
Inability to keep home warm	33		27	22	24	6	6
Inability to face unexpected financial expenses	75	75	76	65	65	28	27
Inability to afford meat	37	36	25	29	30	6	6
Inability to afford holidays	82	77	71	65	68	24	23
Inability to afford a car	35	19	20	27	28	6	10
Inability to afford replacing furniture	73	66	63	54	56	23	22

Source: EU-SILC 2020, Milieu calculations.

Note. Low public transport expenditure refers to spending less than half the national means. High public transport expenditure refers to spending more than twice the national mean. *How to read the table:* around 30% of people who cannot afford internet also have arrears on utility, rent or mortgage payments

Table 35 – Lack of access to one or more services based on EU-SILC 2020, by country

	As % of total w/o access to at least one service				As % of country sample population			
	No access to one service	No access to two services	No access to three services	Total w/o access to at least one service	No access to one service	No access to two services	No access to three services	Total w/o access to at least one service
AT	0	95	5	100	0	2	0	2
BE	1	90	9	100	0	6	1	7
BG	7	70	23	100	3	26	9	37
CY	0	99	1	100	0	1	0	1
CZ	0	94	6	100	0	10	1	10
DK	0	93	7	100	0	5	0	6
EE	0	95	5	100	0	2	0	2
EL	1	92	8	100	0	4	0	5
ES	0	85	15	100	0	15	3	17
FI	0	90	10	100	0	17	2	19
FR	0	98	2	100	0	1	0	1
HR	0	92	8	100	0	8	1	9
HU	2	84	14	100	0	10	2	12
IE	4	77	19	100	1	13	3	17
IT	0	94	6	100	0	1	0	1
LT	1	84	15	100	1	42	8	51
LU	0	89	11	100	0	32	4	36
LV	0	98	2	100	0	2	0	2
MT	3	83	14	100	1	19	3	23
NL	0	88	12	100	0	3	0	3
PL	0	96	4	100	0	2	0	2
PT	0	99	1	100	0	1	0	1
RO	1	88	11	100	0	12	1	14
SE	1	86	13	100	0	43	6	49
SI	7	65	28	100	2	16	7	25
SK	4	79	17	100	1	15	3	19
Total	2	83	15	100	0	9	2	11

Source: EU-SILC 2021, Milieu calculations.

Note: The three services considered for the overlaps are: internet affordability, adequate heating and owning a shower for sole use. Data for IT is from 2019. No data for DE.

Annex C: Further details on regression outputs

To ease the reading of the statistical tables, a full list of the dependent and independent variables is provided in Table 41 below.

Table 36 – Outputs of logit regression analysis for Digital Communication, Energy and Water & Sanitation, 2020

VARIABLES	(1a) Inability to afford internet	(1b) Not having internet for other reasons	(2) Inability to adequately heat home	(3) Having arrears on utility bills	(4a) Not owning a shower/bath for sole use	(4b) Not owning a toilet for sole use
Female responsible for accommodation	1.239*** (0.0481)	1.151*** (0.0236)	1.180*** (0.0307)	1.214*** (0.0358)	1.214*** (0.0493)	1.131*** (0.0441)
Age	1.001 (0.00610)	0.953*** (0.00271)	1.016*** (0.00375)	1.040*** (0.00416)	1.006 (0.00546)	1.004 (0.00536)
Age squared	1.000 (6.14e-05)	1.001*** (2.86e-05)	1.000*** (3.84e-05)	0.999*** (4.34e-05)	1.000*** (5.56e-05)	1.000** (5.46e-05)
Country of birth :						
<i>European (excl. reporting country)</i>	0.712*** (0.0866)	0.828*** (0.0556)	1.018 (0.0893)	0.889 (0.0776)	0.918 (0.163)	0.990 (0.180)
<i>Other (third countries)</i>	1.068 (0.0925)	0.739*** (0.0390)	1.244*** (0.0594)	1.312*** (0.0672)	0.962 (0.110)	1.029 (0.116)
Owner	0.575*** (0.0326)	0.797*** (0.0255)	0.662*** (0.0225)	0.631*** (0.0239)	0.758*** (0.0591)	0.863* (0.0688)
Household size	1.200*** (0.0254)	1.149*** (0.0140)	1.006 (0.0153)	1.183*** (0.0176)	1.102*** (0.0186)	1.109*** (0.0188)
Household with:						
<i>1 child</i>	0.563*** (0.0491)	0.524*** (0.0313)	0.804*** (0.0413)	1.017 (0.0542)	0.640*** (0.0520)	0.650*** (0.0538)
<i>2 children</i>	0.415*** (0.0418)	0.484*** (0.0371)	0.785*** (0.0496)	1.043 (0.0635)	0.603*** (0.0588)	0.618*** (0.0581)
<i>3 or more children</i>	0.808*** (0.0471)	0.997 (0.0321)	1.187*** (0.0514)	1.221*** (0.0569)	0.808*** (0.0461)	0.792*** (0.0442)
Household with old- age person(s)	1.856*** (0.0918)	3.933*** (0.100)	0.953 (0.0336)	0.789*** (0.0300)	0.913* (0.0432)	0.956 (0.0449)
Household with disabled person(s)	1.626*** (0.0647)	1.743*** (0.0328)	1.478*** (0.0392)	1.490*** (0.0426)	1.246*** (0.0475)	1.258*** (0.0475)
Household location						
<i>Thinly populated</i>	1.075 (0.0484)	1.763*** (0.0401)	0.897*** (0.0267)	0.838*** (0.0281)	2.599*** (0.118)	3.070*** (0.142)
<i>Intermediate</i>	0.824*** (0.0391)	1.257*** (0.0296)	0.947* (0.0278)	0.972 (0.0316)	1.158*** (0.0640)	1.353*** (0.0755)
Education level (ISCED) :						
<i>Medium (3-4)</i>	0.465*** (0.0195)	0.522*** (0.0112)	0.789*** (0.0227)	0.866*** (0.0277)	0.449*** (0.0177)	0.461*** (0.0179)
<i>High (5-8)</i>	0.239*** (0.0192)	0.276*** (0.00859)	0.591*** (0.0237)	0.543*** (0.0242)	0.474*** (0.0329)	0.500*** (0.0345)
Income quintiles	0.617*** (0.0130)	0.719*** (0.00713)	0.766*** (0.0107)	0.742*** (0.0111)	0.670*** (0.0149)	0.703*** (0.0156)
Household AROP	1.490*** (0.0721)	1.052* (0.0297)	1.404*** (0.0473)	1.185*** (0.0454)	1.776*** (0.0877)	1.712*** (0.0833)
Household with very low work intensity	1.929*** (0.112)	1.440*** (0.0598)	1.614*** (0.0681)	1.359*** (0.0611)	0.966 (0.0724)	1.032 (0.0761)

Housing costs :						
<i>Somewhat of a burden</i>	0.410*** (0.0159)	0.853*** (0.0179)	0.368*** (0.00986)	0.332*** (0.00969)	0.681*** (0.0260)	0.720*** (0.0269)
<i>Not a burden at all</i>	0.262*** (0.0290)	0.901*** (0.0310)	0.200*** (0.0105)	0.145*** (0.00985)	0.894* (0.0588)	0.845** (0.0591)
Energy prices			1.950e+37*** (1.367e+38)	1.199e+11*** (7.267e+11)		
Leaking roof etc.			2.263*** (0.0644)	2.065*** (0.0664)		
Constant	0.0548*** (0.0118)	0.130*** (0.0119)	1.54e-06*** (1.47e-06)	0.00275*** (0.00222)	0.0196*** (0.00460)	0.0226*** (0.00517)
Observations	335,483	335,483	338,072	336,022	335,286	335,243
Country FE	YES	YES	YES	YES	YES	YES

Source: EU-SILC 2020, Milieu calculations.

Note. Robust seeform in parentheses. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$. Model (1a) and (1b) are multinomial logit regressions and show the relative risk ratios on not having internet due to affordability reasons, or other reasons, compared to having internet access. Model (2) is a binary logit regression and shows the odds ratios on not being able to adequately heat home, compared to being able to do so. Model (3) is a binary logit regressions and shows the odds ratios on having arrears on utility bills, compared to not having them. Models (4a) and (4b) are binary logit regressions and show the odds ratios on not owning a shower/bath, or toilet, for sole use, compared to owning one. Relative risk ratios and odds ratios below (above) 1 indicate a negative (positive) impact, and close to 1 indicate no or limited impact. For indicators variables, the reference group is as follows: for "country of birth" is "being a national"; for "owner" is "renter"; for households with 1 or more children is households w/o children; for households with old-age or disabled person(s) is households w/o old-age or disabled person(s); for households location is "highly populated areas"; for education is "low" education level; for housing costs is "heavy burden"; for being AROP or having very low work intensity is not being AROP and not having very low work intensity. Income quintiles go from 1 (lowest income) to 5 (highest income). The responsible person is the person owning or renting the accommodation (the oldest is considered in case of shared responsibility). Income quintiles are computed at Member State level. Low education means 0-2 ISCED level, medium 3-4 and high 5-8. Densely populated areas have density of at least 1 500 inhabitants per km² and a minimum population of 50 000; intermediate areas have density of at least 300 inhabitants per km² and a minimum population of 5 000; thinly-populated areas are areas outside urban clusters. Households are at risk of poverty if the equivalised disposable income is below the at-risk-of-poverty threshold (i.e. 60% of the national median equivalised disposable income after social transfers). Households have very low work intensity if working age members worked a working time equal or less than 20% of their total work-time potential during the year. Fixed effects included to account for unobserved differences between countries. The indicator was constructed using the Eurostat definition of low work intensity, taking into account the working age population of the household (those aged 18-64, but excluding students aged 18-24). Energy prices and income variables in purchasing power parity. The unit of measure for energy price is kilowatt/hour, which leads to an inflated coefficient for this variable (considering the EU-level average price of 0.08 PPS for KW/hour, one unit increase represents a rise to 1.08 PPS, which is a substantial price change and the reason behind the high coefficient). Energy prices only capture differences across member states, not over time. This is due to the nature of the regression analysis, which only focuses on year 2020. Country FE included in all regressions to account for unobserved differences between the countries. Missing data were handled via listwise deletion (i.e. row with missing value is omitted).

How to read the table: For logit regression models (Models (2) to (4)), values of the odds ratios above / below 1 indicate an increase / decrease in the odds of having access issues. For instance, in Model (2), odds ratios of the variable "households with disabled person(s)" are 1.48; this implies the odds of those households to have issues to adequately heat their home are 1.48 times higher relative to households without disabled person(s), all other variables held constant. In Model (2), the estimate of having medium education is 0.79; this entails that having medium education, compared to having low education, lowers the odds of having issues to adequately heat home by a factor of 0.79, all other variables held constant. Continuous variables, such as households size, do not have a reference group and are interpreted as follows: an increase of one member in the size of the households entails an increase in the odds of having arrears of utility bills by a factor of 1.18 (Model 3). Multinomial logit regressions (Model (1a/b)) depict the relative risk ratios and can be interpreted in a similar manner. In Model (1a), the coefficient of the variable "household with old age person(s)" is 1.86, this entails that the relative risk of not being able to afford internet relative to being able to do so is 1.86 higher for households with old-age person(s), relatively to households without old-age person(s), all other variables held constant. Relative risk ratios and odds ratios do not indicate the magnitude of the change in the probability of the outcome. To do so, other methods should be used (such as marginal effects).

Table 37 - Outputs of logit regression analysis for Digital Communication, Energy and Water & Sanitation with single-parent households, 2020

VARIABLES	(1a) Inability to afford internet	(1b) Not having internet for other reasons	(2) Inability to adequately heat home	(3) Having arrears on utility bills	(4a) Not owning a shower/bath for sole use	(4b) Not owning a toilet for sole use
Female responsible for accommodation	1.234*** (0.0533)	1.159*** (0.0257)	1.207*** (0.0359)	1.137*** (0.0393)	1.193*** (0.0541)	1.136*** (0.0504)
Age	1.002 (0.00686)	0.932*** (0.00309)	1.021*** (0.00449)	1.046*** (0.00513)	1.000 (0.00647)	0.999 (0.00647)
Age squared	1.000 (6.79e-05)	1.001*** (3.25e-05)	1.000*** (4.44e-05)	0.999*** (5.10e-05)	1.000* (6.28e-05)	1.000 (6.30e-05)
Country of birth : <i>European (excl. reporting country)</i>	0.705*** (0.0922)	0.818*** (0.0595)	1.089 (0.111)	0.830 (0.0967)	0.819 (0.142)	0.975 (0.183)
<i>Other (third countries)</i>	1.129 (0.106)	0.698*** (0.0401)	1.291*** (0.0738)	1.305*** (0.0844)	1.166 (0.144)	1.292** (0.158)
Owner	0.570*** (0.0346)	0.841*** (0.0287)	0.642*** (0.0252)	0.628*** (0.0299)	0.767*** (0.0621)	0.847** (0.0710)
Household size	1.097*** (0.0304)	1.123*** (0.0151)	1.122*** (0.0203)	1.271*** (0.0257)	0.953** (0.0233)	0.965 (0.0234)
Household with single-parent	0.548*** (0.0735)	0.455*** (0.0575)	0.910 (0.0752)	1.174** (0.0939)	0.687*** (0.0949)	0.694*** (0.0949)
Household with old- age person(s)	1.696*** (0.0908)	3.490*** (0.0993)	0.962 (0.0375)	0.806*** (0.0341)	1.005 (0.0508)	1.027 (0.0512)
Household with disabled person(s)	1.625*** (0.0699)	1.678*** (0.0339)	1.444*** (0.0438)	1.396*** (0.0478)	1.275*** (0.0531)	1.222*** (0.0520)
Household location <i>Thinly populated</i>	1.063 (0.0514)	1.798*** (0.0436)	0.889*** (0.0303)	0.888*** (0.0360)	2.325*** (0.112)	2.852*** (0.142)
<i>Intermediate</i>	0.837*** (0.0424)	1.242*** (0.0308)	0.969 (0.0320)	0.986 (0.0380)	1.045 (0.0612)	1.162** (0.0692)
Education level (ISCED) : <i>Medium (3-4)</i>	0.471*** (0.0212)	0.495*** (0.0115)	0.814*** (0.0274)	0.874*** (0.0344)	0.459*** (0.0195)	0.473*** (0.0198)
<i>High (5-8)</i>	0.221*** (0.0195)	0.253*** (0.00847)	0.621*** (0.0285)	0.562*** (0.0303)	0.472*** (0.0366)	0.521*** (0.0403)
Income quintiles	0.609*** (0.0152)	0.727*** (0.00784)	0.768*** (0.0121)	0.747*** (0.0134)	0.700*** (0.0179)	0.721*** (0.0181)
Household AROP	1.676*** (0.0880)	1.099*** (0.0330)	1.490*** (0.0551)	1.233*** (0.0537)	2.081*** (0.111)	1.951*** (0.103)
Household with very low work intensity	1.799*** (0.118)	1.468*** (0.0638)	1.478*** (0.0705)	1.366*** (0.0712)	0.910 (0.0694)	0.971 (0.0739)
Housing costs : <i>Somewhat of a burden</i>	0.406*** (0.0173)	0.832*** (0.0188)	0.366*** (0.0111)	0.331*** (0.0115)	0.826*** (0.0346)	0.886*** (0.0366)
<i>Not a burden at all</i>	0.232*** (0.0205)	0.869*** (0.0319)	0.201*** (0.0120)	0.140*** (0.0108)	1.062 (0.0786)	0.992 (0.0764)
Energy prices			2.196e+40*** (1.822e+41)	4.740e+08*** (3.389e+09)		
Leaking roof etc.			2.341*** (0.0765)	2.063*** (0.0796)		
Constant	0.0624***	0.268***	4.23e-07***	0.00478***	0.0205***	0.0273***

	(0.0146)	(0.0282)	(4.77e-07)	(0.00455)	(0.00540)	(0.00726)
Observations	254,468	254,468	256,029	254,400	254,161	254,132
Country FE	YES	YES	YES	YES	YES	YES

Source: EU-SILC 2020, Milieu calculations.

Note. Notes under Table 36 apply. Comparison group for single-parent households is households with at least two parents.

Table 38 - Outputs of tobit regression analysis for Transport Services, 2020

VARIABLES	(5a) Public transport expenditure as a share of income	(5b) Private transport expenditure as a share of income
Female responsible for accommodation	0.0329 (0.0462)	-0.558*** (0.0613)
Age	0.00863 (0.00702)	0.0878*** (0.00934)
Age squared	-0.000224*** (7.33e-05)	-0.00115*** (9.71e-05)
Country of birth:		
<i>European (excl. reporting countries)</i>	0.280** (0.122)	0.570*** (0.172)
<i>Other (third countries)</i>	0.607*** (0.126)	0.173 (0.172)
Owner	0.101** (0.0512)	1.089*** (0.0935)
Housing expenditure as share of income	-9.46e-08*** (1.05e-08)	0.00481** (0.00193)
Household size	0.0551* (0.0302)	-0.0632* (0.0336)
Household with:		
<i>1 child</i>	-0.183** (0.0724)	0.137 (0.104)
<i>2 children</i>	-0.233** (0.101)	-0.0771 (0.119)
<i>3 or more children</i>	0.287*** (0.0998)	0.372*** (0.0862)
Household with old-age person(s)	-0.274*** (0.0766)	-0.832*** (0.0751)
Household with disabled person(s)	-0.158*** (0.0373)	0.0614 (0.0569)
Household location		
<i>Thinly populated</i>	-0.0943** (0.0477)	1.331*** (0.0685)
<i>Intermediate</i>	-0.276*** (0.0540)	0.470*** (0.0687)
Education level (ISCED) :		
<i>Medium (3-4)</i>	0.0908 (0.0602)	0.389*** (0.0787)
<i>High (5-8)</i>	0.319*** (0.0701)	0.428*** (0.0868)
Household with very low work intensity	-0.410***	-1.329***

	(0.128)	(0.185)
Housing costs :		
<i>Somewhat of a burden</i>	-0.135***	0.123*
	(0.0480)	(0.0662)
<i>Not a burden at all</i>	0.120**	0.0551
	(0.0555)	(0.0904)
Household AROP	1.631***	4.458***
	(0.112)	(0.159)
Income quintiles	-0.331***	-1.529***
	(0.0209)	(0.0282)
Private car:		
<i>No, cannot afford it</i>	1.724***	-7.494***
	(0.155)	(0.177)
<i>No, other reasons</i>	0.797***	-7.165***
	(0.0727)	(0.121)
Constant	2.170***	11.38***
	(0.206)	(0.287)
Observations	110,094	213,719
Country FE	YES	YES

Source: EU-SILC 2020, Milieu calculations.

Note. Robust seeform in parentheses. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$. Models (5a) and (5b) are tobit regressions and show the impact on the monthly expenditures on public and private transport as a share of households' disposable income. Households with negative shares or shares above 100% have been excluded from the calculations. Negative shares stem from negative (disposable or gross) income. Shares above 100% stem from an income reported that is lower than the expenditures on transport. Reasons for having a negative, or too low, income reported include: tax burden higher than income (e.g. if the person is unemployed), self-employed individuals starting their business and registering initial losses. For indicators variables, the reference group is as follows: for "country of birth" is "being a national"; for "owner" is "renter"; for households with 1 or more children is households w/o children; for households with old-age or disabled person(s) is households w/o old-age or disabled person(s); for households location is "highly populated areas"; for not having a car because of inability to afford it or other reasons is "owning a car"; for education is "low" education level; for housing costs is "heavy burden"; for being AROP or having very low work intensity is not being AROP and not having very low work intensity. Income quintiles go from 1 (lowest income) to 5 (highest income). The responsible person is the person owning or renting the accommodation (the oldest is considered in case of shared responsibility). Income quintiles are computed at Member State level. Low education means 0-2 ISCED level, medium 3-4 and high 5-8. Densely populated areas have density of at least 1 500 inhabitants per km² and a minimum population of 50 000; intermediate areas have density of at least 300 inhabitants per km² and a minimum population of 5 000; thinly-populated areas are areas outside urban clusters. Households are at risk of poverty if the equivalised disposable income is below the at-risk-of-poverty threshold (i.e. 60% of the national median equivalised disposable income after social transfers). Households have very low work intensity if working age members worked a working time equal or less than 20% of their total work-time potential during the year. The indicator was constructed using the Eurostat definition of low work intensity, taking into account the working age population of the household (those aged 18-64, but excluding students aged 18-24). Fixed effects included to account for unobserved differences between countries. Fixed effects included to account for unobserved differences between countries (controlling for regional differences did not significantly change estimates). Explanatory income variables and dependent variables in purchasing power parity (euros). Missing data were handled via listwise deletion (i.e. row with missing value is omitted).

How to read the table: estimates of tobit regressions can be interpreted as OLS coefficients. For instance, increasing the size of the household by one person increases the share of monthly expenditures on public transport by 0.05 percentage points, all other variables held constant. Similarly, having high education increases the share of monthly expenditures on private transport by almost 0.43 percentage points, compared to those with low education, all other variables held constant.

Table 39 - Outputs of tobit regression analysis for Public Transport with single-parent households, EU-SILC 2020

VARIABLES	(5a) Public transport expenditure as a share of income	(5b) Private transport expenditure as a share of income
Female responsible for accommodation	0.0366 (0.0596)	-0.656*** (0.0727)
Age	0.00881 (0.00838)	0.0878*** (0.0113)
Age squared	-0.000239*** (8.53e-05)	-0.00117*** (0.000115)
Country of birth:		
<i>European (excl. reporting countries)</i>	0.378** (0.157)	0.678*** (0.215)
<i>Other (third countries)</i>	0.625*** (0.182)	0.635*** (0.235)
Owner	0.0304 (0.0650)	1.065*** (0.111)
Housing expenditure as share of income	-9.60e-08*** (8.71e-09)	0.00447** (0.00191)
Household size	0.245*** (0.0480)	0.0520 (0.0508)
Household with single-parent 1 child	-0.822*** (0.202)	-1.140*** (0.214)
Household with old-age person(s)	-0.253*** (0.0848)	-0.890*** (0.0873)
Household with disabled person(s)	-0.189*** (0.0445)	0.0127 (0.0674)
Household location		
<i>Thinly populated</i>	-0.0751 (0.0602)	1.245*** (0.0841)
<i>Intermediate</i>	-0.292*** (0.0705)	0.410*** (0.0852)
Education level (ISCED) :		
<i>Medium (3-4)</i>	0.132* (0.0710)	0.486*** (0.0922)
<i>High (5-8)</i>	0.370*** (0.0849)	0.488*** (0.103)
Household with very low work intensity	-0.424*** (0.145)	-1.267*** (0.196)
Housing costs :		
<i>Somewhat of a burden</i>	-0.111* (0.0606)	0.0490 (0.0832)
<i>Not a burden at all</i>	0.135* (0.0719)	-0.0408 (0.111)
Household AROP	1.718*** (0.135)	4.795*** (0.196)
Income quintiles	-0.357*** (0.0265)	-1.478*** (0.0342)
Private car:		
<i>No, cannot afford it</i>	1.759*** (0.195)	-7.754*** (0.200)

<i>No, other reasons</i>	0.871*** (0.0842)	-7.296*** (0.135)
Constant	1.945*** (0.267)	11.22*** (0.354)
Observations	82,632	155,367
Country FE	YES	YES

Source: EU-SILC 2020, Milieu calculations.

Note. Notes under Table 38 apply. Comparison group for single-parent households is households with at least two parents.

Table 40 - Outputs of logit regression analysis with interactions, EU-SILC 2020

VARIABLES	(1) Inability to afford internet	(2) Inability to adequately heat home	(3) Having arrears on utility bills	(4) Not owning a shower/bath for sole use	(5) Public transport expenditure as share of income
Female responsible for accommodation	1.234*** (0.0532)	1.207*** (0.0359)	1.135*** (0.0392)	1.206*** (0.0544)	-0.654*** (0.0726)
Age	1.002 (0.00687)	1.021*** (0.00449)	1.047*** (0.00515)	0.996 (0.00639)	0.0880*** (0.0113)
Age squared	1.000 (6.79e-05)	1.000*** (4.43e-05)	0.999*** (5.10e-05)	1.000 (6.22e-05)	-0.00117*** (0.000115)
Country of birth : <i>European (excl. reporting country)</i>	0.706*** (0.0922)	1.091 (0.112)	0.834 (0.0965)	0.826 (0.143)	0.360*** (0.108)
<i>Other (third countries)</i>	1.130 (0.107)	1.289*** (0.0737)	1.294*** (0.0842)	1.199 (0.148)	1.060*** (0.111)
Owner	0.571*** (0.0348)	0.643*** (0.0253)	0.629*** (0.0299)	0.763*** (0.0619)	0.00447** (0.00192)
Household size	1.096*** (0.0303)	1.122*** (0.0203)	1.275*** (0.0258)	0.944** (0.0235)	0.0527 (0.0509)
Household with single-parent	0.548*** (0.0735)	0.905 (0.0751)	1.161* (0.0930)	0.713** (0.0981)	-1.139*** (0.214)
Household with old- age person(s)	1.695*** (0.0909)		0.804*** (0.0341)	1.011 (0.0508)	-0.889*** (0.0871)
Household with disabled person(s)	1.624*** (0.0698)	1.445*** (0.0438)	1.398*** (0.0480)		0.00983 (0.0672)
Household location <i>Thinly populated</i>		0.889*** (0.0303)		2.305*** (0.110)	
<i>Intermediate</i>		0.971 (0.0320)		1.028 (0.0600)	
Education level (ISCED)	0.471*** (0.0173)	0.793*** (0.0175)	0.773*** (0.0197)	0.603*** (0.0236)	0.105*** (0.0120)
Income quintiles	0.609*** (0.0152)	0.768*** (0.0122)	0.744*** (0.0134)	0.711*** (0.0182)	-1.478*** (0.0342)
Household with very low work intensity	1.795***	1.468***	1.360***	0.920	-1.257***

	(0.117)	(0.0704)	(0.0714)	(0.0697)	(0.196)
Housing costs :					
<i>Somewhat of a burden</i>	0.406***	0.366***	0.331***	0.823***	0.0481
	(0.0173)	(0.0111)	(0.0115)	(0.0343)	(0.0831)
<i>Not a burden at all</i>	0.232***	0.201***	0.139***	1.079	-0.0448
	(0.0205)	(0.0120)	(0.0107)	(0.0798)	(0.111)
Energy prices		3.025e+40***	2.533e+09***		
		(2.513e+41)	(1.812e+10)		
Leaking roof etc.		2.340***	2.053***		
		(0.0764)	(0.0794)		
Owning a car:					-7.748***
<i>No, cannot afford it</i>					(0.202)
					-7.288***
<i>No, for other reasons</i>					(0.136)
<i>Reference group:</i>	1		1		1
<i>Rural & Not AROP</i>	(0)		(0)		(0)
Urban & Not AROP	0.916		1.089*		-1.189***
	(0.0519)		(0.0504)		(0.0763)
Urban & AROP	1.516***		1.431***		3.316***
	(0.129)		(0.0975)		(0.390)
Rural & AROP	1.605***		1.180***		5.046***
	(0.108)		(0.0747)		(0.251)
Intermediate & Not AROP	0.736***		1.120**		-0.804***
	(0.0413)		(0.0524)		(0.0718)
Intermediate & AROP	1.337***		1.297***		3.997***
	(0.106)		(0.0910)		(0.329)
<i>Reference group:</i>		1			
<i>Not old-age & Not AROP</i>		(0)			
Not old-age & AROP		1.532***			
		(0.0760)			
Old-age & Not AROP		0.980			
		(0.0416)			
Old-age & AROP		1.413***			
		(0.0780)			
<i>Reference group:</i>				1	
<i>Disabled & Not AROP</i>				(0)	
Not disabled & Not AROP				2.026***	
				(0.154)	
Not disabled & AROP				1.221***	
				(0.0646)	
Disabled & AROP				2.732***	
				(0.182)	
Constant	0.145***	5.13e-07***	0.00476***	0.0338***	12.46***
	(0.0356)	(5.78e-07)	(0.00453)	(0.00897)	(0.360)
Observations	254,468	256,029	254,400	254,161	155,367
Country FE	YES	YES	YES	YES	YES

Source: EU-SILC 2020, Milieu calculations.

Note. Notes under Table 36 and Table 38 apply. Comparison group for interaction terms is the one with value “1” greyed out. *How to read the table:* Odds ratios and relative risk ratios for interaction terms are more difficult to interpret. With an interaction term, there is no single odds (or relative risk) ratio; to get the effect of one of the variables involved in the interaction, one must define a fixed level of the other effect. The direction of the estimates can still be interpreted in a straightforward way; in Model (1), those households living in rural areas and being AROP have higher risk of not being able to afford internet, relative to households living in rural areas but not being AROP.

Table 41 – Description of variables and reference groups, EU-SILC 2020

Variable	Details	Reference group
Dependent variables		
Inability to afford internet	True if response to question “Do you have an internet connection for personal use?” equals “No – cannot afford it”	Having an internet connection
Not having internet for other reasons	True if response to question “Do you have an internet connection for personal use?” equals “No – other reasons”	Having an internet connection
Inability to adequately heat home	True if household is not able to afford to keep home adequately warm	Being able to adequately heat home
Having utility arrears	True if household has been on utility arrears at least once in the last 12 months	Not having utility arrears
Not owning a shower/bath for sole use	True if household does not have shower/bath in dwelling or shares it	Owning a shower/bath for sole use
Not owning a toilet for sole use	True if household does not have toilet in dwelling or shares it	Owning a toilet for sole use
Public transport expenditure as a share of disposable income	Continuous variable	N/A
Private transport expenditure as a share of disposable income	Continuous variable	N/A
Independent variables		
Female responsible for accommodation	True if person responsible for accommodation is female	Male responsible for accommodation
Age	Continuous variable	N/A
Country of birth: European, Other	True if country of birth is European (excl. reporting country) or Other (third countries)	National
Owner	True if household owns dwelling	Renter
Household size	Continuous variable	N/A
Household with lone parent	True if household has only one person above 18 years old and at least one person below 18 years old	Household with at least two parents
Household with: one, two, three or more children	True if household has one, two, three or more persons below 18 years old	Household without children

Variable	Details	Reference group
Household with old-age person(s)	True if household has at least one person above 65 years old	Household without old-age person(s)
Household with disabled person(s)	True if household has at least one person with strongly limited or limited ability to perform activities due to health problems	Household without disabled person(s)
Household location: thinly populated, intermediate	True if household is located in a thinly populated area or intermediate area	Densely populated
Education level (ISCED): Medium (3-4), High (5-8)	True if household has individuals with high or medium education	Low (0-2)
Income quintiles	Continuous variable	N/A
Household AROP	True if household is at risk of poverty	Household not AROP
Household with low work intensity	True if household has low work intensity	Household without low work intensity
Housing costs: somewhat of a burden, not a burden at all	True if household perceives housing costs to be "somewhat of a burden" or "not a burden at all"	Perceiving housing costs as "heavy burden"
Energy prices	Continuous variable	N/A
Leaking roof etc.	True if housing conditions are inadequate (i.e. leaking roofs, damp walls/floors/foundation, or rot in window frame/floor)	Not having a dwelling with leaking roof etc.
Housing expenditure as a share of income	Continuous variable	N/A
Private car: no- cannot afford it, no- other reasons	True if household does not own a private car due to affordability or other reasons	Owning a private car

Source: Milieu elaboration.

Note. Continuous variables do not have a reference group.

Annex D: Statistical sources identified in national reports

Table 42 – Summary of statistical sources identified in national reports

	General	Digital communications	Energy	Financial services	Transport	Water and sanitation
AT	United Nations, Österreich und die Agenda 2030 Freiwilliger Nationaler Bericht zur Umsetzung der Nachhaltigen Entwicklungsziele / SDGs		E-Control, Energiearmut in Österreich Statistik Austria, Energiearmut in Österreich 2016. Haushaltsenergie und Einkommen. Mikrozensus Energie und EU-SILC – Statistical Matching			BMNT, Kommunales Abwasser. Österreichischer Bericht 2018
BE		BIPT (2022d) – BIPT Data Portal Statbel – ICT usage in households	Statbel – Betaalbare en duurzame energie Statbel – Energy	Febelfin – Kerncijfers van het Belgische bankwezen Febelfin – Kerncijfers van het Belgische bankwezen Febelfin – Kerncijfers van het Belgische bankwezen Nationale Bank van België – Betalingsstatistieken Nationale Bank van België – Betalingsstatistieken Nationale Bank van België – Betalingsstatistieken	Statbel – Vehicles per household	Statbel – Schoon water en sanitair
BG	National Statistical Institute, Social expenditure by function	National Statistical Institute, 2018 survey on digital connectivity				

	General	Digital communications	Energy	Financial services	Transport	Water and sanitation
	National Statistical Institute, Household expenditures					
CY	N/A					
CZ		Czech Statistical Office 2022, Information technology, Use of mobile phone and internet , and Internet use . Czech Telecommunications Office (2018), Collecting data on NGA: Data collection 2018	Eurostat 2022, Inability to keep home adequately warm			
DE	Ministry of Justice, RBEG 2021 and RBSFV 2022					
DK		Statistics Denmark, 2021, Access to pc and internet and IT use in the population (report and summary) Agency for Digital Government, 2022, Numbers and Statistics	Danish Utility Regulator, 2021/22, 2020 Disconnection of utilities, Heating prices, and Price statistics for electricity Statistics Denmark 2022, Buildings and their heated area (2011-2021)	Finance Denmark, 2022, Fees related to a basic payment account	Danish Transport, Construction and Housing Authority, 2019 Sector Report and other traffic analyses	Danish Water and Wasterwater Association, 2021 Water in numbers
EE					Minuomavalitsus, Indicators on the use of transport, water and sanitation networks by local governments	

	General	Digital communications	Energy	Financial services	Transport	Water and sanitation
EL	Hellenic Statistical Authority, Household Income and Living Conditions Survey: Year 2020	Hellenic Statistical Authority, 2021 Survey on the use of information and communication technologies in households and by individuals	Independent Public Revenue Authority, 2012 Statistics of heating benefit Hellenic Statistical Authority, 2015, 2011 Buildings Census			
ES		National Institute of Statistics 2020, Use of ICT products	National Commission of Markets and Competition, Electricity social bonus Ministry for Ecological Transition and the Demographic Challenge 2021, indicators of the national strategy against energy poverty	Eurostat, Survey on living conditions in Europe 2021 National Institute of Statistics 2020, Living Conditions Survey Module 2020		Selectra, Water tariff AEAS-AGA, Social Sustainability in the water sector (forthcoming) Natural Mineral Waters Europe, statistics on bottled water La Moncloa, 2022 Spanish water reserve
FI	Official Statistics of Finland, Households' consumption Official Statistics of Finland, Prices and Consumption Official Statistics of Finland, Dwellings and Housing conditions		Energy Authority, Statistics and publications Statistics Finland, Energy prices	Finanssivalvonta, Availability of basic banking services		Ymparisto, Water supply information system (VEETI)
FR		ARCEP, CGE, ANCT (2021) Digital Barometer	National Observatory of Energy Poverty, Energy poverty dashboard	Observatory of Banking Inclusion, annual reports and Datasets		National Observatory of Public Water and Sanitation Services, Datasets and Indicators

	General	Digital communications	Energy	Financial services	Transport	Water and sanitation
HR		World Bank, statistics on demographics Digital Economy and Society Index (DESI) 2021, Statistics on Croatia	Ministry of Economy and Sustainable Development, Annual Energy Report 2020 .	Croatian Financial Agency, Number of accounts with credit institutions Croatian National Bank: General statistics and Payment transactions and accounts 2020	Croatian Regulatory Authority for Network Industries (HAKOM), Analysis of Consultations with Representatives of Service Users of Railway Transport of Passengers and Passenger transport by railway in 2021	Ministry of Economy and Sustainable Development, September 2021, Multiannual Programme of Water-Construction Works until 2030
HU	Habitat for Humanity, Affordability 2019 and Annual report on habitual poverty 2021 Central Statistical Office, Measures of households, dwellings and type of settlements and Statinfo central	Central Statistical Office, Use of IT devices 2020 , Proportion of internet users DESI 2021, Report on Hungary	Central Statistical Office, Infrastructural qualities of settlements, 2019 , Gas supply 1990-2019 Habitat for Humanity, Housing quality and energy efficiency 2020		Central Statistical Office, Transport services 2001-2020	National Public Health Authority, Drinking Water Quality 2020 Central Statistical Office, Settlements and dwellings connected to the public water system, 1990-2020 ,
IE	Central Statistics Office (CSO) (2022), Social Transfers Data.gov.ie (2022), Pobal HP Deprivation Index Department of Social Protection (2021), Statistical Information on Social Welfare Services Annual Report 2020	Central Statistics Office (CSO) (2022), Information Society Statistics – Households 2020 National Economic and Social Council (2021), Digital Inclusion in Ireland: Connectivity, Devices and Skills	Lawlor, D., Visser, A. (2022), Energy Poverty in Ireland	Central Statistics Office (CSO) (2022), Household Finance and Consumption Survey 2018	National Transport Authority (NTA) (2022), Annual Bulletins on Public Transport Central Statistics Office (CSO) (2022), “Travel”, Statistical Yearbook of Ireland	
IT			ARERA, Memo from the Regulatory Authority for Energy, Networks and the		The Transport Regulation Authority (ART), Annual Report 2021	

	General	Digital communications	Energy	Financial services	Transport	Water and sanitation
			Environment on electricity and natural gas price trends 2021 Bank of Italy, Energy poverty in Italy 2014 Italian Observatory on Energy Poverty (OIPE), Energy poverty in Italy in 2020 (update) Ministry of Ecological Transition 2021, The national energy situation in 2020 Ministry of Economic Development et al., National Plan for Energy and Climate 2019 Ministry of Economic Development et al., National Energy strategy 2017			
LT	Ministry of Social Security and Labour, Monitoring the effectiveness of social assistance in Lithuanian municipalities: Social assistance effectiveness index	Information Society Development Committee, ISD Program monitoring: share of the population that uses the internet regularly	The Environmental Projects Management Agency, Statistics			
LU	N/A					

	General	Digital communications	Energy	Financial services	Transport	Water and sanitation
LV	Official Statistics of Latvia, Statistical Yearbook of Latvia					
MT	Eurostat 2022, Population, GDP per capita and people at risk of poverty and social exclusion	Eurostat 2022, frequency of internet access, broadband connection and internet affordability	Eurostat 2022, electricity prices and inability to keep home adequately warm	World Bank Group 2021, Account ownership	Eurostat 2022, Number of passenger cars, modal split of passenger transport and consumption expenditure	EurEau 2021, Annual water bill Eurostat 2022, population connected to public water supply and wastewater treatment plants
NL		Statistics Netherlands 2020, Internet: access, use and facilities 2012-2019 and Internet access and activities; personal characteristics	Statistics Netherlands 2021, Energy indicators per region 2018 , Energy consumption; housing type and region , Energy consumption; housing type and year of construction and occupancy and Housing heating installations by region Ministry of the Interior and Kingdom Relations and Statistics Netherlands 2019, Energy Module 2018 and Energy Poverty report TNO 2021, Effect of gas price VNG 2021, DEGO	Social Consultation on payment systems 2021, Reachability Monitor 2021	CLO 2020, Public transport, car and means of access to residential areas 1996-2018 , Public transport, car and means of access to work areas 1996-2018 , and Accessibility of jobs by car and public transport 2020 Statistics Netherlands 2021, Proximity to public transport stops 2020	Drinkwaterkaart 2022
PL	Main Statistical Office, Annual Yearbook 2021	Main Statistical Office, Information society in Poland in 2021 and Use of information and communication technologies in public	Main Statistical Office, Consumption of energy in households in 2018	Commission for Financial Supervision for statistics on the functioning of the Polish financial market	Main Statistical Office, Transport in 2020	Main Statistical Office, Housing and communal infrastructure in 2020

	General	Digital communications	Energy	Financial services	Transport	Water and sanitation
		administration, enterprises and households in 2021 Office of Electronic Communications, Report on the state of the telecommunications market in Poland in 2020				
PT		ANACOM (2022) Reclamações sobre serviços de comunicações - Análise do ano 2021	DGEC (2021) Energia em números DGEG (2022) Statistics of Energy Social Tariff ERSE (2020) Tarifa Social de Eletricidade e gás natural Observatório da Energia (2019) Estudo sobre a aplicação da tarifa social de energia em Portugal	Banco de Portugal (2021), Sinopse de Atividades de Supervisão Comportamental - 1.º semestre 2021, Lisboa, Departamento de Supervisão Comportamental	Botelho, I. (2020) Relatório global de avaliação do impacto do PART 2019 Pereira, M. (2018), Qualidade de serviço e satisfação do consumidor: o caso dos transportes públicos da Área Metropolitana de Lisboa	DECO (2022), Tarifa social da água: cidadãos mais vulneráveis nem sempre usufruem
RO	N/A					
SE	National Board of Health and Welfare 2021, Statistics on financial aid Statistics Sweden, Statistics on financial assistance 2021, At-risk-of-poverty rate by age 1991-2020, Housing allowance for families with children 2022 and Housing allowance for pensioners	Statistics Sweden 2022, Internet accessibility Swedish Internet Foundation, Digital exclusion 2020 Q1 and Swedes and the internet 2021 Swedish Post and Telecom Authority 2021, PTS mobile coverage and	Eurostat 2022, Inability to keep home adequately warm Statistics Sweden 2022, Electricity prices and contracts		Statistics Sweden 2021, Dwellings close to public transport 2014-2019 Swedish Social Insurance Agency 2022 Statistics in the field of disability	Statistics Sweden 2021, Population connection to municipal water and sewage 1960-2019

	General	Digital communications	Energy	Financial services	Transport	Water and sanitation
	2022	broadband mapping 2020				
SI	Ministry of Labour, Family, Social Affairs and Equal Opportunities 2021, Report on progress on indicators of European Pillars Social Rights , Statistics on minimum income , Report on social transfers 2022 , Appendix , and table on monthly payments of social transfers National Statistical Office, Settlements and residents	AKOS, Analysis of products and services in retail market 2021 , Research on monthly expenditures on electronic communication services 2021 and analysis of the demand for internet access , Test Net and Geoportal National Statistical Office 2021, Usage of ICT in Households	Energy Agency, Report on the energy sector 2020 . National Statistical Office, Experimental calculation of the fuel poverty indicators	The Bank of Slovenia, Analysis of compensation of banks and savings The Slovene Consumers' Association, Comparison of business costs and personal accounts .	REUS, 2021 Energy efficiency research . National Statistical Office, Passengers by transport mode .	EurEau, Europe's Water in Figures 2021 and The governance of water services in Europe 2020 . National Statistical Office, Public water supply abstracted from groundwater sources 2021
SK	Ministry of the Interior, Atlas of Roma communities National Statistical Office, 2018 survey on Roma-related issues					

Source: Milieu elaboration based on national reports.

Note: The table only includes indicators not already identified as Eurostat indicators, and which have not already been summarised based on the survey to national statistical institutes (cf. Table 3 in Section 2.3). Blank cells, or cases where no data are listed for a Member State, are instances where the national expert was not able to identify sources other than those already aggregated in Eurostat.

