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CONCEPTUALIZING "GREEN ECONOMY" IN THE RUSSIAN ACADEMIC DEBATE

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Abstract

Green economy (GE) is a fairly new concept in the domestic discussion in Russia, which lags behind most developed economies in terms of environmental governance. This article examines how GE is conceptualized in the Russian academic discussion and how this debate reflects international conceptualizations of the concept. Drawing on a coding frame inspired by the international literature on GE to analyze Russian academic articles, we find that the Russian academic discussion tends to operate with a "strong" interpretation of GE that is not yet sufficiently well developed to underpin policy-making. Russian academics see GE as a solution to the environmental, social and as economic problems largely stemming from the country's resource-exporting and industrial economy. In particular, problems with the quality of environmental administration are highlighted by the academics. Finally, the benefits/threats thinking characteristic of the Russian environmental debate directs the GE discussion towards environmentally weaker interpretations.

Keywords: green economy, green growth, Russia, thematic analysis

Introduction

Economists disagree on the minimum set of necessary conditions for achieving sustainability (Stern 1997, p.150). Green growth – economic (GDP) growth – which also achieves significant environmental protection has gained a prominent position in the policy discourse of international economic and development institutions and governments alike (Jacobs 2013, 197). The term green economy (GE) is often used interchangeably with green growth (Allen and Clouth 2012); both concepts concern ways of improving the results of economic activity with less impact on the environment and natural resources than the case with traditional "brown" growth (Jacobs 2013), possibly even functioning as a "new engine for growth" (UNEP 2011, 2). However, the concepts differ from each other in scope: while GE highlights greening in terms of increased social welfare, green growth aims at continuous economic growth, simultaneously recognizing the role of natural capital in planning processes and national accounts (Kaszelan 2017). Both concepts remain political, and academic debate on many of the basic claims is ongoing (e.g. Georgeson et al. 2017; Merino-Saum et al. 2020), as well as the critique against the underlying assumption of constant growth (e.g. Wanner 2015). Some have seen green growth and GE as buzzwords; others, as a potential paradigm change which would gradually gain wide acceptance, generating path dependency after initial institutional support (Bowen and Fankhauser 2011; Fouquet 2019).

Russia industrialized under the Soviet system, but it still lags behind the West as to environmental policy priorities (Ministry of Natural Resources and Ecology 2020; Oldfield 2005) and lacks a functional and comprehensive regulatory basis for environmental protection (see Kochtcheeva 2009; Newell and Henry 2016). There is no explicit official political framework for GE in Russia, such as a doctrine or a government program, but the

concept and its elements appear in a range of official documents and political statements.[1] Various environmental policies have addressed environmental protection in Russia since the global GE debate got underway, however, including energy efficiency (Russian Federation 2009), utilization of associated petroleum gas (APG) (Russian Government 2009), renewable energy (Russian Government 2013), municipal waste (Russian Government 2016) and best available technology (Russian Federation 2014). The Russian government conceptualizes GE largely through technology development as "efforts involving design, production and use of technologies and equipment for control and reduction of emissions of pollutants and greenhouse gases, technologies of energy and resource conservation and renewable power generation, as well as the development of market and nonmarket incentives for business sector" (Russian government 2012a, 46–48). Regardless of the legal basis, technological improvement, which could be expected to make the economy better equipped for solving environmental (or other) problems in the future, is limited. Very low levels of company innovation activity,[2] weak framework conditions for innovation (lack of competition, low levels of trust, corruption), weak infrastructures and regulations, institutional inertia and active resistance from interest groups to efforts at policy reform have long distorted technological development in Russia (OECD 2011b), and the recent sanctions on financial institutions and technology imports by the Western countries as a result to Russia's attack to Ukraine add to this.

As Russian academics point out (Bobylev et al. 2015; Panova 2017), the concept of GE is fairly new in Russia. Examining the various conceptualizations can provide new insights into how to overcome miscommunications, facilitating dialogue at several levels (see Shenhav 2004). This article focuses on *how green economy is conceptualized in the Russian academic literature, and how this discussion reflects the international conceptualizations of green economy*. We use the main themes identified in the international academic literature defining GE as a coding frame to analyze academic articles written by Russian authors, and inquire into the strictness of approaches through the theoretical dichotomy of weak vs strong GE identified in the international literature. Examining GE through the central themes working as criteria for assessing the weakness and strength of interpretations helps to shed light on important conceptualizations. In particular, we are interested in the variety of conceptualizations within Russia, as well as between Russia and the international discussion from which the concept of GE originates: although the concept of GE is discussed in Russia, some central elements of the concept may be less influential or studied and understood differently in Russia than internationally.

The next section provides an overview of GE in the international academic literature as well as its central themes, to be used as a preliminary coding frame for the Russian materials. Our methodological approach, materials used and the research task are also outlined. The results

[1] This is the case elsewhere as, for instance in Finland, but in Russia such a dedicated policy framework is part of the political tradition and lends the issue political credibility. For instance, on the issue of climate change there was the Climate Doctrine and on energy efficiency the 'State program: Energy Efficiency and Energy Sector Development' for 2013–2020.

[2] In Russia business financed only 0.29% of gross domestic expenditure on RandD (GERD) as percentage of GDP in 2015, in comparison to 1.48% in the OECD on average, 1.54% in China and 1.79% in the United States. The government financed two-and-half times as much of GERD in Russia (0.76%) than business, whereas OECD governments financed only 0.62%, China 0.44% and the USA 0.62% – much less than half of what the business sector financed (OECD 2017).

of our research indicate how GE is conceptualized by the Russian academics within themes that emerged in the international and domestic bodies of literature. To our knowledge, this study presents the first overview of the literature and the first systematic scrutiny of conceptualizations of GE in Russia.

Methodology, approach and materials

Gruber (1995, 907–908) defines conceptualization as "an abstract, simplified view of the world that we wish to represent for some purpose"; further: "[e]very knowledge base, knowledge-based system, or knowledge-level agent is committed to some conceptualization, explicitly or implicitly." Our study proposes that some of the miscommunications between political and academic discourses as well as between Russian and international discourses are caused by differences in constructing and interpreting key concepts such as GE, or sustainable development – as demonstrated also by Oldfield (2005).

International research has identified three emerging agendas of GE, differing in terms of how radical they are as regards the depth of the necessary greening and their stance towards the quality of growth: weak, transformational, or strong green economy (Georgeson et al. 2017; Bina 2013; Faccer et al. 2014; see also below). For simplicity, we use the dichotomy weak vs. strong to assess Russian academic literature on GE, asking: *Do Russian academics interpret the concept of GE in the context of the current state environmental policy of a raw-materials-exporting country, or do they employ a stronger interpretation of GE?* Such an assessment is important, as the GE label may be applied to many activities, ranging from "green-washing" to deep ecologization.

We have systematically reviewed the international academic literature to map the central themes in the GE discussion. The material was collected by using the Web of Science databases, including all its databases. The search term used was *green economy*; only titles of articles were addressed in the search as it was assumed that papers that discuss the concept would have the term in the title. No time frame was used. The search produced 353 hits, first from the 1970s, the majority published during the last 5 years (top year 2016 with 59 publications). Majority of the papers were conceptual, but also empirical and sectoral analyses were included. Review papers were further used to extend the relevant bibliographies. This snowballing brought the total number up to 400. In the final analysis, only papers with 10+ citations were included. These papers were categorized manually by using the identified agendas of GE – weak and strong green economy (Georgeson et al. 2017, see below) – as the frame for the categorization. After that, themes helping to assess whether it is about weak or strong GE were identified by using inductive thematic analysis with attention to themes that recurred in the academic articles. The aim here was not to present a balanced overview of the international academic literature as such, but to identify the central themes to be used as the tentative coding frame for analyzing the Russian academic literature on GE.

In Russia, GE began to appear in the academic literature toward the end of the first decade of the 2000s. We tracked this discussion; articles for potential inclusion in the analysis were identified through academic search engines (cyberleninka.ru, elibrary.ru) and using a snowballing method based on the reference lists of articles already identified. As a result, several articles were included from the first decade of the 2000s, together with more recent articles. Altogether 28 articles (see Appendix 1) focusing on GE written in Russian or

English were selected by all-Russian authors. Not all articles that came up were included: we focused on those providing original and relevant insights into the definition of GE, and not, for instance, reviews of the topic based on the writings of others, which are numerous in Russian academic journals.

Thematic analysis was applied to organize the material regarding both the international discussion and Russia. Thematic analysis is a method of systematically identifying, organizing, and offering insights into patterns of meaning (themes) across a dataset. *Themes* are "broad topics or issues around which the codes cluster" (Braun and Clarke 2012, 63). A theme "captures something important about the data in relation to the research question, and represents some level of patterned response or meaning within the dataset" (Braun and Clarke 2006, p.82). Rather than the frequency of the themes in the material, the significance of the contribution to defining GE guided the choice of themes.

A deductive approach to coding data was chosen in the case of the Russian materials; key themes conceptualizing GE were inspired by the international literature, which thus guided the analysis as a coding frame. This top–down approach allows us to analyze whether the original features of GE from the international debate are included in the Russian conceptualizations, how they are interpreted and how the socio-cultural context is built into the interpretation. Thus, thematic analysis in this study is critical and constructionist. Coding was conducted manually, as that facilitates the search for new interpretations and their elements which may not be captured by the initial categories (Chong and Druckman 2007). We now turn to the main themes related to the definition of GE in the international literature, establishing the coding frame for the analysis of the Russian academic articles on GE.

Debating green economy in international research: a coding frame

Although the term green economy first appeared in the report *Blueprint for a Green Economy* by Pearce et al. (1989) and was theorized by Jacobs in 1991, the concept became widespread both in academia and practice only towards the end of the first decade of the 2000s (Merino-Saum et al. 2020; Boehnert 2016; Faccer et al. 2014; Loiseau et al. 2016). International organizations, including the UN and OECD, adopted the concept of GE, and that of green growth, in their strategies (e.g. UNEP 2011; World Bank 2012). The emerging recognition of GE has been explained by rapid technological developments (e.g. Jänicke 2012), as well as by the global "double" crisis, where GE has been seen as part of the solution to both economic and environmental paralysis (Bina 2013). However, GE has also received considerable and growing criticism, including accusations of "neoliberalization of nature" (e.g. Wanner 2015), and the "myth" of decoupling growth from the environment, pollution generations and resource consumption (e.g. Swyngedouw 2010). It has also been held that GE diverts attention from the social and political dimensions of sustainability, including issues of social and international justice, as these are seldom discussed in connection with GE (Boehnert 2015). Moreover, GE may give rise to doubts concerning participation, democracy and the inclusion of stakeholders outside the economic sphere (see e.g. Pitkänen et al. 2016).

Scholars have identified three emerging agendas of GE, which differ in terms of how radical they are towards the depth of the needed greening and their stance towards the quality of growth: weak, transformational, and strong green economy (Georgeson et al. 2017). Bina

(2013) refers to these agendas as "almost business as usual," "greening," and "all change," whereas Faccer et al. (2014) call them "the incrementalist discourse," "the reformist discourse," and "the transformative discourse." This can be seen as a spectrum of interpretations from market-led, business as usual type of weak green economy through to strong green economy of radical changes, such as a steady-state economy or even degrowth (Kenis and Lievens 2015; O'Neill and Gibbs 2016). Regarding the academic criticism towards the concept, weaker versions of it have raised more criticism than the stronger ideas of GE, which, as mentioned, may even decouple prosperity and quality of life from the demands of economic growth (Gibbs 2020). We have developed the spectrum from weak to strong further by identifying and explicating themes in the GE discussion that help in analyzing and explaining the differences between weak and strong GE; the preliminary stage of GE analysis in Russian does not provide sufficient material for using the more detailed division of GE interpretations to, for instance, incrementalist, reformist and transformative.

The first of the themes that we identified to be defining the weakness or strength of GE is *environmental stringency.* It has been contested what can be deemed "significant" in terms of environmental protection (Jacobs 2013). For example, the differences have been documented in the stringencies of GE definitions between international organizations (Hickel and Kallis 2020; Smulders et al. 2014). The World Bank (2012) was found to be the weakest as it sees GE as "minimizing" rather than reduce environmental impact of growth. The strongest one was UNEP (2011), which considers "reducing" environmental impact and ecological scarcities and rebuilding natural capital as being necessary. UNEP also requires "absolute decoupling" of GDP from resource use and environmental impact, which would imply that total consumption of, for instance, energy in the economy, would remain constant or decline while the economy continues to grow in contrast to the less environmentally stringent "relative decoupling" i.e. the reduction of consumption per unit of product (Ward et al. 2016; Victor and Sers 2019).

The second theme concerns the *quality of growth.* Traditional "brown" growth is seen as replaced by a more environmentally friendly, "green," development (e.g. van der Ploeg and Withagen 2013). Many expect a "new industrial revolution" with a transition to low-carbon growth to bring innovative and creative growth. For instance, the Stern Review (2007) argued that stabilizing the climate would gradually become more expensive. Shifting long-term investment (also by directing public finance) towards the greener options to avoid lock-in to less efficient and emission intensive technologies has been a point of discussion for some time, also referred to as "the Green New Deal" (UNEP 2011; World Economic Forum 2013). For instance, green investment was taken as an important criterion of the European Union's Covid recovery package in 2020: allocating 25% of the package to climate investments, requiring all investments to "do no harm" to the environment, and generating green jobs (European Commission 2020). However, economic theory and empirical evidence of the limits of economies to improve efficiency of material use and reduce carbon emissions have also been cited to question GE's potential as a source of better or higher growth (e.g. Hickel and Kallis 2020). "Grow first, clean up later" thinking related to the environmental Kuznets curve (see e.g. Dinda 2004; Stern 2004) – also heavily criticized (see for instance Chen et al. 2019) – holds that poorer societies care less about environmental damage, but that, as they develop and fulfill the basic needs of their populations, this interest and environmental investment will increase significantly (World Bank 2012).

The third major theme defining the weakness or strength of GE is the *role of the current economic system*, and GE's dependence on it. This debate on the feasibility of solving the ecological crisis through GE boils down to the disagreements between those who see GE as a feasible path and those who argue that what is necessary is to limit growth, rather than achieving even green growth (Lipsey 2019; Brockington 2012). Economic growth facilitating progress towards greener solutions for the society entails a dilemma concerning growth itself, which enables higher consumption, the very thing green growth seeks to reduce: the "Jevons Paradox" (Lipsey 2019; Hickel and Kallis 2020; Foster 2011). The counter-argument is that the policy tools of GE are well-known and tested, whereas it remains unclear how the state of agrowth or degrowth could be achieved under democratic systems and exactly how that would contribute to solving environmental problems – as current solutions are dynamically linked to sufficient levels of economic growth (e.g. Schultz and Bailey 2014; Swyngedouw 2010). GDP is widely recognized as being an inadequate proxy of welfare: for instance, it fails to capture income inequalities or environmental externalities. This has led some economists to propose ignoring GDP growth as the leading indicator and focusing instead on the increase in welfare which takes place when social and environmental problems are solved (van den Bergh and Drews 2019). This links up with criticism of GE as regards exacerbating global inequalities between the North and South, as well as more locally in the South and in the North (see e.g. Martinez-Alier et al. 2010).

Under the fourth category, *social impacts* and questions of justice are included in the definition of GE to varying degrees. The main focus here tends to be on the intergenerational social aspect, and to avoid reducing the possibilities of welfare for future generations. More immediate impacts on the social sphere include improvements in the quality of the living environment, avoiding future environmental (and thus, social) disasters, and generating green jobs. For instance, UNEP (2011) has emphasized the developmental approach through equity and poverty reduction, including green jobs (e.g. Victor and Jackson 2012), while the OECD (2011) mentions only the green jobs dimension (Borel-Saladin and Turok 2013). Green jobs are anticipated to provide a decent living in terms of "traditional labour concerns including wages, career prospects, job security, occupational health and safety as well as other working conditions, and worker rights" (UNEP et al. 2008). However, there has been criticism that the green jobs generated have been overestimated, originate from government campaigns, and have negative impacts on the economy (Morriss et al. 2009; Alvarez et al. 2010).

Thus, this review of the GE concept in the international literature inspired a coding frame consisting of four initial themes: *environmental stringency*, *quality of growth*, *the role of the current economic system,* and *the social impacts of GE*. Our analytical frame makes the distinction between the weak and strong interpretations of GE based on how these four themes are addressed as summarized in Table 1.

Table 1. Analytical framework: coding frame

Theme	**Weakness or strength of GE interpretation: Coding frame**	
	Weak	***Strong***
Environmental stringency	*Minimizing* environmental impact of economic growth; relative decoupling	*Reducing* environmental impact of economic growth; absolute decoupling; rebuilding natural capital
Quality of growth	Brown traditional growth; questioning limits of economies to improve efficiency and cut carbon emissions; "Grow first, clear up later"	Green growth; long-term investments to greener options to avoid technological lock-in; cheaper to react now on climate change than later
Role of economic system	GE feasible path in terms of economic theory; also other indicators than GDP required to	Economic growth should be limited, GE is not enough; Jevons Paradox – growth entails higher consumption;

	measure GE; policy tools tested unlike with agrowth/degrowth	GDP inadequate proxy for welfare; GE exacerbating global inequalities
Social impacts	Focus on green jobs, other social impacts not included; questions of justice and equality not focus	Wide range of social impacts; questions of justice, equity and poverty reduction; focus on quality of green jobs

In the next section we apply this coding frame to discuss various conceptualizations of GE in Russia.

Conceptualizing green economy in Russia

We approach the first theme, the *environmental stringency* of the definition of GE, by examining how the environmental impact of the economy is described in definitions of GE. In the international literature, the "reduction" of environmental impact versus its "minimization" was the main language that reflected environmental stringency. In the Russian discussion we found some who called for minimizing environmental impacts or economic growth without increasing the environmental risks (Panova 2017; Samarina 2015; Samarina and Skufina 2015), and reducing them (Radionova and Lipina 2015; Glazyrina 2017; Kiryushin 2014; Svetikov 2018; Voikina and Potravny 2018; Svarts et al. 2017). Further, proposals like "taking into account" the environmental impacts (Bahtinova et al. 2019; Danilenko 2013), improving the quality of the living environment (Porfiriev 2013) and extending the welfare society to include environmental friendliness (Matraeva et al. 2019) clearly lie at the "weak" end of GE. Many authors simply cited the definition of "sustainable development": not exposing future generations to significant environmental risks (Kiryushin 2014; Ivanova and Levtsenko 2017; Zashneva and Mustafava 2019) or providing an uninterrupted supply of natural resources and ecosystem services (Radionova and Lipina 2015; Nosko 2017); these could be interpreted as somewhat stronger approach to GE. Economics was also considered to be dependent on the natural environment/capital, which indicates a departure from neoclassical welfare economics, and is thus in line with "strong" GE (Ivlev and Ivleva 2018; Ivanova and Levtsenko 2017; Bobylev et al. 2015).

Decoupling – one of the indicators that illustrate the trend towards a greener economy – is mentioned in relation to GE by some Russian scholars, although no clear distinction is made between relative and absolute decoupling. Bobylev et al. (2015) provide a graph that shows the relative decoupling of water consumption from gross regional product, as well as a similar tendency, albeit less clear, regarding air pollution. Without explicitly stating this, Samarina (2015) would seem to refer to absolute decoupling, as she defines decoupling as taking place when environmental pollution or consumption of natural resources is decreasing or remains unchanged; however, Zashneva and Mustafava (2013) speak of minimizing the depletion of natural capital while meeting growing needs: relative decoupling. Samarina and Skufina (2015), without specifying as to relative or absolute decoupling, argue that decoupling is evident in Russian industrial regions like Murmansk, Krasnodar, and Belgorod, due to international pressure on exporting companies to comply with international environmental standards; Svarts et al. (2017) recognize a similar external driver for GE. Thus, despite some published examples, in-depth analysis on the strength of decoupling, and the measurement of the GE trend overall, is yet to develop among Russian GE scholars.

Our second theme used to define the weakness or strength of GE is the *quality of economic growth*. Here we noted that understanding GE as a new level of economic thinking (Bobylev

et al. 2015; Poltarykhin et al. 2018), something qualitatively different from the current economic system (Bahtinova et al. 2019; Matraeva et al 2019) was recognized by the Russian academics. As Zashneva and Mustafava (2013, 34) put it: "the 'green' economy is not just a new direction in economic science but rather a new consciousness that penetrates into all spheres of society." These views clearly indicate thinking along the lines of strong GE. But there were also those who considered GE as being a sector of the economy (Gurova 2019) and called for separating GE for society from GE for nature (Bocharnikov 2013) – clearly a weaker interpretation (or misinterpretation) of GE. In sum, we find that the Russian discussion includes thinking from both weak and strong GE traditions. Visions of a qualitatively different economy even had a hint of the degrowth debate linked to GE, and the strong interpretation seems to dominate slightly.

GE as yielding "better" growth than the current economic model, and as making not only environmental but also economic sense was clearly recognized. This is logical, given the orientation of the Russian economy to raw material exports, which leaves great leeway for hopes as to the quality of growth. The articles that we examined argue that GE could solve many problems which the Russian government will soon have to deal with in any case, and has already set about solving: reducing resource dependency and boosting the competitiveness of the economy by modernizing production, which could increase the degree of domestic processing of raw materials to generate jobs, improve the efficiency of material and energy use, and catch up the Western world in technology development (Bobylev et al. 2015; Zashneva and Mustafava 2019; Bokarev et al. 2018; Voikina and Potravny 2018; Svarts et al. 2017). Also mentioned was the Porter Hypothesis of innovation generated by environmental policy being able to compensate the costs of implementing the policy (Nosko 2017). Russia's current economic system is seen as leading to economic and environmental risks due to dependence on the volatile world market prices of raw materials (Bobylev et al. 2015; Nosko 2017) and the declining demand for fossil fuels, the country's main export product (Svarts et al. 2017; Khovavko 2018). Also the growing technological gap between Russia and the Western world is noted (Poltarykhin et al. 2018; Panova 2017). Thus, as per the stronger version, most of the academics examined here see GE as a suitable guideline for reforming the Russian economy as a whole; however, they also note that the industry is likely to feel threatened by the idea of GE and will oppose it (Vladimirova 2017; Nosko 2017; Svarts et al. 2017). Moreover, the perceived Western dominance of the GE paradigm via international environmental institutions was seen as suspicious (Khovavko 2018) (see below).

Also GE and *the role of the current economic system* emerges as a theme in the Russian literature. Most criticism of GE is related to its proximity to the current economic system: economic growth is deemed inherent in the current system, and thus GE (Vladimirova 2017; Poltarykhin et al. 2018; Ivlev and Ivleva 2015; Rodionova and Lipina 2015), which is seen to legitimize extractive business in Russia (Vladimirova 2017; Bokarev et al. 2018). It is argued that the current political leadership still sees environment and economy as being in opposition to each other (Svarts et al. 2017). Similarly to the international critique (e.g. Wanner 2015), the GE concept is criticized for not providing a functional economic theory or a model beyond the current neoliberal paradigm (Vladimirova 2017; Bokarev et al 2018; Ivlev and Ivleva 2015), and some call for further research on how to accomplish the transition to GE (Khovavko 2018; Vukovic et al. 2019). However, unlike in the international debate, here we noted very little questioning as to the feasibility of the GE concept as a solution to

environmental and other problems. Win–win or double / triple benefit (economic, social and ecological) views were frequent (Bobylev et al 2015; Poltarykhin et al. 2018; Samarina 2015; Nosko 2017; Samarina and Skufina 2015). Similar to the international debate, the need for new approaches to measuring well-being beyond GDP was noted (Bobylev et al. 2015; Poltarykhin et al. 2018). The "strong" interpretation of GE dominates, as the criticism focuses on maintaining the neoclassical welfare economics basis, rather than on the feasibility of GE as a solution to environmental problems.

Also the *social dimension* of GE featured frequently in the Russian materials. Maintaining and improving wellbeing were typically included in the definition of GE, including reduction of environmental pollution and avoidance of future environmental disasters, seen as major social effects of GE on the Russian population (Ivanova and Levtsenko 2017; Rodionova and Lipina 2015; Poltarykhin et al. 2018; Svarts et al. 2017; Samarina and Skufina 2015). Also social justice was brought up as an outcome of GE (Bokarev et al. 2018; Zakharova 2015; Voikina and Potravny 2018). Measures to support science and education, and thus, the development of human capital, were seen as promoting the transition to GE (Bobylev et al. 2015; Kiryushin 2014; Poltarykhin et al 2018; Zashneva and Mustafava 2019; Voikina and Potravny 2018) – a double benefit. We found rather little about green jobs, a theme quite dominant in the international literature – with the exception of Voikina and Potravny (2018), who argue that GE could address such major problems as unemployment and changes in the structure of the labor market, and advocate socially driven criteria for green jobs (decent wages, work safety, career growth opportunities, employee rights), which they expect to emerge in connection with the rational use of natural resources, energy saving, elimination of environmental damage, and better waste management. The range of social issues brought up in this connection indicates the "stronger" interpretation of GE.

Further, we noted two themes beyond the coding frame: viewing GE in the context of potential benefits and pitfalls, and the performance of the Russian state administration. Considerations of the *benefits and pitfalls* of planned environmental policies have found their way to the center of the Russian environmental debate earlier (see Korppoo et al. 2015; Henry and McIntosh-Sundstrom 2007; Makarov 2016); this pattern of thinking is clearly demonstrated as regards GE. On one hand, Russia's vast natural capital is seen as providing potentials for developing GE, and as an opportunity to benefit from the country's natural capital by recognizing Russia as a provider of ecosystem services, an environmental donor (Zashneva and Mustafava 2019; Bobylev et al. 2015; Medvedev 2010; Khovavko 2018). Such a focus might be seen to fall in the weak end of the GE spectrum, because of the emphasis on further ways to benefit for natural capital, perhaps in order to avoid environmental policy and related costs. On the other hand, Svarts et al. (2017) dismiss inexhaustible resources (oil and gas) and underutilized forest reserves as illusions. We note that GE policies are also seen as a space for international engagement (Vladimirova 2017; Zaharova 2015). However, threats were also indicated: GE was considered as an instrument of green protectionism, and the reigning emerging economies for the West (Panova 2017; Bokarev et al. 2018; Kiryushin 2014). The green protectionism argument can be placed in the weak end of the GE spectrum, as it does not recognize the justification for environmentally based trade restrictions. International environmental institutions related to GE were also seen as being controlled by Western elites, thereby posing a risk to the sovereignty of resource-rich countries (Khovavko 2018; see also Svarts et al. 2017). The country-specific nature of

GE was emphasized, and seen as a positive feature (Bobylev et al 2015; Bokarev et al 2018; Porfiriev 2013; Kiryushin 2014; Rodionova and Lipina 2015; Panova 2017) – perhaps partly due to concerns over sovereignty.

Finally, *the role and performance of the state administration* was deemed crucial for launching GE, as civil society has less influence in Russia than in the West (Ivlev and Ivleva 2015; Poltarykhin et al. 2018). Russia's policy goals are largely considered to be in line with the goals of GE, and the policy shift in this direction recognized (Nosko 2017; Kiryushin 2014; Bobylev et al. 2015; Expert Council 2018). For instance, 'Fundamentals of state policy in the field of environmental development of the Russian Federation for the period up to 2030' (Russian government 2012b) stating that "[t]he strategic goal of the state policy in the field of environmental development is to solve social and economic problems that ensure environmentally oriented economic growth… and…to meet the needs of present and future generations..." has been interpreted to follow the principles of GE (Bobylev et al. 2015; Kiryushin 2014; Nosko 2017) but also criticized for delaying efforts to green the economy until 2030 (Vladimirova 2017). The likelihood of policies getting implemented has been questioned, arguing that policy-makers in Russia may promote GE policy projects but oppose their actual implementation (Vladimirova 2017), and foreign pressure interpreted to support launching GE in Russia (Kiryushin 2014). State regulation was deemed absent and ineffective as regards GE, and the lack of coordination between state authorities and corporations was seen as impeding any transition to GE (Samarina 2015; Ivanova and Levtsenko 2017; Zashneva and Mustafava 2019; Samarina and Skufina 2015; Tarkhanova et al. 2019); the quality of governance in Russia was also criticized (Samarina 2019; Ivanova and Levtsenko 2017; Nosko 2017; Svarts et al. 2017). The state administration requires modernization in order to improve environmental standards and compliance with them (Ivanova and Levtsenko 2017; Zashneva and Mustafava 2019; Nosko 2017; Bobylev et al 2015). This is a "strong" GE argument.

Discussion

The coding frame inspired by the international literature on GE offered a useful skeleton for the analysis. The themes identified were clearly present and central in the Russian academic literature, although the depth and nuances varied somewhat. In this section we discuss the Russian GE discussion in the context of international literature, and then evaluate the depth of environmental awareness in the Russian discussion: can the statements be considered to fall in the weak or strong end as regards GE interpretations? We conclude with remarks on what seemed to be underrepresented in the Russian discussion.

The Russian academic analysis proved to be clearly (and expectedly) less in-depth on all themes than the international literature – but that could well be true for most national-level debates. Also the problems with implementation of environmental policy in Russia (see also Korppoo et al. 2020) may explain the lack of detailed and specific academic analysis on the various issues and angles of GE. For instance, matters related to the fossil-fuel economy, as well as how the decoupling of GDP from environmental impact is proceeding, were not covered sufficiently to inform actual policy-making, and this literature seems detached from the policy results at times.

GE was seldom questioned as a path to a more qualitative growth; and these academic researchers were mostly supportive of a transition to GE. Although GE was criticized for not

providing an alternative to the dominant neoliberal paradigm, its ability to provide solutions to Russia's problems was questioned much less than in the international literature growingly critical towards GE. That is perhaps logical, given the shortcomings of the Russian environmental regulatory system together with its problematic dependence on the declining fossil-fuel economy in today's emerging low-carbon world, but at the same time, there were only few attempts to measure how GE is proceeding in Russia, for instance with calculations on decoupling of environmental impacts from GDP growth. Further, the shortcomings of the Russian state administrative system can help to explain such difference between the Russian and the international interpretations. The role of government interventions driving GE has been discussed also in the international literature (Hamdouch and Debret 2010), however, as the focus of the Russian discussion was more on the performance of the state administrative system and its importance in launching GE given the weakness of Russia's civil society, not so much the role of the state, we interpreted it as a separate discussion from that in the international debate. The social angle of GE enjoys recognition in Russia, where GE is rarely criticized for undermining the social aspect. On the other hand, concerns over the impacts of GE on democracy do not feature in the analyzed Russian academic GE articles.

Russia-specific arguments concerning the benefits to be gained from international environmental policy apply also to GE, at least to some extent and in some circles, as we noted calls for Russia to play a role as an environmental donor. "Threats" arguments were linked to international-level arguments on the impacts of GE on democracy and equality; here, instead of the national level, the focus was on Russia's role in international decision-making on GE, which was seen by some as threatening the sovereignty of raw material exporters such as Russia due to the dominance of powerful Western elites.

Table 2 summarizes the findings from the Russian academic literature in the context of our analytical framework based on the coding frame. In the table, grey colour signals whether our material indicates the dominance of strong or weak interpretation of GE in the Russian academic debate.

Table 2. Assessment of Russian academic discussion in the analytical framework

Theme	**Weakness or strength of GE interpretation: Russian academic literature**	
	Weak	***Strong***
Coding frame: *Environmental stringency*	*Minimizing* environmental impacts used but lack of definition of environmental stringency more common; little measurement of GE such as decoupling; no clear distinction between absolute and relative decoupling	*Reducing* environmental impact dominates as a definition of GE; not exposing future generations to significant environmental risks / providing uninterrupted supply of natural resources and ecosystem services (in line also with sustainable development); importance of natural / environmental capital (departure from neoclassical economics)
Coding frame: *Quality of growth*	GE is separate from the economy, sector of the economy; the West dominates GE paradigm; industry likely to oppose the idea of GE	GE a new level of economic thinking (hint of degrowth arguments); GE can reduce environmental and economic risks of the fossil fuel exporting Russia; GE consistent with government goals on reducing resource dependency, boosting competitiveness through modernization and technology development; Porter hypothesis
Coding frame: *Role of economic system*		Economic growth inherent to the current economic system (and GE), which legitimizes raw-material economy; GE does not provide economic theory beyond neoliberal paradigm; double benefit; new approaches to measuring GDP necessary; little criticism over the feasibility of GE in Russia

Coding frame: *Social impacts*	Democracy not mentioned	GE maintains and improves wellbeing as reduces pollution and avoids environmental disasters; social justice; development of human capital; green jobs not a focus, social criteria for them
Russian data: *Benefits and threats*	*GE related benefit*: Russia provider of ecosystem services; *GE related threats*: international environmental institutions and Western elites control GE; risk to sovereignty of resource-rich countries; green protectionism	Russia's vast natural capital an opportunity for GE; inexhaustible fossil fuel resources and under used forest reserves an illusion; GE opportunity for international engagement
Russian data: *Performance of state administration*	Russia's policy goals in line with GE	Criticism of the quality of state administration dominates; state's role central as civil society weak; Russia's current policy goals delay GE; problems with policy implementation; foreign pressure can support GE in Russia; state regulation ineffective / absent on GE; lack of coordination between state authorities and corporations impedes GE

Source: authors' compilation

As to the level of environmental awareness, we find that both strong and weak GE approaches are present in the Russian academic discussion. The strong interpretation is generally more dominant, as indicated by Table 2. Most of the arguments under the examined themes fall clearly on the "strong" side, with the exception of the benefits/ threats discussion concerning the role of Russia in global environmental policy. Russian debate concerning environmental policy, which is frequently triggered by global environmental policy and its trends, is often conceptualized through benefits and threats for Russia (see Makarov 2016; Korppoo et al. 2015; Korppoo 2022); the Russian approach to GE seems to follow this pattern. Perhaps the benefits / threats approach could be called a "meta-theme": a theme characteristic of a given society in particular types of situations. If so, such a meta-theme could be expected to occur in certain situations – as here, with Russia's engagement in international environmental policy.

There were also themes that we expected to find in the Russian GE discussion by academics, but proved to be so to lesser extent or not at all. First, we found surprisingly little mention of Russia's status as a raw-materials exporter, and how this might disincentivize many parts of a green transition (low-carbon vs. the Russian fossil-fuel economy). Many issue areas beyond this key sector are covered by environmental regulation; however, such policies tend to be of low quality, as pointed out by Russian academic researchers, and implementation problems give rise to questions about the incentives to introduce such regulation in Russia (see also Korppoo et al. 2020). Another issue generally absent from the materials, but which we had expected to find, is the Arctic and its role in the green transition. Given the vulnerability of the Arctic environment, it seems surprising that the Russian academics seem to skirt the question of GE opportunities in this region. More expected, as mentioned above, was the absence of concern on how GE may influence democracy domestically in Russia.

Conclusions

Despite the policy measures adopted, international comparison shows that the efficiency of energy use remains low in Russia: in 2016, total final energy consumption per unit of GDP was over four times that of OECD Europe, and some one-third more than that of China (IEA Data Services: World Indicators). While the Russian economy remains both energy- and carbon-intensive, easy and simple measures to convert the economy towards GE are readily available. On the other hand, most of the world's developed economies implemented such

measures long before the concept of GE was even invented – which shows that Russia has been lagging behind as regards the global green trend and will soon face competitiveness problems in the global market. The academic discussion in Russia as examined here makes the valid point that Russia could benefit from implementing policies which would direct the economy onto a greener and more diverse path, as also the government has indicated.

The fairly strong interpretation of the GE found in our study shows that Russian academics clearly depart from the government line in pushing for greener future for their country. Of course, academic discussions are one thing: real action in the field is something again. It should also be noted that these academics do criticize their government's policies and performance on environmental protection as regards the GE concept. This is how the GE discussion has contributed to the general environmental policy debate in Russia. In the future, the Russian analysis on GE will require more in-depth studies of key issue-areas that can enable a transition to GE – for instance, on financial measures, the effects of GE policies (there are many already in Russia) and the state of the environment and the economy, and green employment.

Our analysis of Russian academic articles shows significant similarities between the international and Russian interpretations of GE, as well as some differences. However, although these academic interpretations of GE seem to fall in the strong end of the environmental spectrum in Russia, the weak approach is clearly shown on the Russian traditional discussion on benefits and threats related to international environmental cooperation, perhaps especially outside academic circles. This is relevant to whether environmental policy is adopted as a window-dressing for international audiences (should they regain importance once the war in Ukraine ends) and for gaining potential benefits, or is genuinely intended to reduce environmental and social impacts of the economy – or to enhance the international competitiveness of the economy. Our review of the Russian academic GE discussion indicates that there is genuine interest in improving the state of the environment – hand in hand with the competitiveness of the economy. Further development towards a GE clearly seems less likely in the near future due to the declined geopolitical situation and sanctions imposed on Russia by the Western countries as a reaction to the Putin administration's war against Ukraine.

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Appendix 1.

List of Russian articles examined for thematic analysis

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