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# SUSTAINABLE DEVELOPMENT AS A CONCEPT OF FAIRNESS FROM THE PERSPECTIVE OF ENERGY CONSUMPTION POLICY

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ABSTRACT: Classical economists have claimed that selfish behaviour and competition are the most efficient way of resource allocation. Their concept of fairness according to one's work was treated as the universal formula of resource allocation very much defined by the individualistic perspective. However, the concept of sustainable development refers to the idea of fairness according to the needs of both present and future generations. This paper presents the sustainable perspective of fairness that postulates new forms of energy consumption related to the concepts of solidarity or social economies. The perspective is contrasted with the example of Friedman's view, a famous advocate of market economy, to illustrate the differences and consequences for socio-economic development. Both the fairness systems are just in the terms of formal justice, despite the dispute regarding their fairness formula; and this paper presents a strategy to the consumption of energy based on a reference point, which utilizes these two formulas to allocation energy resources. Additionally, this study seeks to present the role of the new socio-technical structures, which provide opportunities to create a wide range of goals beyond the narrow targets of energy production from renewables, including reduction of social and economic inequality or generation of social capital and resilient economies.

KEY WORDS: fairness; energy consumption; sustainable development; social capital; local socio-technical structures

## Introduction

Renn, Webler, and Kastenholz reported that '*modern democratic societies with pluralistic value systems tend to emphasize procedural justice over substantive fairness since the various actors in society disagree about what is a just and fair solution and what ratio of payoffs and risks is regarded as acceptable*' (1996, p. 145). In turn, Miller (1974) referring to Perelman's view, claimed that a specific model of society reflects the agreements and adequate substantive rights that constitute fairness formulas. The formal approaches to justice differentiate the terms *justice* and f*airness* as an obligation to follow particular rules, which stand for the categories and the explanation of the accepted model of society, which postulates the rules (Miller, 1974). Fairness rules are historically specific and they change, conforming to the development of the conditions of socio-economic and ecological systems. Moreover, they can vary at the same point of time in different areas of human activities (i.e. social and economic) or in different political systems. However, the term *justice* from the perspective of formal language is defined as '*the obligation to treat in a certain way all persons who belong to a given category*' (Sullivan, 1975, p. 327-328). This concept does not provide any reason for the moral obligation resulting from the rule. It acts similarly to the conception of rationality in economics, assuming consistency of judgment as a precondition to the application of market rules.

The dominant way of perceiving the relationship between market efficiency and social justice is the perception of the former from the perspective of free-market activities, as a timeless, universal and value-free mechanism of natural resource distribution (Wilkin, 1997). Classical economists have claimed that the selfish behaviour of all the actors in the market is the best strategy for resource allocation, with competition being the most efficient way of doing so. Neoclassical schools have confirmed this point of view, offering mathematical formulas to portray the equilibrium mechanism of resource allocation. The economic equilibrium referred to Pareto optimum underpinning the economic efficiency and the concept of justice (Narveson, 2002). Therefore, the conceptions of economic efficiency and Pareto optimum are value-oriented, although many economists claim non-axiomatic conditions. The market formula of *fairness* according to one's work was treated as the universal formula (= *justice*) of resource allocation very much defined by individualistic ethics.

The present global society disputes on sustainable development postulate a new formula of fairness, which should also be applied in economic systems. The concept of sustainable development refers to the idea of fairness

according to the needs of both present (intertemporal allocation and intragenerational equity) and future (intertemporal distribution and intergenerational equity) generations (Daly, Farley, 2003). It postulates different formulas of fairness and the reorganization of the neoclassical mechanism that produced social inequalities and ecological threats. Therefore, market activities are discussed from the perspectives of solidarity, sharing or social economies. The new forms of socio-economic activities are related to new socio-economic structures that generate potential not only for the goals related to economic activity but also to increase capacity to achieve a wide range of social and ecological postulates, such as changes in consumption patterns or a reduction in inequalities.

Both the fairness formulas represent one of many dimensions of fairness, which are invoked in literature (Barry, 1989; Dobson, 1998; Lebacqz, 1986; Nozick, 1974; Perelman, 1967; Rawls, 2009; Roemer, 1998; Stone, 2012). This paper presents the sustainable perspective of fairness that postulates new forms of energy consumption and production. The new approach is contrasted with the example of Friedman's view, a famous advocate of market economy, to illustrate the differences and consequences for socio-economic development postulated by the fairness formula in the concept of sustainable development. The new approaches emphasise the role of social capital, collaborative consumption and prosumption as complementary to market individualism, competition and profit maximization.

This research seeks to present the role of new local socio-technical structures and distributed generation of renewable energy in sustainable energy transition. The main hypotheses stated in this paper are the following:

- The economics of sustainable development postulates a *fairness* formula different to that of neoclassical economic schools, although both the formulas are *just*.
- The fairness formula postulated in the concept of sustainable development is determined by the present global socio-economic and ecological conditions. The global society is mutually dependent and a local action can have global impact and change the global situation. Therefore, independent competing individuals are less effective than cooperative communities.
- The creation of institutional capacities for the production of social capital is a precondition for sustainable energy transition. In other words, the transition aimed at providing secure and affordable energy from renewable resources has to be centred on the building of new socio-technical structures formed under the conditions of new economic forms such as a collaborative, sharing or social economy.

The new socio-economic structures have to provide opportunities to create of a wide range of different goals beyond the narrow targets of production and distribution of energy from renewables, including the reduction of social and economic inequality or the generation of social capital and resilient economies.

## Sustainable development as a fairness formula in light of Friedman's view

Friedman in his works emphasized the key fairness formula that justifies the free market society: '*to each according to what he and the instruments he owns produces*' (Friedman, 1962, pp. 161-162). In the section titled *Facts of Income Distribution* he clearly stated that '*there is surely drastically less inequality in Western capitalist societies*' (Friedman, 1962, p. 139). To support this view, he provides the example of capitalist countries such as the Scandinavian countries, France, Britain and the United States in comparison with India or Egypt (Friedman, 1962). The inequalities generated by capitalism were to be substantially reduced in the Western countries, although '*of course, there were many losers along the way-probably more losers than winners. We don't remember their names. But for the most part they went in with their eyes open. They knew they were taking chances. And win or lose, society as a whole benefited from their willingness to take a chance'* (Friedman, Friedman, 1990, p. 138).

It is meaningful that the author, in this small section devoted to the facts, in no one place indicated any data, indicators, research or references supporting his theses. The section pointed out misleading conclusions resulting from the well-known limitations of such indicators as the Gini index. To back up the problems, a general view was presented of a higher standard of living in the Western countries in terms of technological and medicine advancements or the higher availability of many upper-class products for the masses. Additionally, he pointed out the benefits of social mobility in terms of change in households' income hierarchy over time resulting from market dynamics (Friedman, 1962, p. 139).

Many of these counterarguments put forward by Friedman are at least as misleading as the problems resulting from the limitations of the Gini index and other indicators. For example, the mass consumption of former upper-class products and services challenges the feudalism that entailed rigid social classes. Since the capitalistic order has transformed the feudalistic one, debates are dominated by the benefits of socialism, but not feudalism. The advocates of feudalism are only a marginal part of reflections on future political and economic systems in the contemporary debates on resource

allocation mechanisms. However, the statement in the same paragraph that '*comparison with communist countries like Russia is more difficult because of paucity and unreliability of evidence*' (Friedman, 1962, p. 140) is an eristic argumentation technique. The central distribution of income characteristic of socialism resulting in a low wage policy and relatively lower income inequalities than in capitalistic countries is widely presented in research (Ellman, 1979; Filek, 2011; Wang, 2008); this is probably the least debatable issue in these terms.

The discourse on market justice can be illustrated in the context of a well-known concept of fairness formulas presented by Perelman (1967), which indicates six principles, including that invoked by Friedman: to each according to one's works; to each the same thing; to each according to one's merits; to each according to one's needs; to each according to one's rank; and to each according to one's legal entitlement. Additionally, the deliberations reflect the debates on process as presented by Stone (2012), who offered three dimensions: recipients; items; and process. The process dimension emphasizes procedures such as competition, lottery or voting. It can be said that competition is the primary mechanism of fair distribution in the market economy.

However, the new order postulated in the concept of sustainable development challenges the idea of a wide group of losers devoted to a smaller group of winners in the market game. Friedman's view on more forgotten losers than winners and, at the same time, all of them as a whole to benefit from the situation, can be justified by the poverty debates. However, this perspective ignores the abundant psycho-social determinants of socio-economic development and assumes imperfect market allocation via competition that has to be by its nature corrected by redistribution. Therefore, back in 1974 the participants of the symposium in Cocoyoc declared that '*we therefore reject the idea of "growth first, justice in the distribution of benefits later"*' and '*our first concern is to redefine the whole purpose of development. This should not be to develop things but to develop man*' ('The Cocoyoc Declaration', 1975, p. 896).

The concept of sustainable development challenges the principle of market-specific fairness formula, postulating a new formula of fairness and the need for a new order: '*sustainable development is development that meets the needs of the present without compromising the ability of future generations to meet their own needs. It contains within it two key concepts:*

1) *the concept of 'needs', in particular the essential needs of the world's poor, to which overriding priority should be given; and*

2) *the idea of limitations imposed by the state of technology and social organization on the environment's ability to meet present and future needs*' (World Commission on Environment and Development, 1987, p. 43).

The postulates of sustainable development relativize economic activities with their socio-ecological consequences. According to Friedman's view, sustainable development postulates economic growth, which does not generate groups of winners and forgotten losers either in the present generation or in the future ones. Therefore, the concept emphasizes quality indicators, ethical dimension of economic growth, environmental limits, global consequences of local activities, and complexity of socio-economic and environmental relationships resulting in the necessity of dealing with uncertainty and the participation of all stakeholders (Pieńkowski, 2013).

It should be clearly emphasized that both the fairness systems, i.e. the competition in market system-based individualistic ethics and the collaborative market activities based on social capital, are *just* in the terms of formal justice, despite the dispute regarding their fairness formula and related model of socio-economic development (Pieńkowski, 2013). However, at the same time the postulates of sustainable development advocate different fairness formulas than the neoclassical economic schools, favouring market-oriented values of social development such as egoism and the formula *to each according to one's works*.

## The concept of a *reference point as* the sustainable energy allocation mechanism

Perelman warned decision-makers against the extreme consequences of any justice system because of its imperfection and arbitrariness (Perelman, 1967). This would explain the successes of the Western economies, such as the Scandinavian countries, which were able effectively reduce poverty and inequalities achieving a relatively high standard of living. These socio-economic systems combine the market-oriented fairness formula with the fairness formula characteristic for social life. In other words, the 'moral balance' between different formulas is also sustainable.

A diverse economic approach for the allocation of resources was presented by Costanza and Daly (1992), who postulated two distinctive mechanisms of allocation depending on the level of undertaken economic activities. In line with this approach, a micro-allocation mechanism was based on the maximization of individuals' private utility. On this level, a value typical for market approaches is dominant, as postulated by Friedman: i.e. competition and the fairness formula *to each according to one's works*. In turn, macro-allocation represents a social/collective mechanism based on social prefer-

ences, which include the present and future generations and other species. Consequently, the dominant mechanism of allocation is voting and the fairness formula *to each according to one's needs*.

Pieńkowski (2012, 2013) offered a strategy based on a reference point to the consumption of energy from the perspective of these two mechanisms of energy allocation. Micro-allocation refers to country-specific socio-economic conditions, such as energy efficiency or consumption patterns (a style of life and system of values). The country-specific strategy towards energy consumption determines benefits derived from a given amount of energy provided to the economy of the country. However, macro-allocation represents the results of international agreements on the amount of energy that can be input into the country. The agreements reflect social preferences and result from political negotiations at an international level, such as the Kyoto Protocol or Paris Agreement. The agreements consider both global ecological conditions for energy consumption and the specific socio-economic and ecological determinants of the energy input.

Consequently, the author offered some indicators to compare countries and measure the two groups of conditions for energy consumption. For example, the *energy intensity of economy* measures energy efficiency of a national economy defined as energy use per $1,000 Gross Domestic Product in constant Purchasing Power Parity from a specific period (year) ('The World Bank Open Data', n.d.) and illustrates the benefits of the country provided by the energy input. Additionally, the benefits can be completed with the *share of renewables in energy use* (in per cent). Energy use refers to the use of primary energy before transformation to other end-use fuels, which is equal to indigenous production plus imports and stock changes, minus exports and fuels supplied to ships and aircraft engaged in international transport ('The World Bank Open Data', n.d.). In turn macro-allocation is defined by such indicators as *energy use per capita*, which measures the input of energy allocated due to political agreements. The energy is usually measured in *kg of oil equivalent* (kgoe) or *ton of oil equivalent* (toe), which is a standardized unit with a respectively assigned net calorific value of 41,868 kilojoules/kg and 41,868 gigajoules/kg (equivalent to the approximate amount of energy that can be extracted from one kilogram or ton of crude oil).

The rationale behind the concept is that the micro-allocation mechanism based on market allocation provides motivation for the increase in efficiency at the country level according to individuals' works: lifestyle, technology, and socio-economic institutions that shape energy behaviour. And the macro-allocation mechanism based on political agreements ensures resources according to the social needs with regard to ecological conditions from the global

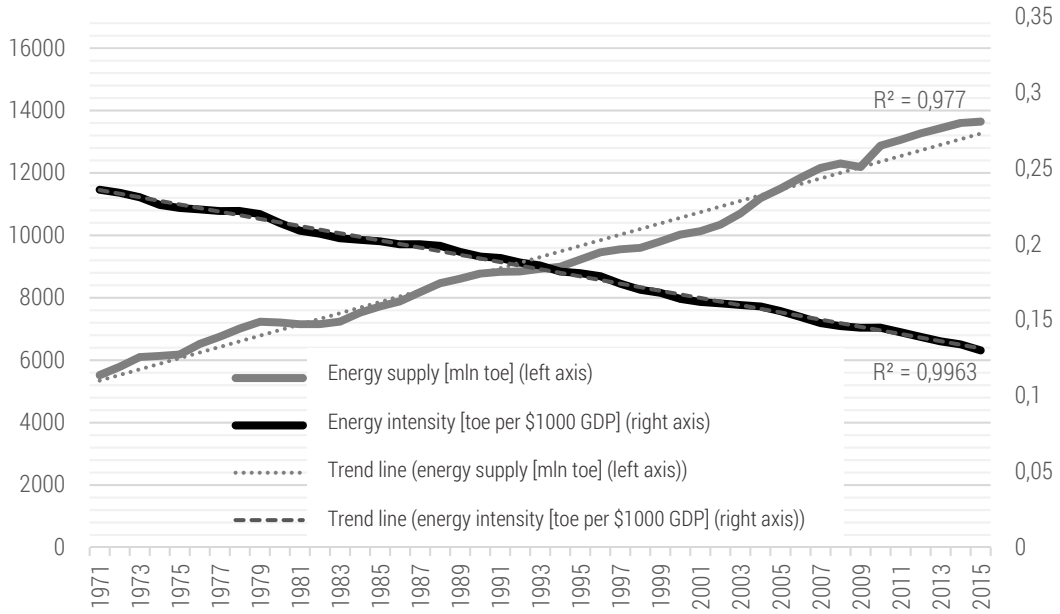


**Figure 1.** Global primary energy supply [mln toe] and energy intensity of economy [toe per $1000 GDP] in 1971–2015. *Notes: toe – ton of oil equivalent, GDP – Gross Domestic Product*

Source: OECD, n.d.

perspective. The high level of energy intensity and, at the same time, the high level of energy consumption is the real threat for the global ecosystem and climate change mitigation. However, a low level of energy intensity and, at the same time, a high level of energy consumption is what is most beneficial for a country. The problem usually reported in the context of Jevons' effect is that in line with the lower energy efficiency in most developed economies, energy consumption increases. In Jevons' words: '*It is wholly a confusion of ideas to suppose that the economical use of fuel is equivalent to a diminished consumption. The very contrary is the truth [...] As a rule, new modes of economy will lead to an increase of consumption*' (Jevons, 1865, p. 123; see also Pieńkowski, 2012). Figure 1 presents global energy efficiency measured by the *energy intensity index* and global energy consumption measured by the global primary energy supply defined as '*energy production plus energy imports, minus energy exports, minus international bunkers, then plus or minus stock changes*' (OECD, n.d.). The figure shows that in line with the Jevons' effect, energy consumption increases with the increase of energy efficiency, while the sustainable energy strategies postulate an increase in energy efficiency to hamper further energy inputs.

The trends presented on the global level can be treated as a reference point for international agreements, providing a framework that targets energy consumption. However, the final results of the negotiations should mirror the specificity of each country. Figures 2 and 3 show the variety of consumption patterns in the example of some countries and OECD members. The changes in Poland, presented in figure 2, are meaningful in the context of the discussion on consumption models from the perspective of political systems. The capitalistic transition related to the improvement in energy efficiency lowered energy consumption (primary energy supply). The level of energy consumption has been stabilized, although the energy efficiency of the economy has been substantially improved, which also has the character of trends described by Jevons' effect. From the perspective of sustainable energy use, the most desirable trend is found in such countries as North Korea, with decreasing consumption levels and increasing energy efficiency at the same time, particularly as the energy consumption level is much lower than in most capitalistic countries (figure 4). This is not typical for China, which follows the patterns characteristic of developed countries in the industrialization periods.

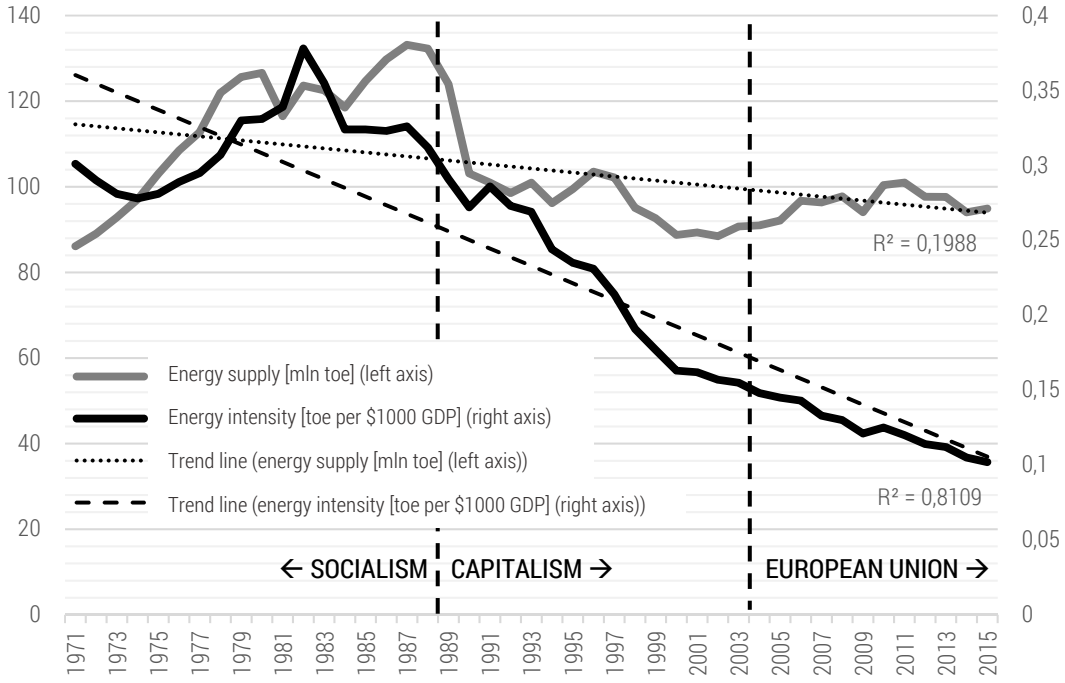


**Figure 2.** Primary energy supply [mln toe] and energy intensity of economy [toe per $1000 GDP] in 1971-2015 in Poland

Source: OECD, n.d.

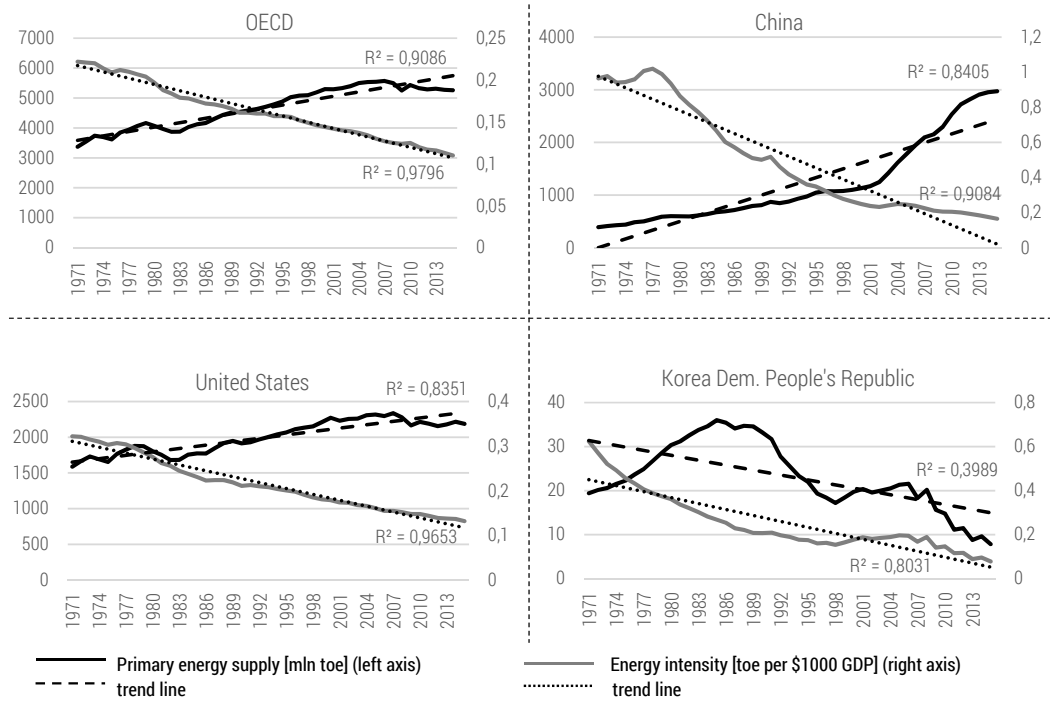


**Figure 3.** Primary energy supply [mln toe] and energy intensity of economy [toe per $1000 GDP] in 1971-2015 in the US, OECD, China, and Korea Democratic People's Republic

Source: OECD, n.d.

Figure 4 presents energy use per capita including energy from renewables and energy intensity in constant 2011 PPP. It shows the differences between particular countries illustrating the burdens on ecological systems. The energy from renewables is a form of sustainable use energy resources and should be excluded from the political negotiations. The countries were sorted according to the level of energy consumption from non-renewables. The level of using energy from renewables additionally benefits particular countries in terms of energy consumption. For example, in Norway the energy provided from the resources exceeds the use of the energy from non-renewables and the consumption of non-renewables only slightly surpasses the global average. In turn, North-American countries such as Canada or the US consume four times more energy per capita than the global average.

Figure 4 also shows the differences between two socio-economic and political systems within the same nation, as can be seen in the example of the Republic of Korea and the Democratic People's Republic of Korea (there is a lack of data on energy intensity in the World Bank database; however,

the trends can be observed in figure 3 based on the OECD database and due to the typically lower energy efficiency of socialistic economies, it can also be expected that the index of energy intensity of economy is much higher in the Democratic People's Republic of Korea than in the Republic of Korea). The OECD database indicates a close to double higher energy intensity index in 2016 [toe per $1000 GDP] in the Democratic People's Republic of Korea (OECD, n.d.). However, the energy consumption level is more than 10 times higher in the Republic of Korea. The mixed results show the complexity of determinants from the perspective of sustainable development. Very high levels of economic development and high energy efficiency hold in favour of the capitalistic system, while very high levels of energy consumption and Jevons' effect at the same time disadvantage the political system.

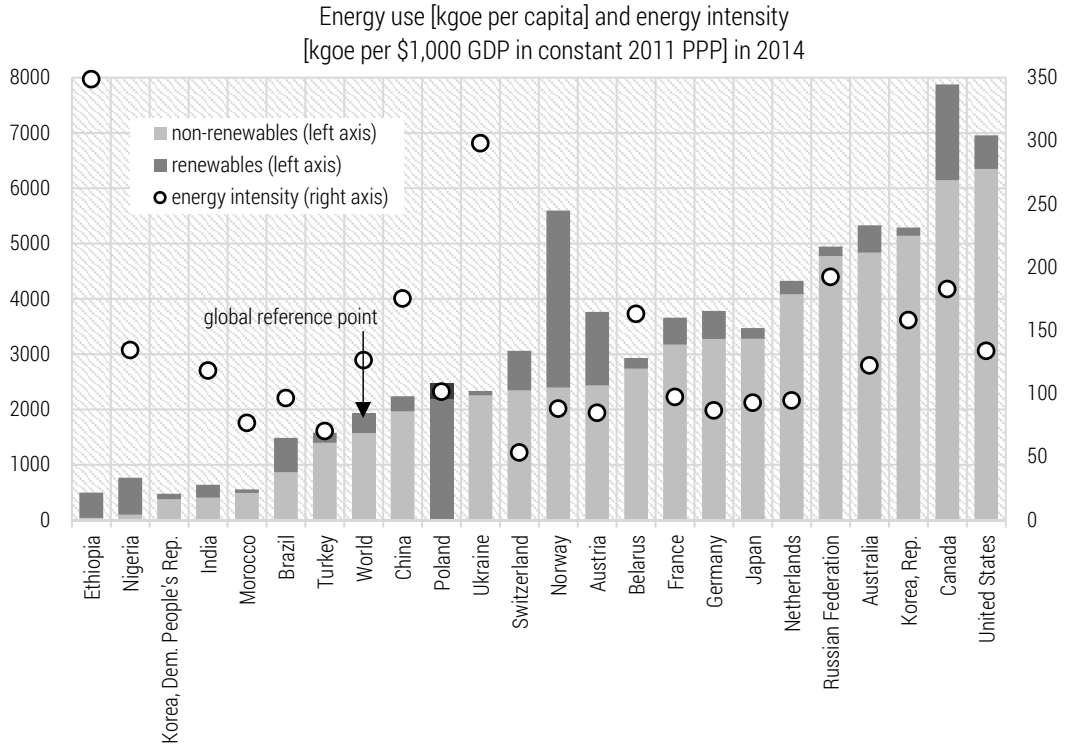


**Figure 4.** Energy use [kgoe per capita] and energy intensity [kgoe per $1,000 GDP in constant 2011 PPP] in 2014 (no energy intensity data for Korea, Dem. People's Rep.)

Source: World Bank Energy, n.d.

The *concept of a reference point* offers a limit to the energy input in a country motivating changes in energy policy in terms of the needs of other countries and the ecological limits at the global level. The *concept of a reference point* postulates using an average energy consumption level as a starting point for macro-allocation agreements. The global reference point creates a framework for energy consumption from the perspective of global ecosystem limits. However, other reference points can be set up for negotiations in specific geographic and political regions such as the European Union, OECD members, sub-Saharan Africa, or North America (figure 5). For example, the European Union can be compared to the global average as a single unit, although the discrepancies between particular member states can be varied to a much greater extent.

The concept of a reference point aims to achieve three main goals. Firstly, from the economic perspective, it hampers the Jevons' effect, politically limiting (voting as a fairness criteria) the amount of energy input in an economy regardless of the economic affordability of buying energy. The limits enforce countries – and in particular developed countries with high levels of energy consumption – to design energy policies for using renewable resources and changing consumption and production patterns. The quality of life and the inequalities between countries are then solely achieved within the fair quota provided to an economy. Second, from the social perspective, the concept meets the moral postulates of fair inter- and intragenerational allocation of natural resources to each according to one's needs. The mechanism ensures a more balanced allocation between different parts of the world and allows to plan development from the perspective of future generations. Finally, from the ecological perspective, it allows the creation of resilient economies from the global perspective, according to the ecological conditions of the Earth.

## Renewable energy communities and social capital as a sustainable micro-allocation mechanism

Miller, Richter and O'Leary claimed that *'energy policy choices shape not just technological trajectories but trajectories in how people envision and construct themselves and their relationships to one another and to the world*' (2015, p. 30). Therefore, the micro-allocation level should be further discussed in the context of sustainable development postulates. The disputes between scientists on the nature of market actors has been increasing since the very beginning and recently they are also joined by behavioural economists (Pieńkowski, 2011, 2013; Pieńkowski et al., 2018).

The most advanced arguments were presented by Siebenhüner (2000), who raised issues such as rationality and emotional reactions, cooperation and communication, learning and creativity as well as morality, which have been widely discussed in biological and social sciences. His model of *homo sustinens*, similarly to the research presented by behavioural economists, is motivated by cognitive and emotional processes. The latter, as evolutionary inherited qualities, also related to emotional learning typical of the first stages of individual development and emotional intelligence, support relationships with the environment and other people. The model emphasizes social qualities of human beings that have been developed over thousands of years of human evolution. Cooperation and solidarity based on communication, postulated in the concept of sustainable development, is a natural and universal human capability, which characterized small communities regulated by social norms. The norms constitute social capital, lowering transaction costs and regulating many areas of economic and social life. The new model of *homo sustinens* challenges the neoclassical model of rational, egoistic utility maximizers typical of a market economy.

The contemporary energy transition postulates the use of decentralized systems based on local renewable energy resources to produce '*competitive, sustainable and secure energy*' (European Commission, 2010). The sustainable perspective of energy transition emphasizes the role of new communities of renewable energy (Büscher, Schippl, Sumpf, 2019; Miller et al. 2015; Ruth, Goessling-Reisemann, 2019; von Bock und Polach et al., 2015; Zbaraszewski, Pieńkowski, 2017). The rationale behind the concept is that the communities go beyond the goals of such narrow approaches as energy production from renewables. In other words, a new seemingly unlimited source of energy without changes in consumption patterns, globally oriented, just distribution and resilient socio-economic systems will soon generate similar problems as those described by Jevons' effect. Therefore, the energy production systems are to be supplementary to the aforementioned socio-economic changes.

Von Bock und Polach et al. (2015), reviewing the goals of energy transition, pointed out such goals as new employment opportunities, generating added value, or increasing the capacity for further economic and social activities. In turn, Miller et al. (2015) indicated more specific issues, such as distributive justice or community resilience manifested in economic stability and well-being. The climate resilience of the contemporary economies has been particularly targeted since the Paris agreement in 2015. Consequently, the complex of sustainable goals provides specific prerequisites for the creation of energy production systems. The socio-technical systems from the experience of many energy initiatives offer the platform for the development of capacities for sustainable energy transition.

The most detailed research is provided by van der Merwe, Biggs, and Preiser (2018), specifying indicators of technical and social resilience. They reported specified and general technical and social resilience at three different organizational levels as follows: 1) operational focused on persistence; 2) tactical focused on adaptability; and 3) strategic focused on transformability. The specified social capacities consist of competence in decisions and the execution of standards, procedures or emergency execution roles, the ability to both anticipate foreseeable accidents and provide leadership in an uncertain environment. The general capacities at the first level consist of monitoring people's attitudes towards safety and resilience, the ability to follow one's intuition based on experience in new situations unregulated by procedures, acting under great pressure or in unplanned scenarios. In turn, at the adaptability level the key qualities involve the ability to network and mobilize support via networks and third-party agreements, monitoring justice or identifying heuristics used in crises. Finally, at the transformability level, the general social capacities are shaped by a resilience culture, social and psychological capital, external and internal connectedness in functions, sectors and disciplines and the ability to see complex relationships, prioritizing objectives and recognizing a phase change.

The goals set in the sustainable energy policy define the character of the new socio-technical structures expected in energy transition. The structures are defined as '*sets of interlinked arrangements and assemblages of people and machines involved in the production, distribution, and consumption of energy, in their supply chains, and in the lifecycles of their technologies and organizations*' (Miller et al., 2015, p. 31). They have to provide opportunities for the creation of social capital as the new qualities such as intuitional behaviour or resilience culture capital are determined by a specific social environment. The typical characteristics of the environment, such as trust building, solidarity and cooperation, are difficult to provide in a group of independent egoists maximizing their interest, as offered in the model of *Homo oeconomicus*. The renewable energy communities are expected to be a platform for the building of the socio-economic capacities postulated in contemporary energy transition. Therefore, their creation assumes ownership, cooperative forms of management and deliberative inclusive decision-making.

## Conclusions

The classical and neoclassical economic models of market actors and the fairness formula of social development accompanying the market distribution of resources is no longer acceptable from the perspective of the present global interdependencies. The ethical framework, which shaped the classical

and neoclassical market-oriented models of socio-economic development, was widely criticized from the socio-psychological and economic perspectives. The arguments presented by contemporary economists such as Friedman are very illustrative in understanding the ethical differences and rationale behind the classical/neoclassical model of society and the approach postulated in sustainable development. The short review of Friedman's view presented in this paper shows that the economics of sustainable development postulates a fairness formula other than that of the neoclassical economic schools, although both formulas are just in terms of formal language.

The justice of both the fairness formulas allows a concept of socio-economic development to be offered that will meet their distribution criteria. For example, the concept of a reference point presented in the example of energy distribution shows that both the formulas can be exploited at different levels of socio-economic development to monitor ecological burdens at the global level related to the trends described by Jevons' effect. At the same time, it enforces specific societies to effectively use these resources in line with the marked-oriented ethical approach. The fairness formula postulated in the concept of sustainable development is determined by the present global socio-economic and ecological conditions.

Finally, this paper shows the micro-allocation level changes in line with the postulates of sustainable development. It emphasizes the role of new socio-technical structures to complete a marked-oriented mechanism of resource allocation. The new postulates of energy transition change not only technologies but also reform socio-economic structures, including social meanings or energy consumption and production patterns. The new approaches emphasize the role of social capital, collaborative consumption and prosumption. The creation of institutional capacities for the production of social capital is a precondition for sustainable energy transition. The new structures provide opportunities for the creation of a wide range of different goals beyond the narrow targets of production and distribution of energy from renewables, including a reduction of social and economic inequality or the generation of social capital and resilient economies.

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