

TDK-dolgozat

2023

Andrea Borbély
University of Szeged

MEASURING POVERTY:
SOCIECONOMIC FACTORS IN CROSS-COUNTRY COMPARISON

*A szegénység mérése: társadalmi és gazdasági tényezők az országok közötti
összehasonlításban*

Dr. Judit Gébert and Wycliffe Obwori Alwago

Manuscript closure date: 2023.11.06

Table of Content

Abstract	1
Introduction	1
1. Defining poverty	2
1.1 Exploring Poverty: Key Concepts in the Literature	4
1.2 Classical and Neoliberal Theories	9
1.3 Structuralist and Political-Economic Approach	10
1.4 Politics of Poverty Studies.....	11
2. Pathways of poverty analysis	12
2.1 Consumption and Basic Needs	14
2.2 Money metric measures.....	15
2.3 Multidimensional measures	17
2.4 Direct and Indirect Measures.....	18
3. Measuring poverty.....	20
3.1 Why income and not consumption?	20
3.2 PPP-based measures	22
3.3 Income per capita and median income	23
3.4 Considering household units and disposable income	24
3.5 Aggregation and Composite Indicators	26
4. Examining poverty measurement in different European Regions.....	27
4.1 Data and Methodology	28
4.2 Results and Discussions.....	31
5. Conclusion.....	42
References	44

List of Figures

Figure 1 People at risk of poverty after social transfers.....	31
Figure 2: CEE People at risk of poverty (% of population)	32
Figure 3: Norway People at risk of poverty (% of population).....	33
Figure 4: Early leavers from education and training, age group 18-24 (%).....	34
Figure 5: Expenditure on social protection (% of GDP).....	34
Figure 6: In work at-risk-of-poverty rate (% of employed people).....	35
Figure 7: Population in dwelling conditions (%)	36
Figure 8: Overcrowding rate by poverty status (%).....	37
Figure 9: Population unable to keep home adequately warm by poverty status (%)	37
Figure 10: Scatter plot of People at risk of poverty and expenditure on social protection	38

List of Tables

Table 1: Variables and Measurement.....	28
Table 2: Pairwise Correlations	38
Table 3: Pooled Panel OLS regression for CEE countries	40

Abstract

Keywords: absolute and relative poverty, social welfare expenditure, socioeconomic factors, poverty measurement techniques

This study explores the multidimensional nature of poverty, covering theoretical foundations and various measurement techniques, including income-based, consumption-based, and multidimensional approaches. Challenges and biases in poverty measurement are discussed. The scientific question focuses on the multidimensional determinants of poverty in Central and Eastern European countries and Norway. The analysis primarily utilized a quantitative approach to enhance the rigor of the investigation. The model employed aimed to examine the factors influencing the poverty rate during the study period of 2010-2022. The importance of considering factors like education, housing, and social welfare programs is highlighted. The case study countries reveal the significant impact of socioeconomic indicators on poverty rates, highlighting the importance of balanced social assistance programs and education in poverty reduction efforts.

Introduction

This study delves into the multifaceted nature of poverty. Poverty has long been the subject of heated scholarly debate, resulting in significant divergence within the academic community. Various scholars have investigated and critiqued various elements of poverty, resulting in disparate theoretical frameworks and methodological approaches. However, to effectively address the difficulties of poverty, it is vital to understand what each assessment method entails and how they are biased. So, in this study, I'll attempt to answer the following scientific questions:

- What are the difficulties and biases in measuring poverty?
- How do socioeconomic factors influence poverty in highly developed and moderately developed countries, using Central and Eastern European countries and Norway as examples?

Remarkably, the specific comparative analysis of these countries, in the manner proposed, represents a novel scholarly endeavor. This unique comparative perspective promises to contribute valuable insights to the ongoing discourse surrounding poverty and the importance of socio-economic factors in addressing poverty.

The first section introduces the topic of poverty, including its prevalence and influence on individuals and societies. The theoretical roots of poverty are investigated using literature, including numerous definitions and the various elements that contribute to it. The distinction between absolute and relative poverty is examined, as is the concept of multidimensional poverty, which takes health, education, and living standards into account. Multiple global poverty thresholds, such as national poverty lines, dollar-a-day poverty, hunger poverty, or other updated PPP-based poverty lines utilized globally, are discussed.

The second section focuses on the various techniques of measuring poverty and the biases that may follow. The benefits and drawbacks of various techniques, such as income-based measures, consumption-based measures, and multidimensional measures are introduced. The difficulties of comparing poverty between countries are also discussed, given the disparities in economic and social settings.

The third section explores the details of poverty measurement, such as the rationale of income-based measurements, the application of PPP standards, and the use of aggregated indicators. The section also discusses the relationship between poverty and economic growth and the importance of inclusive growth in reducing poverty.

The fourth section provides a case study that focuses on the multidimensional determinants of poverty in Central and Eastern European countries and Norway.

1. Defining poverty

In this chapter, the goal is to define poverty and build a theoretical framework that will serve as the basis for a statistical analysis aimed at highlighting the biases between different ideas and methods of measuring poverty.

Defining the concept of poverty is not an easy task, and first, I'd like to clear that there is no single 'concept' or definition for the phenomenon. It is debatable whether it should be approached in the simplest possible way, in a universal sense, or in a broader sense, as everyone

wants to come up with a definition that on the one hand explains why poverty still exists on such a scale in our globalized and developed world, and on the other hand points to a flaw in the system that can be corrected or an opportunity that offers hope for ending poverty.

Poverty is something that dates back as far as history does. There are mentions in the code of Hammurabi and the Bible of people suffering from poverty, and the general aim to help them as a moral obligation. Since then, the means we can help those in need and the moral and ethical standards developed a lot within economic and political development frames. Here I imply the transition from living in barrel societies into stitched systems, such as feudalism and capitalism. The aim of this process was, to put it brutally simple, to create a framework for coexistence that was as inclusive as possible. This organized coexistence has been defined as an economic system that has taken many forms over time, but the quality of these systems can be defined in terms of two characteristics keeping in sight the definition of poverty to call it a decent one. Once it has to secure the risk groups, be it the orphans and widows of Hammurabi or the unemployed or retired of the 21st century. Secondly, it should give all people an equal opportunity to enrich themselves within this system with a decent social welfare system. By which means this can be achieved is as argued as the definition of poverty, but we would like to clarify a more fundamental question first: What is meant by poverty?

Since we are focusing on the biases between different ways of poverty measurement, we need to look at the many definitions and insights to define the phenomenon in a simple way and one that also considers economic and social conditions and may require a broader vision.

A widely accepted term that is used by the United Nations is: “Poverty has various manifestations, including lack of income and productive resources sufficient to ensure sustainable livelihoods; hunger and malnutrition; ill health; limited or lack of access to education and other basic services; increased morbidity and mortality from illness; homelessness and inadequate housing; unsafe environments; and social discrimination and exclusion. It is also characterized by a lack of participation in decision-making and civil, social, and cultural life” (United Nations, 2010).

According to the UN’s perspective, poverty is defined by a broad range of social and environmental indicators besides economic ones. This perspective is essential when it comes to poverty reduction strategies and monitoring of the SDSs and MDSs, however, the representativity of this concept is argued by many. The definition of poverty is critical to

political, policy, and academic aspects as well, consequently, has been many times shaped to serve such purposes, and has been biased by doing so.

Although these concepts are controversial and no consensus definition describes the phenomenon in the following chapter, I'm going to introduce the most relevant concepts of poverty according to the literature. I'm going to introduce the definition of poverty according to the previously introduced aspects in this research on the concepts of recognized authors who laid down the base for poverty studies in the last decades, such as Nolan and Whelan, Amartya Sen, Ruth Lister, the more recent works of Andrew M. Fisher and other greatly cited authors mainly from the fields of economics, sociology, and political science, all this without claiming completeness.

1.1 Exploring Poverty: Key Concepts in the Literature

The conceptualization of poverty is mainly focused on two aspects: whether we should consider absolute or relative poverty (Lister, 2021). Here we differentiate between two extremes: the **absolute approach** which aims to find a universal and objective concept to determine the usual threshold and the **relative approach**, which tries to consider every factor associated with poverty, focusing on the disparities in income and living conditions within a particular social or economic setting.

The already-known definition used by the UN is a great example of the attempt to define poverty comprehensively. Relative poverty usually refers to a multi-dimensional concept, embracing all of the major spheres of life, such as living standards and activities, rights and equality, education, etc. It can have multiple meanings depending on what we call poverty even to the point that it is argued whether poverty even exists until defined according to the nature of different human needs.

One significant element regarding the relative approach lies in the comparative element, that it is only possible to judge whether someone is in poverty about other people living in the same society at the same point in history. This comparative element has 3 usual aspects according to Lister's work *Defining Poverty* back from 2021 (): the historical, cross-national, and intra-national approaches. However, there are some concerns regarding defining something only by comparing it to something else.

1. First, the **historical comparison** can be problematic because while driving up the living standards of the majority without considering what we are doing to those who cannot keep up, at a time when overall living standards are steadily rising and technological development is occurring quickly, we constantly create new forms of poverty. And by doing so we also underestimate the reproduction of poverty, which can be linked to many reasons, but I'd like to highlight the role of the state in this case, whose task is to lower this reproduction and give enough economic freedom for individuals to be able to avoid the state of poverty over generations.
2. Secondly, the **cross-national approach**: a great example is the global comparison between the South and the North, highlighting the extreme poverty that millions of people in the South endure, in contrast to the high living standards and rapid development of the wealthy North. The question arises: What works better in the North than in the South: Is it the economic system, the institutional framework, the cultural background, or the political establishment? These factors and the relationship between poverty and reproduction are discussed in more detail in the following pages. It is argued that in a globalized world, where nations are more interconnected, it is vital to understand the relativity of need concerning global resources as well as domestic resources, with Purchasing Power Parity (PPP) based indicators serving as a valuable tool for this purpose.
3. Thirdly, the **intra-national approach** mainly places poverty in the context of inequality within society (Lister, 2021). The system in which a group of people chooses or is forced to live, namely the economic system has a big say in how equally resources are distributed and redistributed. As many times seen these systems can not fit everyone in and are not necessarily just, hence inequality is inevitable. It is debatable whether some economic systems are fit to be able to reduce this reproduction or just happen to widen the income and living standards gaps as the system evolves.

Peter Townsend defined it as the inability to access resources that would enable individuals to partake in customary activities and maintain living conditions in line with societal expectations. Townsend's stance, although grounded in some objective standards of deprivation, acknowledges the relative nature of poverty concerning local norms and expectations (Townsend, 1979). The Townsend poverty index measures poverty and emphasizes the importance of **relative deprivation and social exclusion** in addition to income levels. The

index is constructed from the following four census variables, each of which must be divided by the appropriate count of households or persons to obtain a percentage score: Households without a car, Overcrowded households, Households not owner-occupied and Persons unemployed. It takes a multidimensional approach to assess social inclusion, living standards and well-being of households (Townsend, 1979).

To give an example, poverty often leads to social exclusion, which also has a mental impact on an individual's life, on how they evaluate their abilities and opportunities, resulting in the belief that there is no way out of poverty (Fischer, 2018). This further increases the reproduction of poverty as such beliefs are passed on through generations. Secondly, even if it would be possible to determine indicators that measure the mental state and the damage done by it in this particular case, it would vary by each individual not to speak about cultural differences and social norms that are common in society.

As the above aspects are difficult and often impossible to measure, we often encounter absolute poverty. Absolute poverty lies on indicators that are modelled after and created as targeted tools to address absolute minimum standards, such as minimum income, purchasing power parity, or dollar-a-day poverty (Lister, 2021). Amartya Sen labelled this the 'absolutist core' of poverty. Sen argued for the importance of establishing absolute minimum standards, particularly concerning necessities like food and the prevention of hunger. However, Sen also emphasized the need for democratic processes within communities to identify essential functioning, thus adding subjectivity to the concept (Sen, 2000).

The absolute approach is often associated with mainstream agendas, such as the MDG's and SDG's. An absolute way to encounter poverty is **“hunger poverty”**, stating that someone is in poverty if cannot obtain 2100 to 2400 calories a day, along with some modest amounts of non-food necessities, determined by their daily income, which does not allow for an accurate or consistent assessment of their absolute basic needs (Fischer, 2018). This, however, raises some doubts: while it is true that wherever we are in the world, reaching a certain income threshold is necessary to be able to purchase enough food, one does not necessarily depend on the other in all cases. Let's take for example the developing southern countries that rely on agricultural economies, where it is not the usual practice to go to a supermarket to buy vegetables, but rather they are produced locally. If the harvest is good, everyone is well-fed, but if not, famine follows, so the minimum calorie intake is determined not so much by income but rather by external factors such as the number of sunny hours, amount of rainfall, or available resources. In this

case, it is not representative to determine poverty based on the minimum calorie intake that income allows, as the harvest may vary from year to year, regardless of whether these people's income has changed or if they had any income at all. Additionally, this measure is not that relevant in the richer economies of the West, particularly in well-established welfare states. There are social safety nets, government assistance programs, and public initiatives that aim to address food insecurity and hunger.

If we step one step away from hunger poverty to just defining poverty by minimum income, such a concept is the **"one dollar a day" poverty** threshold, a commonly used indicator of extreme poverty. The concept of the one-dollar-a-day poverty threshold was first introduced by the World Bank in the 1990s to measure global poverty. At the time, the World Bank defined extreme poverty as living on less than \$1.00 per day in purchasing power parity (PPP) terms (World Bank, 2022). As this concept tries to define it simply and universally it is highly debated and criticized for not being representative and is biased in many cases (Fischer, 2018). Take the example of a homeless person, let's assume that the country that he does this in is struck by an inflation crisis. If such a crisis occurs, prices in the economy begin to rise rapidly and uncontrollably, this can lead to a decrease in the purchasing power, making it more expensive for people to buy goods and services. So, it's more than likely that the beggar will get more money as well because in a sense everyone is giving them more money as it costs more to buy any basic food, so consequently we can say that the beggar has a higher income. It is even possible that his new 'inflation-adjusted' income exceeds the poverty threshold, and he is no longer considered poor. This would be a false statement since the living conditions of a given individual are more likely to have worsened than improved as the figures would suggest.

However, the **threshold is set by PPP**, which is meant to consider differences in the cost of living between countries and has been updated many times ever since, the new global poverty lines of \$2.15, \$3.65, and \$6.85 reflect the typical national poverty lines of low-income, lower-middle-income, and upper-middle-income countries in 2017 prices (World Bank, 2022). It has been criticized for being too low and not considering the full range of human needs, such as education, healthcare, and social services, which are essential for people to escape poverty and lead fulfilling lives, but this is an absolute concept, so it is shaped to take those factors into account. Despite its limitations, the one-dollar-a-day poverty threshold remains a widely recognized measure of extreme poverty and has been used to track progress in reducing poverty around the world. According to the World Bank, the percentage of the global population living

in extreme poverty has declined significantly in recent decades, from 36 per cent in 1990 to 8.5 per cent in 2019, the latest data available (The World Bank, 2023).

And finally, the most used poverty measure is the **poverty rate** also known as the poverty threshold set by the national poverty line. The number of people in a certain age group whose income is below the poverty line is known as the poverty rate, which is calculated as half the median household income of the entire population. Additionally, it can be accessed by age group, including working-age poverty, senior poverty (66-year-olds or more), and child poverty (0–17 years old). Nonetheless, the relative income level of the poor may vary between two nations with identical rates of poverty (OECD, 2015). This widely used measure encounters many biases, defining a national income line which gives the poverty rate isn't an easy task. Setting a line that takes into account the costs of different regions, the urban and rural disparities the inflation price changes and many more non-monetary aspects that would result in a more comprehensive view simply cannot be done, not to mention the biases that come because of governments wanting to end up with better results regarding the number of people living in poverty. However, it is a completely tangible indicator that gives a clear measure of the number of people living in poverty and is therefore widely used around the world (Atkinson, 2019).

A common argument stands that absolute poverty measures are deemed more suitable for impoverished countries where many individuals face severe constraints regarding food scarcity and hunger. In contrast, relative poverty measures find greater relevance in wealthier nations, where very few people experience absolute deprivation of necessities. In these contexts, relative poverty focuses on disparities in living standards, social participation, and access to resources rather than mere survival (Fischer, 2018).

In sum, the debate over absolute and relative poverty underscores the intricate nature of poverty itself and the necessity of considering both perspectives to develop effective policies and interventions that address the diverse challenges individuals and communities worldwide face. Based on the above listed statistical measures I would like to find out how distorted these are, how many people are living in need without us realizing it and who is receiving help without needing it.

1.2 Classical and Neoliberal Theories

Now as in every scientific concept the traditions about the most important aspects of poverty and the way the phenomena should be statistically measured change as well.

The early economic ideas of the 18th and 19th centuries served as the foundation for the classical understanding of poverty. According to Fischer, it is mostly related to the writings of economists like David Ricardo and Thomas Malthus (Fischer, 2018). According to classical traditions, people decide over their lives and are largely accountable for their fate, hence living in poverty is a result of their own, individual choices. This can be rooted in many things like forming single-parent families, lack of appropriate role models, or unemployment (Davis & Sanchez-Martinez, 2015). Therefore, the classicist tendency sees the cause of poverty in the acts of the individual, not the political or economic system of a given state nor a structural problem that should be treated at the level of the system.

Neoclassical views are more comprehensive and acknowledge causes of poverty that are not beyond people's control. These include the absence of both social and private assets, market imperfections that prevent the poor from accessing credit markets and render some unfavorable decisions reasonable, obstacles to education, immigrant status, ill health, and advanced age, as well as obstacles to employment for single-parent families (Davis & Sanchez-Martinez, 2015).

The Keynesian or **neoliberal perspective**, as advocated by the new Keynesians, places a strong emphasis on the role of government in addressing poverty. This school of thought views poverty as a problem that can be tackled through targeted government intervention and the provision of public goods. They believe that a more equal income distribution is essential to enable disadvantaged groups to participate in essential activities. In alignment with neoclassical economists, new Keynesians also emphasize the significance of overall income growth as a key element in poverty reduction. They stress the importance of publicly provided capital, including education, as the foundation for economic prosperity. Furthermore, they see unemployment as an involuntary issue that necessitates government action, along with addressing macroeconomic factors such as inflation, sovereign debt, and asset bubbles to combat poverty and promote economic stability (Davis & Sanchez-Martinez, 2015).

From a structuralist view a phenomenon that is more specific to some political economic, and social factors than others, the classical approach focusing on the individual is not appropriate.

The neoclassical approach, working from a broader perspective, is suitable for evaluating poverty in structural analysis as well as the Keynesian school. These two schools of thought have different perspectives on how economies work and the role of government intervention, but they can be integrated to create a more nuanced view of poverty dynamics.

1.3 Structuralist and Political-Economic Approach

This approach looks for the causes and sources of poverty in structural factors such as the economic or political system. Therefore, stands closer to the aimed conceptualization which links the reproduction of poverty to certain characteristics of the economic system. It is often referred to as critical poverty studies. The term "**critical**" in this context does not refer to post-structuralism but rather to the more traditional political economy tenet that demands that we critically examine our theoretical, normative, and ideological presuppositions from the outset and how they are incorporated into our paradigmatic conceptions of, in this case, poverty, and development. (Fischer, 2018). The main idea is that as the phenomenon of poverty is transforming and reproducing over time as a consequence of development, it can be only fully understood in a broader holistic perspective, that involves the creation and division of wealth within and across societies.

The problem is that classical economics does not deal with the distribution of capital, they don't aim to understand the distribution of wealth within an understanding of growth. However, the human-capital model or the model of Solow and Kuznets Curve are examples of economic models used to explain income distribution and inequality but they do not necessarily theorize growth, except by way of the efficiencies gained through a static reallocation of inputs based on comparative advantage (Fischer, 2018). Comparatively, political economy refers to the concept that distribution and its relationship to production—and thus, economic growth—are fundamentally political and institutional.

The term "**structuralist**" refers to an understanding of the economy in terms of its articulations and patterns of integration and circulation, of where value is created and how it is created, and with the knowledge that structural change is typically required for sustained economic growth and the reduction of poverty, this change is primarily fueled by rising labour productivity (Fischer, 2018). Fisher states that the aim should be to reduce inequality and poverty and work for improved "inclusion" of marginalized groups in growth or development, ideally without

undermining their agency, autonomy, or dignity, as is frequently the case in governmental projects directed at such groups-

1.4 Politics of Poverty Studies

When it comes to operationalizing and statistically analyzing poverty three types of politics must be mentioned surrounding poverty: the politics of representation, the politics of prioritization, and the politics of conception and production (Fischer, 2018). These politics determine the indicators that a government uses to observe poverty and also the means they are going to use to fight it in the hopes of development and poverty reduction. Each of these dimensions' sheds light on the complexities and nuances surrounding the discourse on poverty and development.

The **politics of representation**, often associated with neoliberal perspectives, delve into interpretations of colonialism, occupation, and their implications for poverty. Fischer points out that the international debt crisis in the early 1980s, coupled with a radical shift toward right-wing economic ideologies, marked a turning point in global economic policies. Subsequently, the 1990s witnessed a wave of reforms characterized by deregulation and privatization, with debates centered on whether these neoliberal reforms were genuinely improving the well-being of impoverished populations. Whether the higher market concentration, higher prices, and the overall stimulation of the free market led to a more just and equal wealth distribution or ended up making it all worse. These discussions spilt over into the Millennium Development Goals (MDGs), further shaping the global discourse on development (Fischer, 2018). The default strategy for domestic resource mobilization often involves regressive measures like value-added taxes, lacking ambitious redistribution agendas (Fischer, 2018). Moreover, the debate over income status thresholds tends to pit growth against redistribution. The emphasis on growth in poorer countries, driven by the idea that wealth creation should take precedence over wealth redistribution, shifts the discourse towards poverty reduction through productivity enhancement, often framed in terms of market efficiency rather than government intervention.

It is argued that the focus on thresholds as indicators of fundamental change can divert attention from the historical success stories where simultaneous or closely sequenced public interventions in both redistribution and production have been observed. Unfortunately, this view has been coopted by conservative agendas, sidelining the importance of redistribution, even within the discourse of the Left in development studies (Fischer, 2018).

Moving beyond the politics of representation, the **politics of prioritization** suggests that the primary objective of development efforts should be poverty reduction. Barbara Harriss-White's work emphasizes that poverty can be explained within the framework of market imperfections, a concept rooted in Keynesian economics, which has implications for how development goals are formulated, since it requires a new and economically structured approach, using indicators like income inequality employment and unemployment, wage and price levels and market competition (Harriss-White, 2006). This concept puts the reduction of poverty in a more comprehensive and complex picture, where the mechanisms of the economy must be analyzed carefully to be able to adapt the appropriate measures.

Finally, the **politics of conception** and production, emphasize that the challenge lies not in defining poverty but in operationalizing it. In this sense, poverty is essentially a study of human needs in terms of a lack of means or outcomes relative to some minimum social or subsistence standard. While poverty is understood as multidimensional, its measurement often tends to be unidimensional for practical reasons (Fischer, 2018).

The myriad definitions of poverty in the literature primarily revolve around specifying standards, outcomes, and means. These dilemmas are compounded by the need to make choices about the criteria for both means and outcomes in poverty measures, which further complicates the discourse surrounding poverty and development.

In summary, Fischer's examination of the politics of poverty and development highlights the multifaceted nature of these issues, encompassing representation, prioritization, and the challenges of defining and measuring poverty in a rapidly changing global landscape. It stresses the importance of defining exactly what we mean by poverty in this study and what indicators we will use in the analysis because these decisions themselves determine the meaning and bias of the results we are going to obtain (Atkinson, 2019).

2. Pathways of poverty analysis

The study of poverty encompasses a diverse array of approaches that grapple with the precise conceptualization and operationalization of this complex issue. These various approaches offer distinct lenses through which poverty can be understood and addressed. Some of the most significant approaches according to Anthony B. Atkins include:

Income/Expenditure Approaches (Money-Metric Approaches): These methods focus on monetary measures, such as income and expenditure, as indicators of well-being and poverty. They assess individuals' financial resources to achieve a certain standard of living. These are highly favorable when it comes to statistical analysis because the data is already provided by the National Accounts, although there is still an ongoing debate about whether approaching the problem by measuring consumption would give a more reliable result. The one-dollar-a-day" poverty threshold belongs here for example.

Basic Needs Approaches: Basic needs approaches emphasize the fulfilment of essential human needs, such as access to food, clean water, healthcare, and education. Poverty is seen as the inability to meet these fundamental requirements. It provides insight into how the international poverty line is set. This approach was usually used in rich countries. However, how these fundamental needs should be measured so that they do not give biased results is debated in the scientific society. Hunger poverty is such a measure.

Entitlement, Capability, and Multidimensional Approaches: These approaches delve into the entitlements individuals have, the capabilities they possess, and a multidimensional view of poverty that considers various dimensions of well-being beyond just income. The Multidimensional Poverty Index (MPI) developed by the United Nations can be counted here, it takes health education and standards of living into account all represented by multiple indicators.

Asset, Livelihood, and Participatory Approaches: These approaches consider individuals' assets, livelihoods, and participation in economic and social activities as factors in assessing poverty. They look beyond monetary measures to understand how people engage with their communities and resources.

Social Exclusion Approaches: Social exclusion approaches examine the processes by which individuals or groups are marginalized or excluded from participating in societal activities. Poverty is viewed as a form of social exclusion, as it is also represented by the works of Townsend (Ferragina, et al., 2013).

Gender Approaches: Gender perspectives highlight how poverty affects women and men differently and explore the gender-specific dimensions of poverty, including disparities in access to resources and opportunities. Except for the nutritional needs, the research does not cover this topic.

Wellbeing Approaches: Wellbeing approaches consider individuals' overall sense of well-being, happiness, and life satisfaction as indicators of poverty or prosperity. These are often measured on a systematic level, and recent trends are rather focused on such aspects, so the well-being of a country and the way it should be measured will be encountered later.

In the next chapter, we will elaborate on the approaches relevant from the perspective of structuralist analysis, which will provide the theoretical background for the indicators we are going to use for our analysis.

2.1 Consumption and Basic Needs

The concept of basic needs is something that already came up in this study multiple times regarding the definition of poverty. However, the exact definition and how it can be quantified and measured has not yet been determined. The concept of basic needs to measuring poverty is a complex process involving three main steps:

1. **Determination of Nutritional Requirements:** This initial step involves calculating an individual's daily calorie requirements, considering variations in age and gender. Various organizations, such as the World Health Organization (WHO) and the Food and Agriculture Organization (FAO), provide guidelines for calorie requirements. Importantly, these requirements are not fixed but depend on the level of physical activity assumed, ranging from sedentary to highly active lifestyles (Atkinson, 2019). The concept of hunger poverty is based on the minimal nutritional requirements as well.
2. **Conversion into a Food Budget:** The calculated nutritional requirements are then translated into a food budget, considering the nutritional content of different foods and their associated costs. This step aims to secure the necessary calories and nutrients at the lowest possible cost, given the prices of available food items (Atkinson, 2019).
3. **Incorporation of Nonfood Items:** The final step involves accounting for nonfood items. There are multiple methods and considerable discretion in this step. One approach is to consider total consumption, including both food and non-food items, to determine a poverty line. This can be achieved by multiplying food consumption by the reciprocal of the food share (e.g., if half of a household's consumption is spent on food, it's multiplied by 2).

Alternatively, the food share can be estimated separately (e.g., 0.33 in the United States), leading to different multipliers in different regions (e.g., 2 in Brazil and 1.43 in Georgia).

One notable consequence of this approach is that nutritional requirements are typically set lower for women than for men, potentially resulting in a lower poverty line for women. Moreover, the Basic Needs Approach recognizes that basic needs are not constant and vary based on factors like occupation and physical activity. For instance, jobs that involve physical labour may require higher calorie intake than sedentary desk jobs.

However, this approach faces challenges. It lacks a purely physiological foundation since judgment is exercised at each calculation stage. Additionally, implementing it consistently over time raises significant issues, particularly concerning nonfood and food components. This complexity poses a significant obstacle to using the Basic Needs Approach for monitoring poverty and progress.

In conclusion, while the Basic Needs Approach provides a structured framework for measuring poverty, it involves several subjective decisions and considerations, making it a nuanced and challenging method for assessing and tracking poverty levels.

2.2 Money metric measures

The concept of money-metric measures is primarily concerned with monetized incomes. Income and expenditure measures are often referred to as 'monetary' measures, with the choice of money as the common unit, driven by the logic that income remains a primary concern and a strong indirect indicator of poverty. Monetary measures are the most restrictive forms of poverty measurement, additionally are the most scientific or objective, at least in theory, if used properly. Political and ideological are readily adaptable to many purposes (Fischer, 2018).

Conventional income or expenditure surveys, especially in rural settings, are designed to record all sources of livelihoods, including both monetized (such as selling crops for cash or wage labour) and non-monetized sources, often termed as 'income in kind' or 'own consumption.' These non-monetized sources are seen as 'subsistence production,' where households directly consume a significant portion of what they produce and supplement their consumption through various means, including selling surplus or other income sources (Nolan & Whelan, 1996).

Debates arise, particularly in feminist and gender studies literature, regarding what should be included or excluded in the calculation of non-monetary incomes, especially unpaid domestic work (Nolan & Whelan, 1996). The central question from a poverty evaluation perspective is whether such work should be considered income augmenting consumption or an input necessary to realize income. It's essential to recognize that ascribing a monetary value to something does not necessarily imply a substantive improvement in poverty or its reduction; for example, slave labour can be monetarily valued without improving the condition of the enslaved individual.

Using a unidimensional metric does not mean that only one dimension is being measured, but rather various dimensions must be converted into a common unit for evaluation purposes. These measures yield precise, seemingly objective, and scientific statistics, facilitating comparison and analysis using advanced statistical techniques. Money-metric measures remain a valuable means of aggregating within one critical dimension of poverty, among several imperfect options. Adding different dimensions and elements to better reflect well-being or other objectives can dilute the original information, obscuring or even losing its essence (Atkinson, 2019).

Standard absolute money-metric poverty measures are susceptible to underestimating absolute poverty over time, primarily due to declining terms of trade for food, which accentuates non-food essential needs. Additionally, the shift towards commodified consumption, especially during the era of commoditized social provisioning like the privatization of health and education, further complicates these measures. They exhibit bias against universalistic and decommodified forms of social provisioning, potentially reflecting greater commodification as an improvement in poverty under certain conditions (Fischer, 2018).

In the context of various welfare and social provisioning systems, the suitability of absolute lines for poverty measurement is questionable. Differences between systems with universalistic provisioning, free at the point of use, and those with user fees and stratified privatized provisioning cannot be resolved through comparative poverty measures alone, necessitating social and political debates about the kind of societies we wish to inhabit together (Lister, 2021).

Furthermore, addressing the crucial question of social needs and broadening the scope of what should be included in the basket used to set the poverty line requires nuance, context specificity, and a departure from the World Bank's historic reluctance to adopt such approaches. Money-metric approaches to measuring poverty, often regarded as the most precise and restrictive

methods, serve as the cornerstone of various development goals adopted by most international organizations. However, it's essential to recognize that even these seemingly precise approaches are inherently arbitrary in their ability to reliably indicate whether basic needs are being met and how this might be changing over time (Fischer, 2018).

For instance, consider the World Bank's widely recognized "\$1 a day" poverty line. While this metric may appear straightforward, it essentially shifts the problem into a classic quandary. Are poverty trends over time a reflection of actual changes in people's well-being, or are they merely errors resulting from adjustments and even conceptual flaws within these measures (World Bank, 2022)?

The complexity deepens when we apply these measures to the real-world dynamics of policymaking and the distribution of benefits and poverty relief (Fischer, 2018). Here, the problems inherent to poverty measures become compounded by intricate social and power relations. Poverty lines, in this context, need to be understood primarily as outcomes shaped by complex processes of political contestation and the balance of power among various competing factions with vested interests in influencing these measures.

In essence, while money-metric approaches offer a seemingly precise way to measure poverty, they should not be taken as definitive or absolute indicators of well-being. Instead, they should be understood within the broader socio-political context where power dynamics and competing interests often play a significant role in shaping how poverty is defined and measured.

2.3 Multidimensional measures

While monetary measures are commonly used, they are inherently arbitrary and relative, particularly when it comes to setting thresholds. An ongoing dilemma exists regarding how to address public goods like health and education, as well as how to evaluate their outcomes, which are challenging, if not impossible, to monetize. Notably, health and education expenses are excluded from the calculation of the money-metric poverty line (Fischer, 2018).

To address these issues, multidimensional measures of poverty have gained traction, drawing inspiration from the capability approach championed by Amartya Sen. These measures aim to bridge the gap between income poverty and broader human development outcomes. They are informed by various direct measures of poverty and well-being, derived from fields such as epidemiology, nutrition, and education (Ferragina, et al., 2013).

Among the key direct measures of well-being, three stand out: infant mortality rate, life expectancy at age one, and literacy rate. However, the radical stance of excluding income or wealth measures has not been consistently followed in subsequent multidimensional indices, most of which incorporate some form of income or wealth indicator. For example, the Human Development Index (HDI) by the UNDP includes GDP per capita. The inclusion of income or wealth measures in such indices serves various purposes, such as highlighting disparities between economic and human development indicators and demonstrating the impacts of crises and austerity measures (Fischer, 2018).

One notable development is the **Multidimensional Poverty Index (MPI)**, which represents an advancement in composite indicators for human development. It challenges the dominance of money-metric measures in global comparisons and was pioneered by Sabina Alkire. However, it's important to note that these multidimensional measures don't fundamentally solve the issues associated with money-metric poverty lines because many of these problems stem from the use of thresholds, regardless of their nature. Additionally, multidimensional poverty lines can make poverty measurement more complex and arbitrary, potentially reinforcing the political implications discussed earlier (Fischer, 2018).

Furthermore, there's a fundamental supply-side bias inherent in these multidimensional approaches, especially as they transition from entitlement to capability-based approaches, drawing from Amartya Sen's work. This bias is rooted in the idea that supply creates its demand, assuming free market dynamics. The mainstream acceptance of these approaches may partly stem from their alignment with this supply-side bias. However, there has been a tendency to overlook the precise mechanisms of delivering human development, potentially perpetuating inequalities, and social stratification in segregated social provisioning systems (Sen, 2000).

In essence, these multidimensional measures have raised questions about their true value compared to the alternative of using a range of disaggregated indicators. Additionally, there has been a subtle shift from entitlement to capability approaches in the work of Amartya Sen, reflecting a transition from a more Keynesian to a more neoclassical theoretical stance.

2.4 Direct and Indirect Measures

These diverse approaches reflect the multifaceted nature of poverty and the need to consider various dimensions and factors when studying and addressing it. Within these approaches, methodologies can be categorized as either direct or indirect measures: Direct measures involve

the assessment of actual outcomes or conditions, such as undernutrition or housing quality, which can be observed or quantified directly. Indirect measures use proxies for outcomes or focus on the means (e.g., income or expenditure) that are assumed to lead to those outcomes. For instance, income poverty lines are indirect measures of overall well-being, assuming that sufficient income will result in adequate living standards (Fischer, 2018).

It's essential to recognize that insufficient means do not always translate into substandard outcomes. For example, impoverished children may excel academically under certain conducive circumstances. Amartya Sen's contributions, particularly through the capability approach, shed light on the complex relationship between means and ends. This approach highlights situations where sufficiency in means does not guarantee sufficiency in outcomes, or where sufficient basic outcomes do not necessarily lead to broader social functioning (Sen, 2000).

Moreover, the concept of relativity in poverty assessment does not equate to subjectivity. Relativity often involves relative comparisons, central to subjective perceptions of poverty. Subjective measures refer to individuals' perceptions of their poverty status. These subjective approaches are closely linked to participatory methods, which involve external mediation in revealing subjectivities, and anthropological approaches, which involve less external mediation but rely more on the researcher's subjectivity (Fischer, 2018).

Within this myriad of concepts and measures, selecting a specific set of concepts and measures is just one layer of complexity. Methodological and epistemological issues related to social and economic measurement add further layers of complication to the study of poverty. These challenges highlight the intricate nature of poverty analysis and the ongoing pursuit of a more comprehensive understanding of this pressing global issue.

3. Measuring poverty

3.1 Why income and not consumption?

In poverty studies focusing on the income of individuals or households rather than on their consumption is not evident. This part explores the distinction between "consumption" and "income" as metrics for poverty assessment. It also delves into the challenges posed by incomplete data coverage and the need for non-monetary indicators to complement monetary ones. It highlights differences in assessing poverty concerning durable goods and presents empirical evidence of how the choice between income and consumption metrics can impact poverty estimates, especially in high-income countries. In the realm of poverty measurement, particularly in high-income countries, the choice between "consumption" and "income" as the primary metric raises critical issues. This text aims to shed light on these issues and their implications for poverty assessment in affluent nations (Atkinson, 2019).

The first and most obvious reason to use income instead of consumption is that income is a direct measure of the monetary compensation individuals receive for their labour efforts. It includes wages, income from self-employment (such as from a farm or a profession), investment income, government transfers (like unemployment benefits, disability allowances, and state pensions), and private transfers (such as private pensions, remittances), net of taxes and social insurance contributions, but also the value of household production less any costs incurred and in-kind transfers (Atkinson, 2019). Measuring labour in income is straightforward because it directly reflects what individuals earn from their work. Consequently, the resources a household has to be able to convert their basic needs. However, the ideas go much deeper than just "money in" and "money out."

Secondly, income reflects the actual cash flow into individuals' or households' budgets, allowing for a clear understanding of the financial resources available for consumption, saving, and investment. This perspective is crucial for assessing an individual's or household's ability to meet immediate needs and measure a household's or individual's potential spending power. It provides insights into their ability to participate in the economy, cover basic needs, and engage in discretionary spending (ILO, 2019). Moreover, income can be measured more consistently, and the data gathered is more comparable. Income data are often more readily available and consistently collected through regular surveys, tax records, and other administrative sources.

This makes income a more accessible and comparable metric across different populations and periods, facilitating cross-country and longitudinal analyses.

A key distinction between income and expenditure arises when considering durable goods. Household welfare often results from the use of durable items, such as refrigerators or cars, rather than the initial purchase cost. Consequently, expenditure data may not capture the ongoing benefits of these possessions. Imputed rent, representing the value homeowners would receive if they rented out their homes, adds another layer of complexity. Deciding whether to include imputed rent data in poverty statistics can further influence the perception of welfare (Atkinson, 2019).

The widely recognized \$1-a-day-per-person poverty line illustrates the complexity of the choice between income and expenditure as the primary indicator. Take, for example, a family of four earning \$7 a day; on an income basis, they fall below the poverty line. However, if they receive in-kind assistance valued at \$1 a day, they may be considered above the poverty line. This disparity highlights how the perception of poverty can vary based on the chosen metric (Atkinson, 2019). In essence, the income approach underscores the importance of having a minimum income level, which is considered a prerequisite for participation in a particular society. If this minimum threshold for a family of four is set at \$7.60 per day, and the family's earned income is only \$7, they are classified as poor, despite receiving assistance. In this context, their resources fall short of the established threshold.

Countries often employ income-based measurements to gauge poverty, particularly in regions like Latin America, the Caribbean, and Malaysia, where income surveys are more readily available than expenditure surveys (Atkinson, 2019). The European Union has also shifted its focus toward income-based poverty measurement. In practice, the choice between income and expenditure data can lead to divergent estimates of poverty. For instance, in Mexico in 2012, the proportion of the population below the \$1.90-a-day threshold was 5.9 per cent based on income, but only 2.7 per cent based on consumption, using the same poverty line. These variations underscore the nuances and challenges inherent in measuring poverty and assessing the well-being of individuals and families worldwide (Atkinson, 2019).

In conclusion, the choice of whether to measure poverty using income or expenditure data is a critical decision with far-reaching implications. It shapes how societies understand and address poverty, emphasizing the multifaceted nature of this complex issue. But from a research point

of view and for the reasons mentioned above, we will refer to income as a key indicator of poverty.

3.2 PPP-based measures

Purchasing Power Parity (PPP) is an economic concept used to adjust exchange rates between two currencies to account for differences in price levels between countries. It reflects the relative value of currencies in terms of the same basket of goods and services. PPP-based measures play a crucial role in comparing poverty standards across different countries and regions, helping the money-metric measures to get closer to being universal. They acknowledge that simply converting dollars into the local currency at market exchange rates to determine the International Poverty Line for a specific country is insufficient. Instead, these measures consider the varying purchasing power of money, which can significantly differ from one place to another (Atkinson, 2019).

To illustrate the concept of PPP indices, consider a practical example: the Big Mac index published by The Economist. In India, with 168 rupees, someone can purchase two burgers, while in the United States, the same amount would barely buy one burger when converted to \$3.60 at market exchange rates. This example highlights that the value of a given amount of money in India is considerably higher than in the United States when using the price of a Big Mac as a benchmark (Atkinson, 2019).

The World Bank categorizes countries into different development levels based on Gross National Income (GNI) per capita using the Atlas method, which is influenced by market exchange rates. However, PPP measures offer an alternative perspective by presenting the ratio of GNI per capita measured in PPP dollars to that measured at market rates. India, for instance, ranks among the countries with the highest PPP values, with GNI per capita in PPP dollars being 3.8 times greater than when using the Atlas method. This suggests that using PPPs tends to narrow the relative income gap between lower- and higher-income countries.

Nevertheless, the application of PPP measures faces challenges. One challenge arises from variations within households, where PPP indices are estimated for different national account categories. Additionally, there are criticisms that standard PPP rates may include items irrelevant to absolute poverty measurement, as they are mainly consumed by wealthier individuals or in affluent nations (World Bank, 2022).

Another concern involves calculating equivalence scales, which determine how a household's income is distributed among its members. While one approach is to simply divide household income by the number of members (per capita adjustment), this method may not adequately account for economies of scale and other factors. Different countries may employ diverse equivalence scales to adjust poverty estimates, considering variables like age and gender. For example, some nations differentiate in their poverty calculations, assuming that children have distinct needs compared to adults (Atkinson, 2019).

It is also important to acknowledge that people with disabilities may incur higher living costs to achieve an equivalent quality of life compared to others. These factors further add complexity to poverty measurement, underscoring the intricacies involved in assessing economic well-being and social welfare.

3.3 Income per capita and median income

The amount of money made by each resident of a region (such as a nation, state, city, or other location) is measured by the area's per capita income. It establishes the typical income of a person in a nation, a state, or a particular area. This enables us to assess the living conditions and overall standard of living of the local populace (The Economist Times, 2023). The calculation formula is the following: $\text{Income Per Capita (PCI)} = \frac{\text{Total Income of the Area}}{\text{Total Population of the Area}}$. To determine the Gross National Income per Capita, we have to take into account the Gross Domestic Product Per Capita along with the value generated by the people of a country living abroad. The results are usually expressed in monetary terms, typically the local currency, per year. Low per capita income generally translates to lower average income and a worse standard of living for residents of a nation or region. (V. Sibirskaia, et al., 2019).

Income per capita is often compared to a predetermined poverty threshold or poverty line. If an individual's or household's income falls below this threshold, they are living in poverty. From an absolute approach, the poverty line is set at a specific income level that is considered the minimum required to meet basic needs, like \$2.15, \$3,65 or 6,85\$. From a relative aspect, the poverty line is set as a percentage of the median income in a specific country. Individuals or households earning less than a certain percentage (for example, 50 per cent or 60 per cent) of the median income are considered below the poverty line. The median income is the middle value in a list of incomes when they are arranged in numerical order. In other words, half of the incomes are below the median, and half are above. It is a great measure to reflect the income of

the middle household or individual in a population, giving a better understanding of the average person's earning potential (Kirken Bymisjon, 2019).

However, income per capita can be used to assess relative poverty based on the line set by the median income, where individuals or households are considered poor if their income is lower than 50-60 per cent of the median income within the society or community (The Economist Times, 2023). One of its biggest perks is that it is often collected and reported by government agencies, international organizations (such as the World Bank and the United Nations), and research institutions (World Bank, 2023). It relies on income surveys, tax records, and other economic data sources and is repeated periodically so income per capita trends over time can provide insights into a country's economic growth and changes in poverty rates. Additionally, governments and policymakers often use income per capita data to design poverty alleviation programs, set minimum wage levels, and make decisions related to social welfare and economic development (The Economist Times, 2023).

But despite its advantages, it is important to note its limitations: first of all, it does not take inflation into account, although, consumer purchasing power is reduced by inflation, which also restricts income growth. Plus, the estimations of per capita income do not take into account any individual savings. A person may have substantial wealth from savings, which he uses to maintain a good standard of living yet only has a meagre salary, and the factors like the standard of the workplace, literacy rates, and overall health benefits are not taken into account in the computations (The Economist Times, 2023). However, it should be used in conjunction with other indicators and considerations to provide a comprehensive understanding of poverty, especially when addressing issues related to income inequality and the multidimensional nature of poverty.

3.4 Considering household units and disposable income

Households are fundamental units of analysis in poverty studies, they are the basic consumption units where individuals and families live, interact, and share resources. Poverty manifests differently in various households, some may be single-parent families, others multi-generational, and each situation presents unique challenges since households are responsible for managing resources such as income, food, healthcare, and education. Consumer units are defined in richer countries as follows: a factor of 1 is assigned to singles; a factor of 1.5 is assigned to couples without children; and a factor of 0.3 is assigned to each dependent child.

The sum of these variables represents how various household types spend their resources. A couple providing for two children would have a factor of 2.1 ($1.5 + 0.3 + 0.3$), whereas a single-parent home with two kids would have a total factor of 1.6 ($1 + 0.3 + 0.3$). The low-income limit varies depending on the makeup of the household because it is set per consumer unit.

The representation of households is done by the concept of income, and the concept of income as it is typically understood in economics is most closely resembled by disposable income. Disposable income, also known as net income or after-tax income, is available to households, such as wages and salaries, income from self-employment and unincorporated businesses, income from pensions and other social benefits, and income from financial investments, is referred to as household disposable income (HDI) (OECD, 2023). It is calculated the following way: $\text{Disposable Income} = \text{Gross Income} - \text{Taxes} - \text{Social Security Contributions} + \text{Government Transfers}$. Gross income is the total of all sources of income, including self-employment income, rental income, and income from investments. Because of taxes, the gross income is decreased by income taxes, social security taxes, and other required deductions. It is also reduced by contributions to social security programs required by the Social Security Act. Plus, government transfers must be extracted too, these include social assistance, food stamps, and other monetary or in-kind benefits that are given out by the government. They raise available money (V. Sibirskaya, et al., 2019).

While disposable income is a valuable metric for assessing poverty, it is essential to acknowledge its limitations and consider additional factors when evaluating economic well-being. Disposable income may not fully capture a household's access to non-cash benefits, such as subsidized housing or healthcare. Plus, regional variations in the cost of living are not always reflected in disposable income calculations. Some areas have higher living costs, which can impact the ability to meet basic needs (Fischer, 2018).

But to sum up, disposable income is a more meaningful indicator of an individual or household's economic well-being than gross income because it reflects the resources available to them for consumption and savings. Poverty thresholds or poverty lines are typically set based on disposable income levels reflected on the size of households, as they represent the income needs to meet their basic needs. Poverty is often defined in terms of disposable income, with individuals or households falling below a certain disposable income threshold considered to be living in poverty. When measuring poverty, adjustments are often made for household size and composition. Larger households typically require more income to meet their basic needs. This is done by using equivalence scales to adjust for differences in household size and composition

(Atkinson, 2019). As data sources Governments and statistical agencies collect data on disposable income through income surveys and tax records.

3.5 Aggregation and Composite Indicators

Composite indicators, which encompass various social indicators or dimensions, are commonly used in poverty measurement. These indices combine multiple indicators into a single continuous index, enabling the establishment of a threshold against this index. This aggregation poses methodological challenges because each indicator is typically measured in different units, or even if measured in the same unit, the unit can hold distinct meanings.

For instance, infant mortality is measured as the number of deaths of infants under one year old per 1000 live births each year, with rates varying from under five to over 100. In contrast, the child death rate considers the number of deaths of children aged one to four per 1,000 children in that age group. Maternal mortality, on the other hand, can be measured in terms of deaths per 1000 women aged 14 to 49 or deaths per 100,000 live births, further complicating the aggregation process (Fischer, 2018).

These complexities become even more pronounced when dealing with dimensions that employ units with entirely different meanings. Striking the right balance in selecting indicators is crucial. Including too many indicators can dilute the significance of more critical variables, while incorporating too few may result in the omission of vital information. Weighting decisions, similar to those encountered in money-metric poverty lines, also come into play, such as determining the appropriate weight to assign to food consumption within a basic need basket and, within food, how much emphasis to place on basic coarse grains.

4. Examining poverty measurement in different European Regions

After summarizing the theoretical framework it's obvious that poverty is a diverse phenomenon defined and measured in many ways, but one thing is certain: when we hear the word, we all think of a certain thing that makes life very difficult. But for how many people does this make life difficult and how?

According to Zamfir (2001), certain groups are particularly vulnerable to poverty, including children, single-parent families with more than three children, individuals residing in rural areas and relying on subsistence agriculture, the unemployed, retirees, and young people who are not engaged in the labour market and are not pursuing any educational or training programs (commonly referred to as NEETs) as well as the abandoned children.

Fiszbein et al. (2014) demonstrated that social protection spending in the European Union plays a crucial role in preventing millions of people from falling into poverty. However, while developing countries have the greatest potential to benefit from such expenditures, only half of them have managed to reduce the poverty rate through social protection programs. In addition, Kiendebeogo et al. (2017) showed that the number of individuals at risk of poverty tends to increase during periods of financial crisis. However, countries that allocate higher amounts of funding for social protection during these periods have successfully reduced the proportion of people at risk of poverty in the overall population.

Socol et al. (2010) provided evidence supporting an inverse relationship between the share of social protection spending in the gross domestic product (GDP) and the poverty rate after accounting for social transfers. Conversely, Deaton (2017) argued that while social aid programs have a different purpose, they do not eliminate poverty. Furthermore, Celik and Gumus (2016) found a negative relationship between poverty and social protection expenditure in the short term, but a positive relationship in the long run. These researchers have also established a negative relationship between public spending on education and poverty in both the short and long term. Klugman et al. (2002) highlighted that rural households are more likely to experience higher levels of poverty due to factors such as limited access to quality education, healthcare services, and inadequate infrastructure. It is essential to examine the influence of income sources, assets (social capital), and labour market participation rates on poverty as well.

Dreze and Khera (2013) calculated the impact of public spending on rural areas and demonstrated that such investments can effectively reduce rural poverty rates.

Khan et al. (2015) demonstrated that various factors, including employment rates, remittances, and agricultural employment, significantly contribute to the negative impact of poverty rates in rural areas. Polanyi (2013) identified several factors that contribute to an increase in poverty, such as cereal deficits, low wages in agriculture, the decline of independent farmers, reluctance to provide higher wages, and a lack of internal savings. Conversely, Christiaensen and Todo (2014) revealed that labour force migration from agriculture and rural areas can lead to a sustainable growth model and a more rapid reduction in the number of people at risk of poverty.

Lavrijsen and Nicaise (2015) revealed that young people from disadvantaged families face a higher risk of dropping out of school. The design of the education system (including age and vocational education breadth) and the socio-economic context (including poverty rates and unemployment) play a significant role in influencing school dropout rates. Kingston and Webster (2015) found that early school leavers, who often take up part-time, low-paying service jobs in sectors like hospitality and catering, are more marginalized and at a higher risk of poverty. Moreover, Merce et al. (2015) analyzed school dropout rates in Romania and found that poverty, particularly in rural areas, is a significant factor contributing to this problem. Their study indicates that school dropout rates are prevalent at the secondary, post-secondary, and university levels.

4.1 Data and Methodology

The data for this study came from two primary sources: Eurostat and the World Bank's World Development Indicators website and database. The selected variables were collected annually from 2010 to 2022 for Central and Eastern European countries including Hungary, Bulgaria, Romania, Slovakia, as well as Norway as a benchmark. Table 1 below outlines the variables and their measurements used in this analysis.

Table 1: Variables and Measurement

Variable	Measurement	Source
At-risk-of-poverty rate after social transfers	The share of persons with an equivalized disposable income below the risk-of-poverty threshold, which is set at 60 % of the national median equivalized disposable income (after social transfers)	Eurostat database (2023)

Early leavers from education and training, age group 18-24	% of the total of the same group	EuroStat database (2023)
Expenditure on social protection	Percentage of gross domestic product (GDP)	EuroStat database (2023)
Overcrowding rate by poverty status	Percentage of the population living in an overcrowded household	EuroStat database (2023)
Unemployment rate	Percentage of population in the labour force	EuroStat database (2023)
Rural population	Percentage of total population	EuroStat database (2023)
Population unable to adequate housewarming	Measures the share of population who are unable to keep their home adequately warm (%)	EuroStat database (2023)
Population living in a dwelling with a leaking roof, damp walls, floors or foundation or rot in window frames of floor.	Measured by the share of the population experiencing at least one of the following basic deficits in their housing condition: a leaking roof, damp walls, floors or foundation, or rot in window frames or floor	Eurostat database (2023)

Source: Own construction based on Eurostat database (2023)

This section outlines the methodologies employed to estimate the impact of exogenous variables on the poverty rate among individuals at risk of poverty after social transfers. The analysis primarily utilized a quantitative approach to enhance the rigour of the investigation. The model employed aimed to examine the factors influencing the poverty rate during the study period of 2010-2022. To analyze this phenomenon, the first step involved establishing and subsequently testing the hypotheses considered, which are as follows:

- i. An increase in the unemployment rate has a positive effect on the poverty rate among individuals at risk of poverty after social transfers.
- ii. A rise in government spending on social protection has a negative impact on the poverty rate among individuals at risk of poverty after social transfers.
- iii. The proportion of the rural population in a country positively influences the poverty rate among individuals at risk of poverty after social transfers.
- iv. An increase in the rate of early school leavers, specifically individuals aged between 18-24, from the previous year results in a higher poverty rate among individuals at risk of poverty after social transfers in the current year.

- v. An increase in the number of school dropouts increases the chance of individuals being at risk of poverty.
- vi. An increase in the percentage of the population living in the overcrowded household increase the risk of the poverty rate.

Most studies examining poverty rate determinants utilize panel methods. Panel analysis is effective because it increases degrees of freedom and strengthens estimate robustness. This analysis employs pooled Ordinary Least Squares regression without fixed or random effects on an annual panel dataset from 2010-2022 focused on Central and Eastern European countries. These nations were chosen because they exhibit different responses to economic policies than Western EU members and are more vulnerable socially. Therefore, the applied Pooled Panel model is based on the following equation.

$$\begin{aligned}
 \text{Poverty rate} = & \beta_0 + \beta_1 \text{Unemployment rate} + \beta_2 \text{Social Expenditure} + \beta_3 \text{Rural}_{pop} \\
 & + \beta_4 \text{Leavers_EDU} + \beta_5 \text{Overcrowding} + \beta_6 \text{Heating house} \\
 & + \beta_7 \text{Dwelling conditions} + \varepsilon_i
 \end{aligned}$$

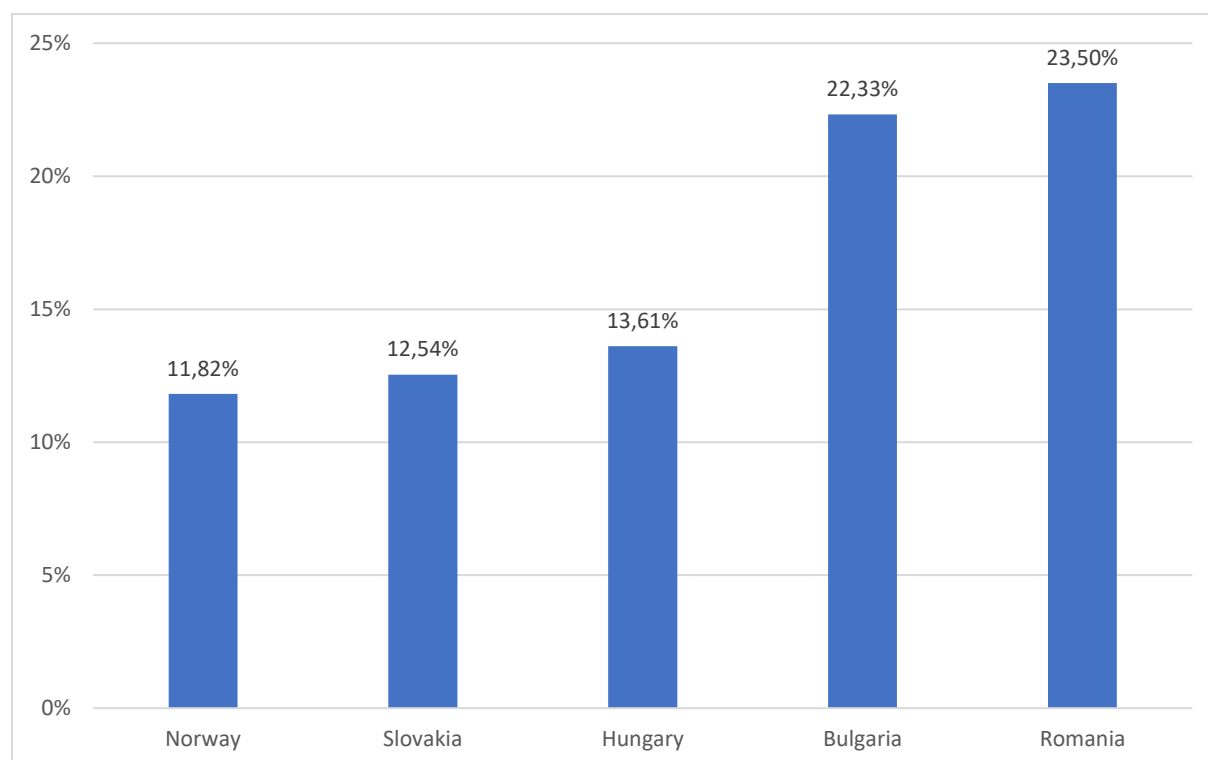
Where *Poverty rate* is the share of persons with an equivalized disposable income below the risk-of-poverty threshold, which is set at 60 % of the national median equivalized disposable income (after social transfers), *Unemployment rate* is the number of unemployed persons as a percentage of the labour force based on International Labour Office (ILO) definition. The labour force is the total number of people employed and unemployed. Unemployed persons comprise persons aged 15 to 74 who: - are without work during the reference week; - are available to start work within the next two weeks; - and have been actively seeking work in the past four weeks or had already found a job to start within the next three months, *Social Expenditure* represents the expenditure on social protection contain: social benefits, which consist of transfers, in cash or in kind, to households and individuals to relieve them of the burden of a defined set of risks or needs; administration costs, which represent the costs charged to the scheme for its management and administration; other expenditure, which consists of miscellaneous expenditure by social protection schemes (payment of property income and other), *Rural_{pop}* refers to people living in rural areas as defined by national statistical offices. It is calculated as the difference between total population and urban population, *Leavers_EDU* represents the percentage of early leavers from education and training, age group 18-24,

Overcrowding represents the percentage of the population living in an overcrowded household. A person is considered as living in an overcrowded household if the household does not have at its disposal a minimum of rooms equal to: - one room for the household; - one room by couple in the household; - one room for each single person aged 18 and more; - one room by pair of single people of the same sex between 12 and 17 years of age; - one room for each single person between 12 and 17 years of age and not included in the previous category; - one room by pair of children under 12 years of age. *Heating house* measures the share of population who are unable to keep home adequately warm and *Dwelling condition* measures the share of the population experiencing at least one of the following basic deficits in their housing condition: a leaking roof, damp walls, floors or foundation, or rot in window frames or floor.

4.2 Results and Discussions

In this section, I analyzed the determinants of poverty in CEE countries and verified the results. Figure 1 shows the average number of people at risk of poverty rate after social transfers in CEE countries compared to Norway.

Figure 1 People at risk of poverty after social transfers



The results reveal that Romania (23.5%), Bulgaria (22.33%), Hungary (13.61%), and Slovakia (12.54%) had the highest values compared to Norway (11.82%). There is a significant difference in the share of people at risk of poverty between the Eastern European countries of Romania and Bulgaria and the Central European countries of Hungary and Slovakia. Hungary and Slovakia have implemented measures to improve social economic indicators of people, which have proven efficient in reducing the share of people at risk of poverty status, catching up with Norway over time. However, this is not the case with Eastern European countries of Romania and Bulgaria. A key feature of these states is that they all belong to the former Soviet bloc. With the collapse of the Soviet Union in 1989, the transition led to a decrease in the standard of living, an increase in unemployment, and the reduction of social protection funding, which in turn led to an increase in the population at risk of poverty.

The figures below show the percentage of people at risk of poverty has decreased over time in Central and Eastern European countries. However, the trend is the opposite in Norway, where the share of the population at risk of poverty has increased. Despite CEE regions demonstrating a downward trend, their 2022 rates still surpass Norway's despite Norway's rising trajectory. This indicates CEE nations are making progress in improving the social and economic well-being of their citizens but still have ground to cover to match Norway's standard. Meanwhile, Norway as a highly developed country is facing challenges as the high cost of living pushes a notable share into poverty risk, even as its poverty rate climbs. While CEE regions are catching up to Norway's benchmark, both regions struggle with preventing poverty in their populations.

Figure 1: CEE People at risk of poverty (% of the population)

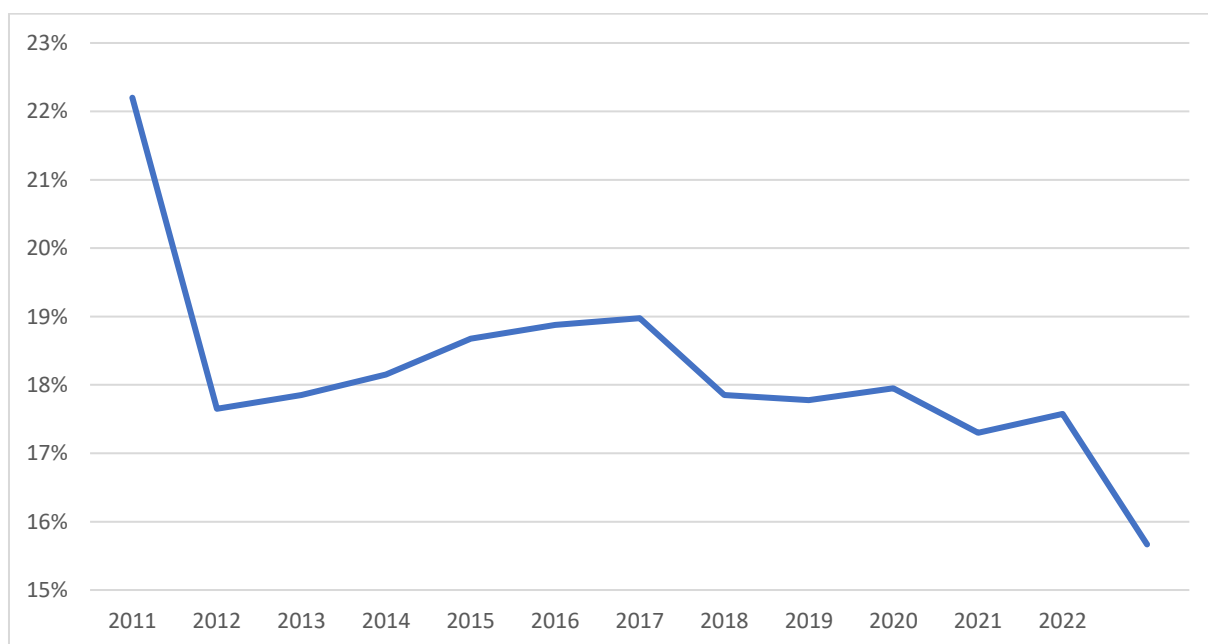
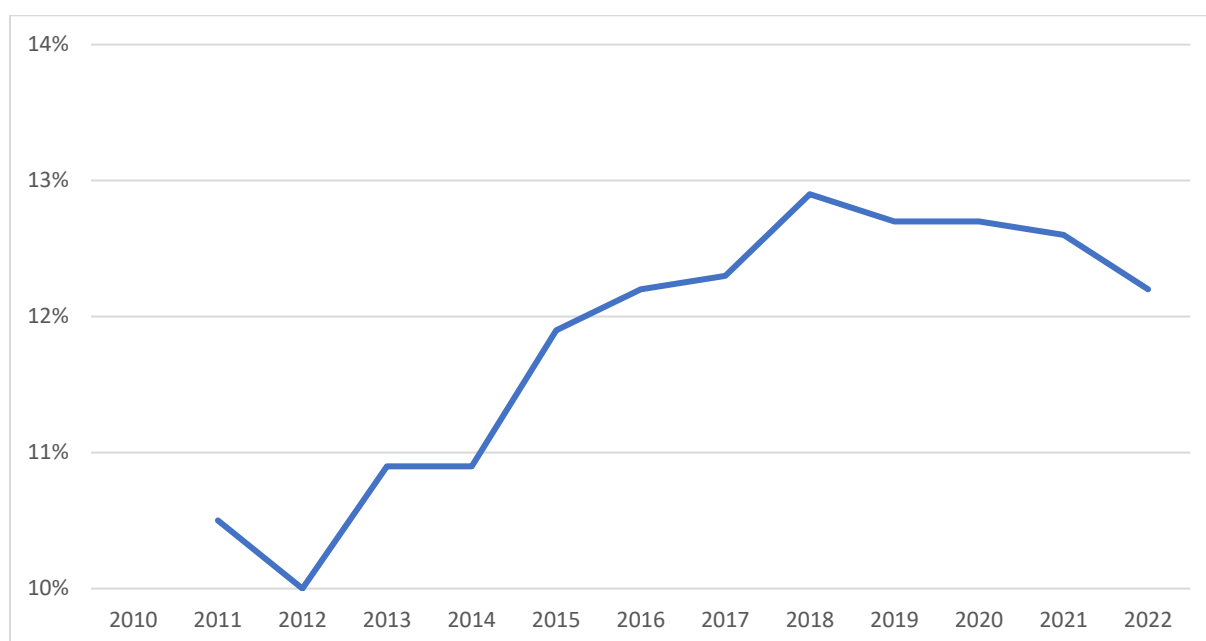


Figure 2: Norway People at risk of poverty (% of population)



The increased poverty exposure in Norway could be explained by the global economic crisis that began affecting Europe in 2007-2008, impacting the entire European Union. A main driver of the crisis was sharply rising commodity prices like oil and energy. Higher prices caused real employee incomes to decrease while also increasing business costs, reducing aggregate demand. Another contributor was inequitable income distribution in capitalist states, reflected by a substantial gap between the earnings of the wealthy versus the poor. High earners used additional income not just for goods and services but speculative investments in financial markets. In contrast, those with lower wages had to take on debt from financial institutions to maintain their living.

Figure 2 shows that the percentage of young people aged 18-24 who leave education and training early is much lower in the Central European countries of Slovakia and Hungary, while Romania still records the highest rate of dropout from education and training. These results are consistent with the Eurostat Statistics for 2022, which indicated that in 2022, an average of 9.6% of young people aged 18-24 in the EU left education and training early. The highest shares were found in Romania (15.6%), followed by Spain (13.9%), Hungary (12.4%), and Germany (12.2%). The overall share of early leavers from education and training fell in the EU by 3.0 percentage points (pp) between 2012 and 2022. Slovakia was among the countries that saw increases in the share of early leavers; an increase that exceeded 1 pp. Interestingly, the proportion of early leavers was lower for young men than for young women in Bulgaria (2.4 pp) and Greece (0.7 pp).

Figure 3: Early leavers from education and training, age group 18-24 (%)

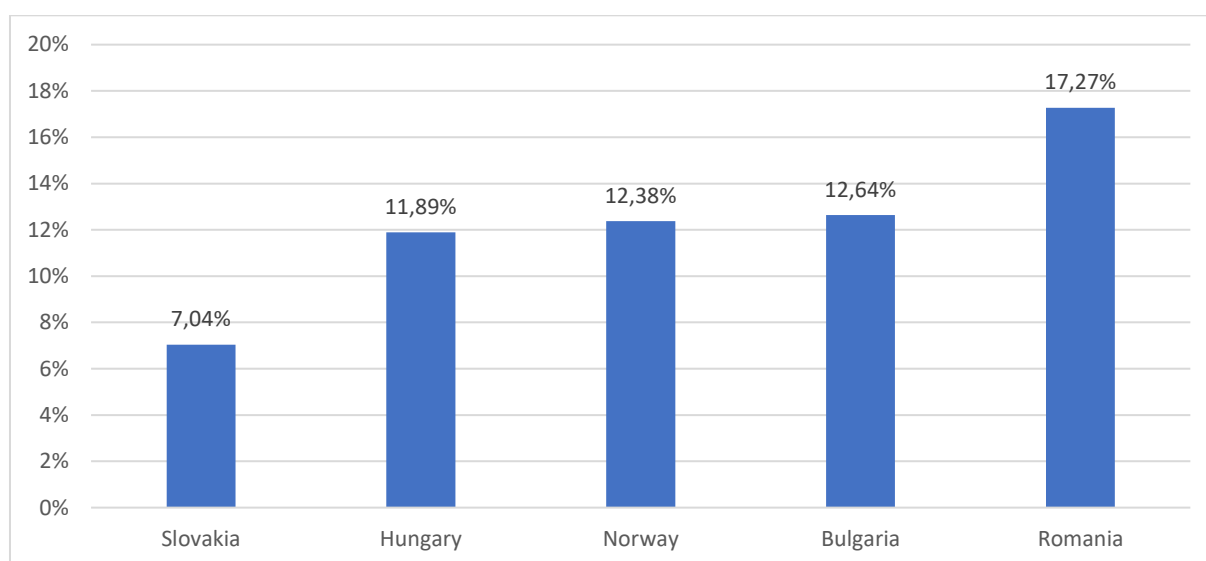
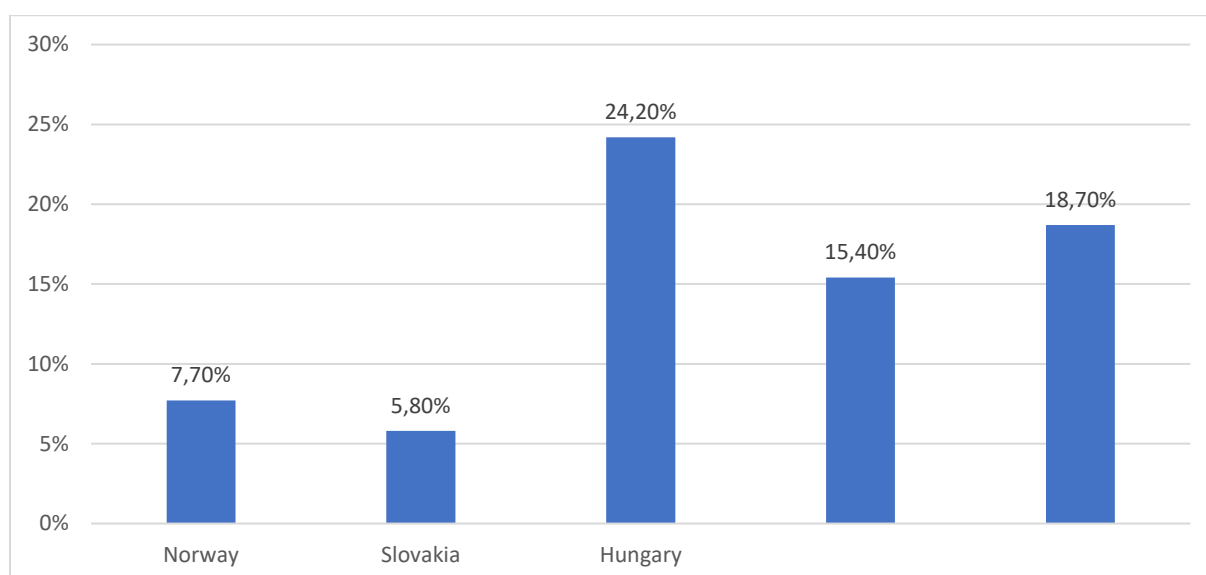


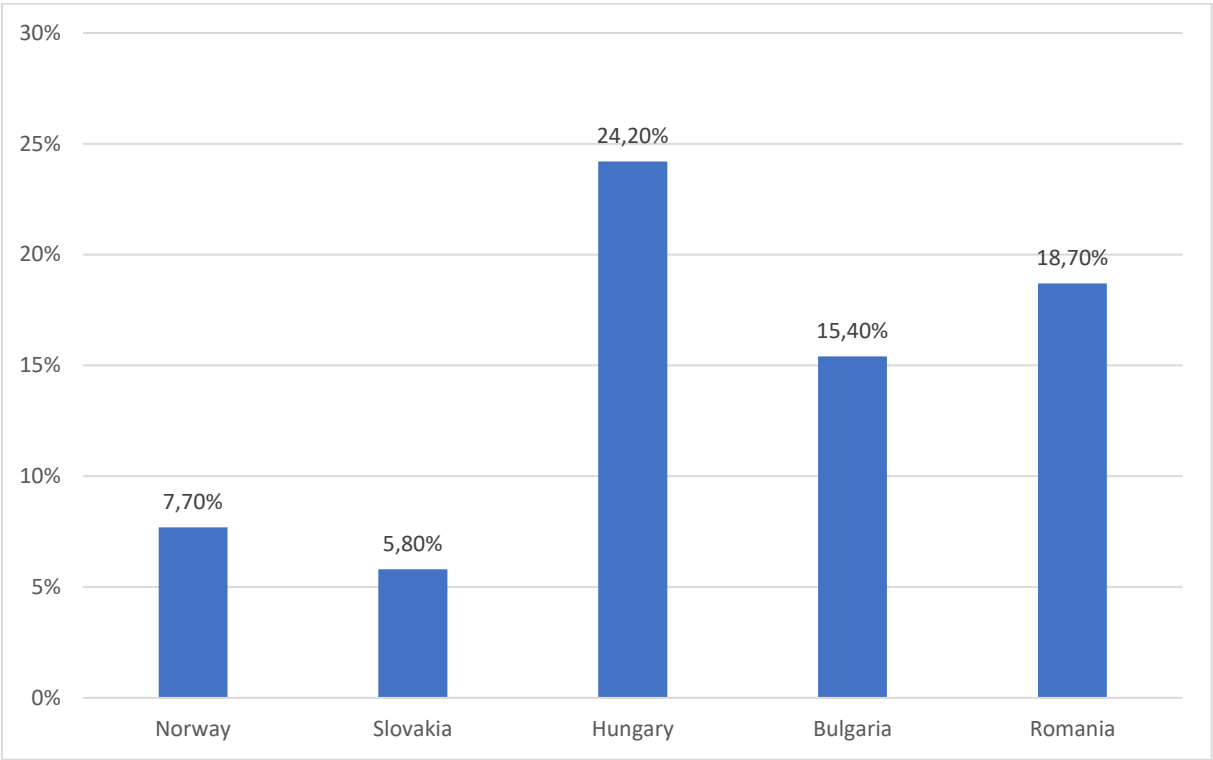
Figure 4: Expenditure on social protection (% of GDP)



Norway has the highest share of social expenditure on social benefits, which is distinct from the CEE records. Interestingly, there is no significant difference in the percentage of GDP spent on social protection and benefits in CEE countries. However, the share is more pronounced in Central European countries like Hungary (19.3%) and Slovakia (18.2%) than in Eastern European countries like Bulgaria (17.4%) and Romania (15.5%). There could be several factors contributing to these differences. Economic development is one such factor. Norway is known for its high standard of living and strong welfare state, which allows for higher levels of social expenditure due to its robust economy with high GDP per capita. On the other hand, CEE countries, particularly Eastern European countries, may have lower GDP per capita and overall

economic development, which could limit their ability to allocate a larger share of GDP to social protection and benefits. Welfare systems are another factor. Central European countries like Hungary and Slovakia have more comprehensive social protection programs, which could explain their higher share of social expenditure. On the other hand, Eastern European countries like Bulgaria and Romania might have more limited social safety nets or less developed welfare systems, resulting in a lower share of social expenditure.

Figure 5: In work at-risk-of-poverty rate (% of employed people)

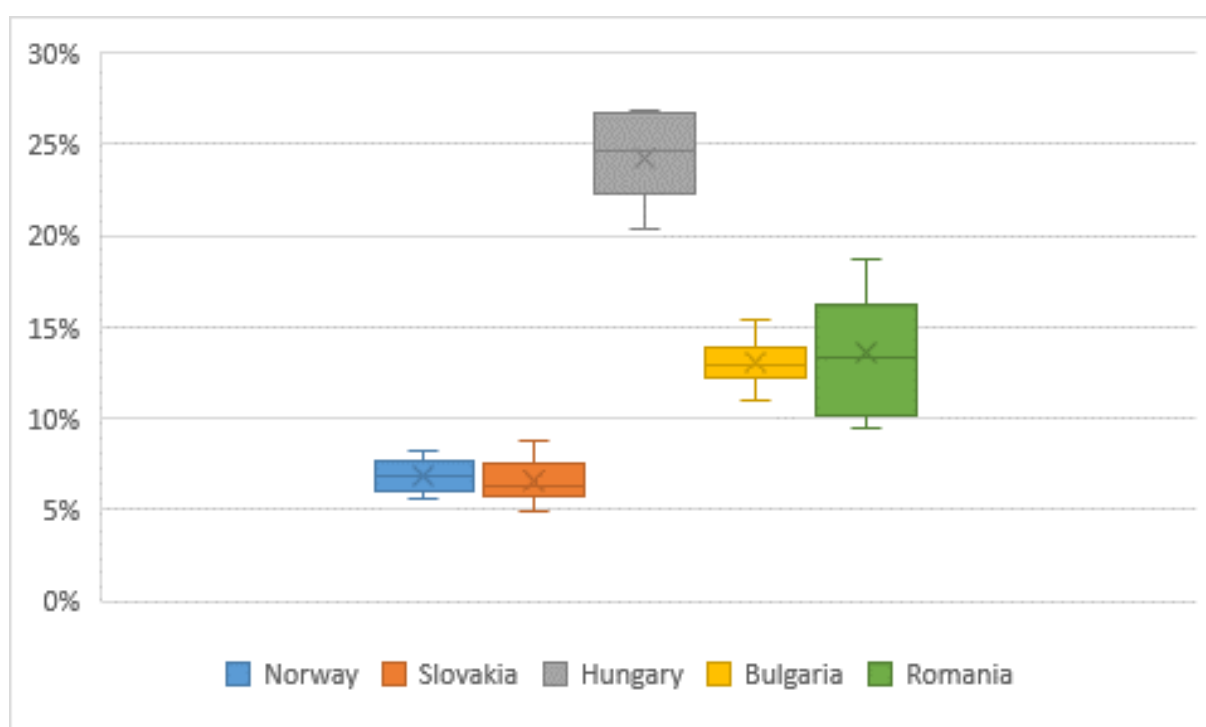


Considering only employed persons who are at risk of poverty (In work at risk of poverty), Romania has the highest share, with 17.3% of employed individuals being at risk of poverty. This suggests that a significant portion of the working population in Romania faces financial challenges and struggles to meet their basic needs despite being employed. This could be attributed to various factors, such as low wages, limited job opportunities, or a high cost of living relative to income levels. Although distinct but close, Bulgaria (7.63%) and Hungary (8.9%) have comparable levels of employed persons at risk of poverty. The similarity suggests that both countries face comparable challenges in terms of poverty among the working population. Again, this could be due to factors like low wages, insufficient social support systems, or economic conditions that make it difficult for individuals to escape poverty despite being employed. On the other hand, a notable observation is that Slovakia has a relatively low

share of employed persons at risk of poverty, like Norway. This indicates that in these countries, a smaller proportion of employed individuals face the risk of poverty compared to the other countries mentioned. This could be attributed to higher wages, more extensive social support systems, or better economic conditions that contribute to a lower risk of poverty for the working population.

Using Box plots, I extended the comparison analysis between the CEE countries and Norway based on overcrowding rate by poverty status, population dwelling conditions by poverty status, and population unable to keep home adequately warm by poverty status.

Figure 6: Population in dwelling conditions (%)



As expected, Figure 7 shows significant differences in dwelling conditions by poverty status between CEE countries and Norway, with medians lying at distinct levels. Romania has a higher spread, meaning more people live in homes with issues like leaks/dampness/rot than the others. Figure 8 reveals Hungary has a high spread and negative skew for overcrowding rates, with the median closer to the top and a shorter upper whisker, signifying left skew. Slovakia shows the same, while Bulgaria skews right. This suggests Hungary and Slovakia have higher concentrations of less overcrowded households, whereas Bulgaria exhibits higher concentrations of more overcrowded households. Skewness can illuminate potential inequalities across housing situations. Likewise, Figure 9 depicts Norway's population's ability

to heat homes adequately versus CEE nations; among them, Slovakia records the smallest share and Bulgaria the largest.

Figure 7: Overcrowding rate by poverty status (%)

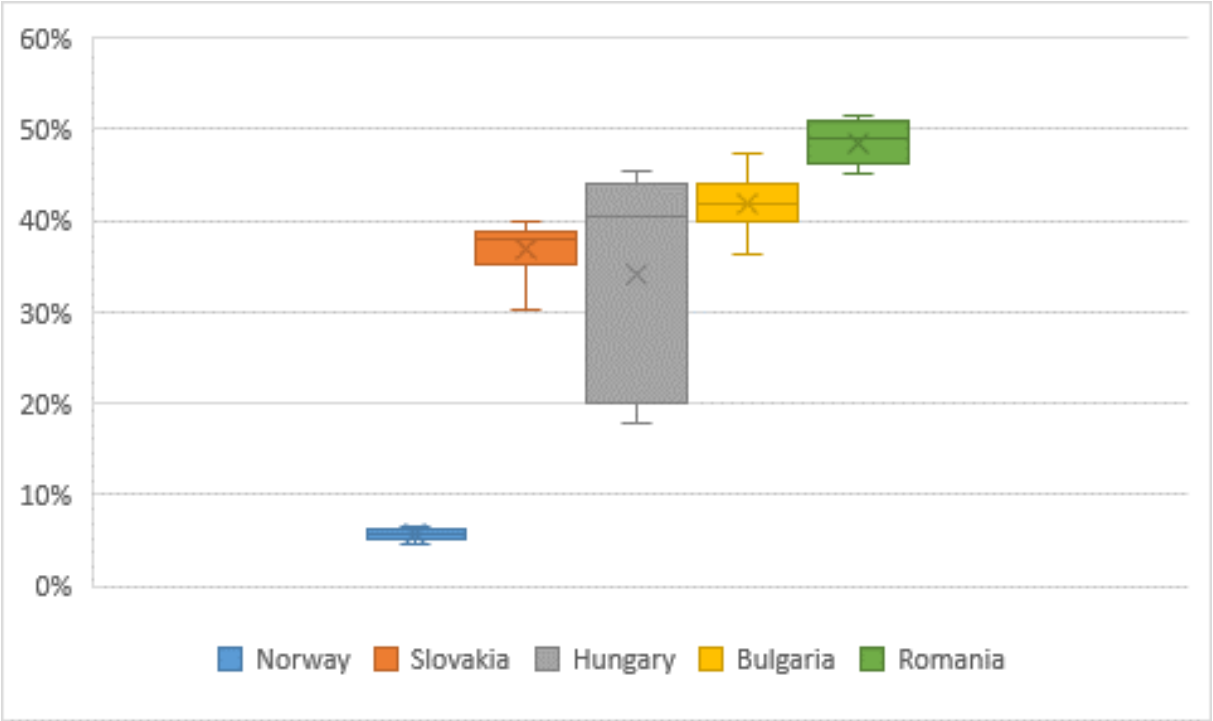
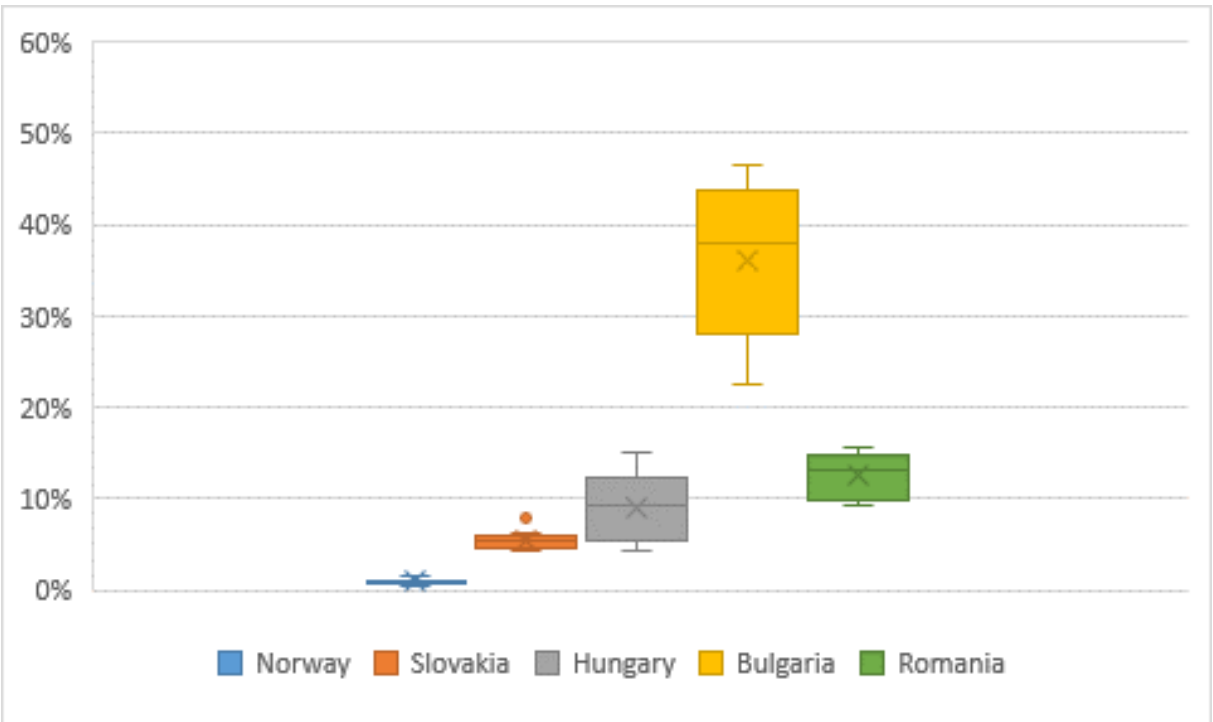


Figure 8: Population unable to keep home adequately warm by poverty status (%)



Correlation Analysis

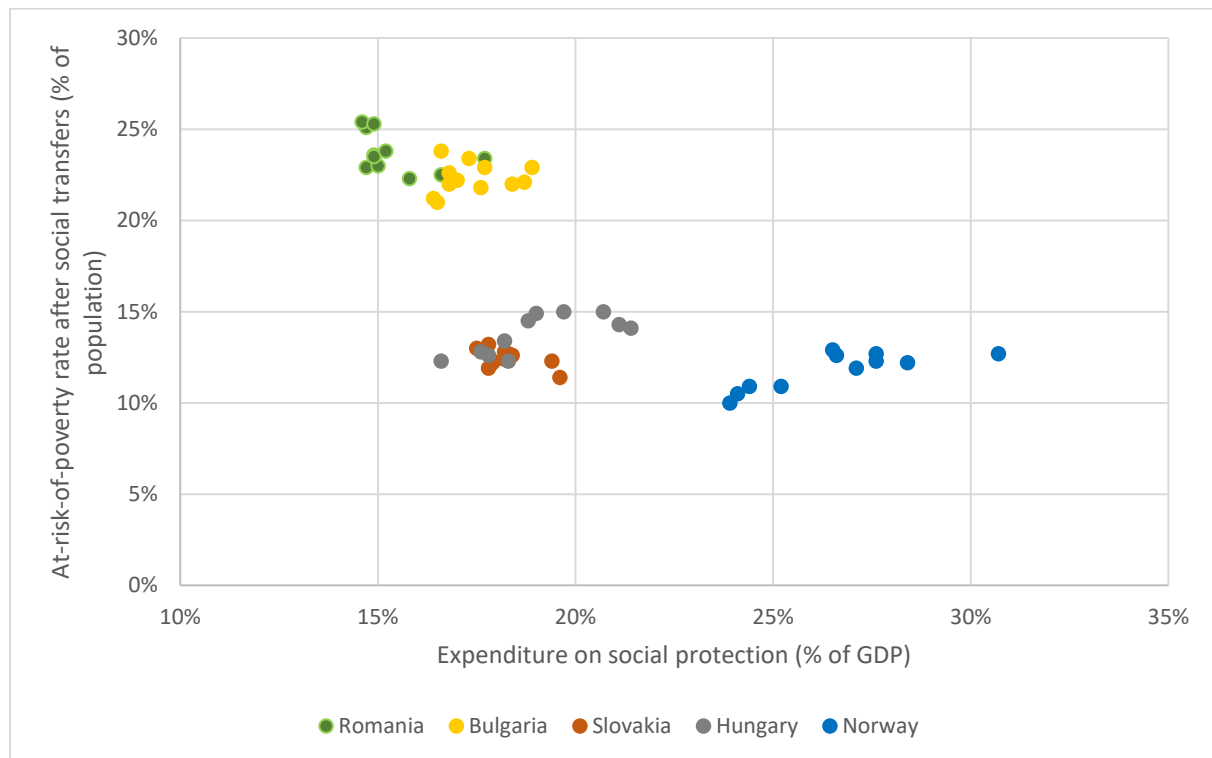
The following section presents correlations between the population exposed to poverty risk rate after social transfers and the exogenous variables used in the analysis. The findings are displayed in Table 2 and Figure 10 below.

Table 2: Pairwise Correlations

Variables	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
(1) Atriskofpovert~o	1.000								
(2) Earlyleaversfr~d	0.669* (0.000)	1.000							
(3) Expenditureons~o	-0.636* (0.000)	-0.272* (0.036)	1.000						
(4) Inworkatriskof~e	0.793* (0.000)	0.753* (0.000)	-0.613* (0.000)	1.000					
(5) Overcrowdingra~a	0.706* (0.000)	0.249* (0.055)	-0.855* (0.000)	0.595* (0.000)	1.000				
(6) Populationlivi~g	0.158 (0.269)	0.282* (0.037)	-0.281* (0.038)	0.225* (0.099)	0.395* (0.005)	1.000			
(7) Populationunab~a	0.661* (0.000)	0.210* (0.093)	-0.443* (0.000)	0.194 (0.122)	0.566* (0.000)	0.224* (0.100)	1.000		
(8) Ruralpopulatio~p	0.265* (0.040)	-0.016 (0.899)	-0.693* (0.000)	0.487* (0.000)	0.656* (0.000)	-0.071 (0.609)	-0.094 (0.455)	1.000	
(9) Unemploymentra~o	0.249* (0.057)	-0.258* (0.041)	-0.382* (0.003)	-0.023 (0.857)	0.614* (0.000)	0.027 (0.845)	0.432* (0.000)	0.411* (0.001)	1.000

Source: Own construction based on Eurostat database (2023) *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$

Figure 9: Scatter plot of People at risk of poverty and expenditure on social protection



The results above show the strongest positive correlation was between people at risk of poverty after social transfers and that in-work at risk of poverty (79.3%) implying that if more employed persons are at risk of poverty, the poverty rate in the CEE region increases. Likewise, the people at risk of poverty rate after social transfers are strongly correlated (negative) with social protection government spending (-63.6%), suggesting that government social transfers are relevant drivers of poverty reduction. Moreover, the correlation between the people at risk of poverty rate after social transfers and the early leavers rate of people aged between 18 and 24 (66.9%), indicates that the level and quality of the educational system have an important role in designing social development within the analyzed CEE countries. Also, the people at risk of poverty rate after social transfers are strongly correlated with overcrowding rate in the household (70.6%) and the share of the population unable to keep homes adequately warm (66.1%). In contrast, correlations were lower for unemployment (24.9%) and rural population (26.5%) levels, pointing to a weaker relationship between poverty rates and these factors. These findings point to employment precarity, education quality, and housing standards as having a strong influence on poverty levels according to economic theory, more so than unemployment, rural living, or substandard housing conditions alone. The correlations provide insight into key drivers of poverty in these countries.

The scatter plot in Figure 10 illustrates the importance of high government spending on social protection in mitigating poverty. As can be seen, Norway spends the greatest percentage of its GDP on social protection and has the lowest poverty rate. This further supports the inverse correlation identified between social protection expenditure and poverty reduction. Countries that dedicate more resources to social welfare programs appear better positioned to curb poverty according to this relationship shown in the data.

This section presents the outcomes of estimating the impact of determinants on the population exposed to poverty risk. A Pooled Panel OLS regression was conducted, with results shown in Table 2. All estimated coefficients were found to be statistically significant, as the probabilities associated with each were below the 5% level used as the threshold for significance. This indicates that all the included variables appear to meaningfully influence the population exposed to poverty risk.

Table 3: Pooled Panel OLS regression for CEE countries

Dependent Variable: LNPOVERTY				
Method: Panel Least Squares				
Sample (adjusted): 2011 2020				
Periods included: 10				
Cross-sections included: 4				
Total panel (balanced) observations: 40				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	5.650986	1.939549	2.913556	0.0086
LNCROWDING	0.236506	0.059880	3.949669	0.0008
LNDROP_OUT	0.339923	0.074733	0.266583	0.0025
LNDWELLING	0.166568	0.098606	0.675088	0.0074
LNRURAL	0.144496	0.477022	2.189620	0.0406
LNSOCIAL_EXP	-0.200460	0.240582	-0.833232	0.0006
LNUNP	0.252680	0.108091	2.337655	0.0299
LNWARMING	0.291800	0.049528	0.036352	0.0014
Root MSE	0.022885	R-squared		0.993754
Mean dependent var	2.855016	Adjusted R-squared		0.987820
S.D. dependent var	0.293251	S.E. of regression		0.032364
Akaike info criterion	-3.716685	Sum squared resid		0.020949
Schwarz criterion	-2.872245	Log-likelihood		94.33370
Hannan-Quinn criter.	-3.411362	F-statistic		167.4720
Durbin-Watson stat	1.864264	Prob(F-statistic)		0.000000

Source: Own construction based on Eurostat database (2023)

The results in Table 2 show the overall model is statistically significant at the 5% level (F-statistic 167.4720, prob = 0.0000 < 0.05). Additionally, the high Adjusted R² and R² values (98.7%) confirm the linear regression's goodness-of-fit and appropriate regressor selection. However, this strong explanatory power is likely due to the inter-correlation among the poverty indicators included in the model. If all explanatory variables in the model remain constant, the people at risk of poverty rate after social transfers would increase by 5.6509 percentage points. This is statistically significant, implying other unincluded poverty indicators outside the model also notably influence poverty rates.

Holding other factors constant, a 1% increase in the unemployment rate, household overcrowding rate, population unable to heat homes adequately, and those living in inadequate dwellings would lead to estimated increases of 25.26%, 23.65%, 29.18%, and 16.65% respectively in the population at risk of poverty after transfers in CEE countries. The implication is that when a person who is fit for work goes into temporary unemployment, will feel a drop

in disposable income which will increase the risk of entering the category of vulnerable persons if reintegration into the labour market is not achieved in an adequate period. Furthermore, overcrowded and inadequately heated housing, as well as dwellings with issues like leaks, symbolize poorer living standards and social welfare.

Conversely, according to the results, a 1 percentage point increase in social protection government spending decreases the population at risk of poverty rate after transfers by 20%, other things constant. Government social assistance aims to support those at poverty risk, helping to raise incomes and living standards in turn reducing the number exposed to poverty. A 1% rise in the rural population is estimated to increase the poverty rate by 14.45% as rural residents face greater poverty risks given employment concentration in lower-paid agriculture and forestry. The population living in rural areas is more exposed to the risk of poverty compared to those who are in urban areas. This can be argued by the fact that there are more rural residents working in agriculture and forestry, and the wages in these fields are lower compared to those in the industry or services. Early school/training leaving increases by 1 per cent for those aged 18-24, and poverty rates after social transfers would go up by 33.99% in CEE countries. Education is crucial for development, with higher attainment facilitating access to better jobs and decreasing poverty exposure. Education is one of the most important pillars of development in a country, and the higher the level of education and qualification, the easier it is for the citizens to access better-paid jobs, thus reducing the number of people exposed to poverty.

To sum up, government social protection spending has the strongest negative impact on poverty rates. Increased spending can reduce those in poverty risk. However, it must be acknowledged that social aid could potentially create long-term dependence for some and discourage labour market participation over time. The early school leaving (dropout) rate also strongly influences poverty levels, underscoring the ongoing importance of education for social well-being. Education decreases the likelihood of poverty by enhancing employment prospects and earning potential. Thus, while model regressors are significant, other unincluded factors also impact poverty rates. Spending on social protection is key but could have unintended medium-term effects if not coupled with initiatives supporting self-sufficiency. And improving education outcomes remains vital to poverty alleviation.

5. Conclusion

The topic of poverty was presented in this study, including its prevalence and influence on individuals and societies. Poverty is a difficult issue that requires a multidisciplinary approach to successfully comprehend and treat. The theoretical roots of poverty are investigated using literature, including numerous definitions and the various elements that contribute to it. The distinction between absolute and relative poverty is examined, as is the concept of multidimensional poverty, which takes health, education, and living standards into account. Multiple global poverty thresholds, such as national poverty lines, dollar-a-day poverty, hunger poverty, or other updated PPP-based poverty lines utilized globally, are introduced.

Following the theoretical foundations, the emphasis shifts to the various techniques of measuring poverty and the biases that may follow. The benefits and drawbacks of various techniques, such as income-based measures, consumption-based measures, and multidimensional measures are introduced. Finally, the above-mentioned indicators are examined in a case study in Central and Eastern European countries and Norway.

To answer my first scientific question, which is about the problems and biases in assessing poverty, I'd like to highlight three points. The choice of measurement methods, such as income-based measures, consumption-based measures, or multidimensional measures, is one of the major biases. Each method has benefits and drawbacks, and the method adopted can have a significant impact on poverty estimates. Income-based measures, for example, may fail to capture non-monetary components of poverty, whereas consumption-based measures may fail to reflect long-term poverty patterns properly.

The second sort of bias stems from the use of poverty thresholds, which can vary greatly depending on the context and method used to compute them. National poverty standards, for example, may not accurately reflect the true cost of living in each location, but global poverty thresholds, such as the dollar-a-day poverty line, may not accurately capture poverty in middle-income countries.

Finally, there are data quality and availability biases. Income surveys, for example, may not be representative of the community or may not capture income from informal sources. Consumption surveys may also be prone to recall bias, as respondents may not recall their spending habits accurately. These biases can lead to erroneous poverty estimates and impede attempts to effectively reduce poverty.

My second question was focused on how socioeconomic factors influence poverty in highly developed and moderately developed countries, using Central and Eastern European countries and Norway as examples. The examination of poverty determinants in Central and Eastern European (CEE) countries demonstrates that many socioeconomic factors have a substantial impact on the region's population at risk of poverty.

According to the findings, increased investments in social welfare programs had a significant negative impact on poverty rates. Countries that invest more in social assistance programs are better positioned to alleviate poverty and raise living standards. However, striking a balance is critical, as excessive reliance on social assistance may unwittingly develop a long-term dependency, potentially impeding active engagement in the labour market. Furthermore, the study found a strong positive association between early school dropout rates and poverty levels. This highlights the continuing importance of education in improving work opportunities and earning potential. Higher levels of education not only enable people to get better-paying employment, but they also contribute to general society development, lowering the likelihood of poverty. Furthermore, overcrowded and insufficiently heated residences represent inferior living standards, increasing the danger of poverty. Similarly, unemployment and rural residence are highlighted as major factors impacting poverty rates, indicating the necessity for tailored strategies to address these issues.

The emphasis is on the multifaceted character of poverty, including theoretical underpinnings and diverse assessment approaches. The significance of elements such as education, housing, and social welfare programs is emphasized. The case study on Central and Eastern European countries demonstrates that socioeconomic factors have a substantial impact on poverty rates, emphasizing the need for balanced social assistance programs and education in poverty reduction initiatives.

References

- Atkinson, B. A., 2019. *Measuring poverty around the world*. Oxford: Princeton University Press.
- Akoun, I.F., 2008. Globalization, growth, and poverty: the missing link. *International Journal of Social Economics*, 35(4), pp.226-238.
- Borgeraas, E. & Dahl, E., 2010. Low income and 'poverty lines' in Norway: a comparison of three concepts. *International journal of social welfare*, Volume 19, pp. 73-83.
- CEIC, 2022. *Norway Social: Poverty and Inequality*. [Online]
Available at: <https://www.ceicdata.com/en/norway/social-poverty-and-inequality7>
[Accessed 15 10 2023].
- Davis, E. P. & Sanchez-Martinez, M., 2015. Economic Theories of Poverty. *Institute of Economic and Social Research, JRF*.
- Decancq, K., Goedemé, T., Van den Bosch, K. and Vanhille, J., 2014. The evolution of poverty in the European Union: concepts, measurement, and data. Reconciling work and poverty reduction in Europe: how successful are European welfare states, pp.60-93.
- Deininger, K., 2003. Does cost of schooling affect enrollment by the poor? *Economics of Education Review*, 22(3), pp. 291-305.
- Dreze, J. and Khera, R., 2013. Rural poverty and the public distribution system. *Economic and Political Weekly*, Vol. 48, No. 45/46, pp. 55-60.
- Eurostat database. (2023). *Eurostat*. Forrás: https://ec.europa.eu/eurostat/web/main/search/-/search/estatsearchportlet_WAR_estatsearchportlet_INSTANCE_bHVzuvn1SZ8J?text=poverty&_estatsearchportlet_WAR_estatsearchportlet_INSTANCE_bHVzuvn1SZ8J_collection=&_estatsearchportlet_WAR_estatsearchportlet_INS
- Ferragina, E., Tomilson, M. & Walker, R., 2013. *Poverty, participation and choice - The legacy of Peter Townsend*, s.l.: Joseph Rowntree Foundation.
- Fischer, A. M., 2018. *Poverty as Ideology: Rescuing Social Justice from Global Development Agendas*. London: s.n.
- Fiszbein, A., Kanbour, R. & Yemstov, R., 2014. Social Protection and Poverty Reduction: Global Patterns and Some Targets. *World Development*, Volume 61, pp. 167-177..
- Government of Norway, 2022. *Voluntary National Review 2021 Norway*. [Online]
Available at: <https://www.regjeringen.no/en/dokumenter/voluntary-national-review-2021-norway/id2863155/?ch=6>
[Accessed 22 10 2023].
- Harriss-White, B., 2006. Poverty and Capitalism. *Economic and Political Weekly*, 41(13), pp. 1241-1246.

ILO, I. L. O., 2019. *THE GLOBAL LABOUR INCOME SHARE AND DISTRIBUTION*, s.l.: ILO.

Ioana, M.I., Anda, M.I., Cornelia, P. and Mariana, C.R., 2015. School dropout—A social problem in Romania. *Procedia-Social and Behavioral Sciences*, 182, pp.623-628.

Khan, R., Rehman, H. and Abrar-ul-Haq, M., 2015. Determinants of rural household poverty: the role of household socioeconomic empowerment. *American-Eurasian Journal of Agricultural and Environmental Sciences*, Vol. 15 (1), pp. 93-98.

Khan, R.E.A., Rehman, H. and Abrar ul Haq, M., 2015. Determinants of rural household poverty: the role of household socioeconomic empowerment. *American-Eurasian J. Agric. & Environ. Sci*, 15(1), pp.93-98.

Kiendebeogo, Y., Assimaidou, K. and Tall, A., 2017. Social protection for poverty reduction in times of crisis. *Journal of Policy Modeling*, Vol. 39, Issue 6, pp. 1163-1183.

Kirken Bymisjon, 2019. *This is how we calculated the figures for the poverty calculator*. [Online]

Available at: <https://kirkensbymisjon.no/kalkulatorutregning/>
[Accessed 16 10 2023].

Lavrijsen, J. and Nicaise, I., 2015. Social inequalities in early school leaving: The role of educational institutions and the socioeconomic context. *European Education*, 47(4), pp.295-310.

Lenagala, C. and Ram, R., 2010. Growth elasticity of poverty: estimates from new data. *International Journal of Social Economics*, 37(12), pp.923-932.

Lister, R., 2021. Defining Poverty. In: *Poverty*. s.l.:s.n., pp. 13-36.

Nolan, B. & Whelan, T. C., 1996. Measuring Poverty Using Income and Deprivation Indicators: Alternative Approaches. *Journal of European Social Policy*, pp. 225-240.

Norwegian Ministry of Foreign Affairs, 2023. *The Norwegian economy and business sector*. [Online]

Available at: <https://www.norway.no/en/central-content/en/values-priorities/the-norwegian-economy-and-business-sector/>
[Accessed 16 10 2023].

O'Boyle, E. and O'Boyle, M., 2011. Global poverty, hunger, death, and disease. *International Journal of Social Economics*, 39(1/2), pp.4-17.

OECD, 2015. *Poverty rate*. [Online]

Available at: <https://data.oecd.org/inequality/poverty-rate.htm>
[Accessed 11 10 2023].

OECD, 2023. *OECD.org*. [Online]

Available at: <https://data.oecd.org/hha/household-disposable-income.htm>
[Accessed 2023].

OPHI, 2020. *Global Multidimensional Poverty Index*. [Online]
Available at: <https://ophi.org.uk/multidimensional-poverty-index/>
[Accessed 13 10 2023].

Sen, A., 2000. *Development as a freedom*. New York: Alfred A. Knopp.

Šileika, A. and Bekerytė, J., 2013. Theoretical issues of relationship between unemployment, poverty and crime in sustainable development. *Journal of Security and Sustainability Issues*, 2, pp.59-70.

Socol, C., Marinas, M. and Socol, A.G., 2010. Fiscal Sustainability and Social Cohesion. Common and Specific in EU Sub-models. *Theoretical & Applied Economics*, 17(3).

Statistics Norway, 2023. *How many are poor in Norway?*. [Online]
Available at: <https://www.ssb.no/inntekt-og-forbruk/inntekt-og-formue/artikler/hvor-mange-er-fattige-i-norge>
[Accessed 16 10 2023].

Statistics Norway, 2023. *Poverty-related problems, survey on living conditions*. [Online]
Available at: <https://www.ssb.no/en/sosiale-forhold-og-kriminalitet/levekars/statistikk/fattigdomsproblemer-levekarsundersokelsen>
[Accessed 21 10 2023].

The Economist Times, 2023. What is 'Income per capita? 12 09.

The Global Economy, 2023. *Norway: Poverty at 1.90 USD per day*. [Online]
Available at: https://www.theglobaleconomy.com/Norway/poverty_ratio_low_range/
[Accessed 20 10 2023].

The World Bank, 2023. *Measuring Poverty*. [Online]
Available at: <https://www.worldbank.org/en/topic/measuringpoverty>
[Accessed 13 10 2023].

Townsend, P., 1979. *Poverty in the United Kingdom*, Berkeley: University of California Press.

Tronstad, K., Nygaard, M. & Bask, M., 2018. *Accumulation of welfare problems among immigrants in Norway*. Oslo: Norwegian Institute for Urban and Regional Research.

Tronstad, K., Nygaard, M. O. & Bask, M., 2018. Accumulation of welfare problems among immigrants in Norway. *Norwegian Institute for Urban and Regional Research (NIBR)*, 8(82).

United Nations, 2010. Poverty. In: *The World's Women 2010*. s.l.:s.n., pp. 157-173.

V. Sibirskaya, E., Oveshnikova, L. V., Mikheykina, L. A. & Lyapina, I. R., 2019. *Economic Systems Analysis: Statistical Indicators*. Moscow: Springer.

Wordometer, 2022. [Online]
Available at: <https://www.worldometers.info/gdp/gdp-per-capita/>
[Accessed 16 10 2023].

World Bank, 2022. *UNDERSTANDING POVERTY*. [Online]
Available at: <https://www.worldbank.org/en/understanding-poverty>

World Bank, 2023. *The world bank data*, s.l.: s.n.