

Aspects of Gender Vulnerability in the Just Transition Process

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Abstract

The just transition targets aspects with a strong social impact that influence the quality of life of communities on the front line of the energy transition. These communities are found in coal-bearing and heavily industrialized areas. Just transition involves creating new reskilling opportunities as well as decent and inclusive jobs. A special attention is directed to women, who are particularly vulnerable to these changes, due to increased family responsibilities. Our work aims to contribute to the analysis on gender equity prior to the financing mechanism for just transition in Romania from the perspective of the infrastructure development and services relevant for just transition (e.g. nurseries) that create a direct impact on the professional retraining and employability of women in the affected areas. We concluded that, for some of the six Romanian counties that are object to just transition, the European funding was the necessary impetus for the development or even the emergence of the nursery infrastructure.

Key words: just transition, women, gender equality, vulnerable category, decarbonization

J.E.L. classification: I24, I25, J24, J65, J16, F63, B55

1. Introduction

The energy transition in Romania, as in the other EU countries, will involve the fundamental transformation of the structure of electricity production. The process of reducing carbon emissions, timed with national energy security objectives, is estimated to be achieved by phasing out coal from the national mix and decarbonizing the industrial sector. This vision for a zero-carbon economy brings with it significant social challenges that address the professional (re)training of the workforce, especially in heavily industrialized and coal-mining areas. As for women in these affected areas, one of the core solution for employability is the development of infrastructure and services relevant for just transition (nurseries, primary and secondary schools, day care centers for children).

During the previous financial programming period, the issue of access to pre-school (nursery) and preschool (kindergarten) education services that has a direct impact on parents' situation (especially women) on the active labor market was addressed through the Regional Operational Program (Regio 2014-2020), thematic objective OT 10 – *Investments in education, skills and lifelong learning* (POR, 2014, p. 31). Based on the n+3 rule, the development of some of the projects has been extended until the December 2023.

2. Literature review

Allwood (2020, p. 10-11) and Walk (2021, p. 3) argue that the energy transition tends to be a gendered process. Moreover, for Giacomini (2020, p. 194-205) the *ecofeminist dimension* of just transition will change the way we understand the capitalism, especially due to issues strictly related to women employment (Janikowska, O. et al, 2021, p. 2, Velicu, I. Et al, 2020, p. 263-273). Other authors (Mohr, K., 2021, p. 11, Young Park, C. Et al, 2021, p. 17-19) rely on women as change agents within their communities during the implementation of climate change policies. The recurring

question is, in this context, how accessible will the newly created jobs be for women (Pollin, R. et al, 2020, p. 50)

In Romania, the absence or insufficient number of nurseries favors gender inequality, given the fact that women bear the responsibility of caring for children (Apostol, A, 2021, p. 1). A recent study carried out in Valea Jiului (Muscă, M et al, 2022, p. 54) shows that an essential factor influencing the possibility of women in this area to be employed is the pressure to stay at home to take care of small children, due to the lack of nurseries. Of the 6 analyzed counties, only Prahova county is in the top 5 nationally in terms of the number of places available in daycare relative to the total number of children in the county (1 place/ 20 children) (Apostol, A, 2021, p. 1).

We performed a summary analysis of the literature review on the Google Academic search engine using the keywords *women* AND *just transition* and the interval we chose was 2015-2023. We obtained the fact that 61% of the articles addressing the topic of women in the just transition are published between 2021-2023, so in the last 2 and a half years of the selected 9-year interval. When we added the keyword *Europe*, the statistics showed us that, between 2020, over 41% of the identified articles refer to the European continent.

3. Research methodology

The research methods used in this paper are the comparative analysis and the statistical method, so that the data resulting from the implementation of the European funds through the Regional Operational Program 2014-2020 were processed. In this research, we analyzed the databases published by the relevant ministry for the projects financed by European funds during the 2014-2020 programming period in the 6 counties in Romania targeted by the just transition (MIPE, 2023, List of operations). We targeted information regarding construction and/or modernization projects of nurseries, kindergartens, primary and secondary schools, as well as day care centers for children financed through axes 4, 9, 10, 13.

4. Findings

4.1. Social and economic challenges for communities affected by the energy transition, from the perspective of gender vulnerability

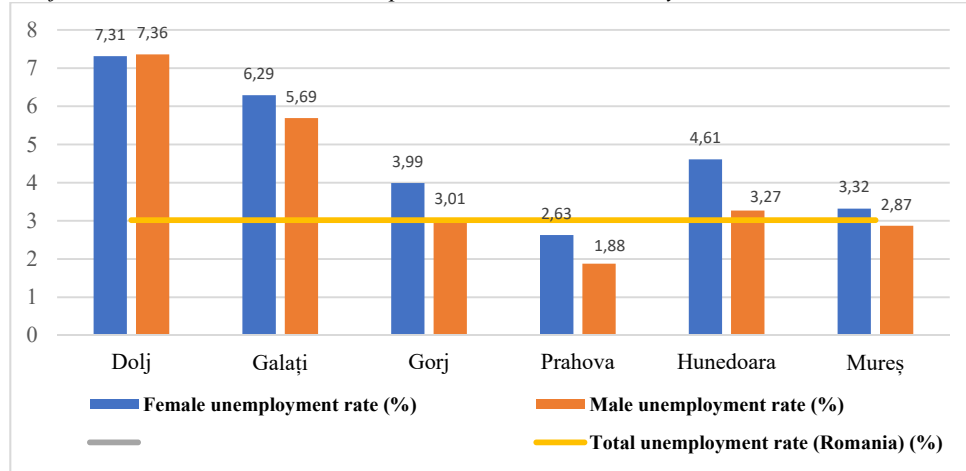
Regulation ((EU) 2021/1056) for the establishment of the Just Transition Fund emphasizes the principle of gender equality, making references to the role of women in the transition to a zero-carbon economy. From this perspective, measures that support women's participation in the labor market and entrepreneurship, as well as equal pay, are encouraged. That is why the regulation establishes gender-disaggregated results reporting indicators.

The legal framework for the decarbonisation of the energy sector in Romania is represented by Emergency Ordinance no. 108/2022. This foresees, on the one hand, the decommissioning by December 2032 of the capacity installed for the production of coal-fired electricity and the closure of mines, and, on the other hand, the need for professional reconversion in order to ensure a high degree of employment laid off in the context of changes in the activity profile. Thus, in parallel with the removal of coal from the national mix, PNRR finances RES production capacities, especially wind and solar, and through the Modernization Fund, projects will be implemented for the operationalization of photovoltaic and natural gas-based capacities and green hydrogen.

The communities strongly affected by these processes of the energy transition and which, moreover, in the period 2021-2027, are the subject of financing through the Just Transition Mechanism, are in coal mining areas (Hunedoara, Gorj, Dolj counties) and industrial areas (concentrated in Galați, Prahova and Mureș counties) (Joița, D. et al, 2022, p. 294). A serious consequence in the targeted areas is the loss of jobs in the local economy through the transformation of some economic activities that, until now, have generated for employees incomes above the zonal average for the similar level of training (PTJ, 2021, p. 12).

A more special situation is recorded in the county of Hunedoara and Valea Jiului, where the unemployment of young people able to work creates negative effects on the lives of many families. In the competition for remaining employment opportunities, accessibility is more difficult for women, leading to gender inequalities in accessing jobs.

Figure no.1. Unemployment rate (%) (female vs. male) in Romania, March 2023 within the 6 counties that are subject to Just Transition Fund. Comparative situation created by author based on statistic data



Source: ANOFM, Registered unemployment – March 2023, <https://data.gov.ro/ro/dataset/somajul-inregistrat-martie-2023>

The comparative analysis showed us that, currently, of the 6 analyzed counties, in 2 of them (Dolj and Galați) the female unemployment average is double compared to the national unemployment average. For now, the situation appears more optimistic from this point of view in Prahova. Another result is that in Dolj the female unemployment rate is almost equal to the male unemployment rate, while in the other 5 counties the percentage differences are more pronounced.

The employment of new jobs depends on access to professional training programs, but also to family support services, which would help vulnerable categories (women, children) to face the social inequalities. The most significant impact occurs on sole breadwinners by affecting the standard of living and increased financial responsibilities of women with dependent children.

4.2. Progress in strengthening services and infrastructure relevant to just transition

Territorial just transition plans (PTJ, 2021, p. 12) indicate that the people affected by the transfer to a new job need forms of support for reintegration. For example, vocational training centers should include play areas for children, so that women's participation in training programs and reinsertion into the labor market is possible.

In Romania, in 2021, there were 376 nurseries (including other pre-school education structures) (INSSE, Tempo 2, 2023), which means that only a percentage of 4.3% of children aged 0-3 could benefit from nursery school places. Added to this is the urgent need for educators-child educators (Apostol, A, 2021, p. 1)

That is why the investments from European funds for the period 2021-2027 (POR, POISD, POEO, POS) and PNRR allocate over 12 billion euros for the development of infrastructure and services relevant for the just transition (including nurseries, primary and secondary schools, centers for elderly, day care centers for children, services for people with disabilities). Rural areas still require long-term measures and projects to increase the number of nurseries and kindergartens (ME, Report 2021-2022). All of these are complementary to the Just Transition Program financing objectives and are based on consultations with civil society, in order to consider equal opportunities for women in the just transition process (PTJ, 2021, p. 103).

Before the PTJ, the Regio allocations started from data that showed that the available places in nurseries and kindergartens are insufficient, which creates difficulties for professional reinsertion for mothers with children aged 0-3 (POR, p. 181). The discrepancies regarding the preschool educational offer is evident from the rural/urban perspective, so the total number of children registered in pre-school education in the urban environment exceeds that of children in rural areas (ME, Report 2021-2022).

Below we have conducted a research on the database published by the relevant ministry on the status of the implementation of the POR. As databases are not available in an exportable format, we selected the list of projects carried out in each of the 6 counties in the period 2014-2020/23. Subsequently, the thematic objective from the POR, respectively the axes from which projects were financed for the creation and/or development of pre-school education infrastructures, were selected. We continued the search on each resulting item, by identifying the keywords in the title of the project or in the description of the project objectives. The results are shown in the following table and graph.

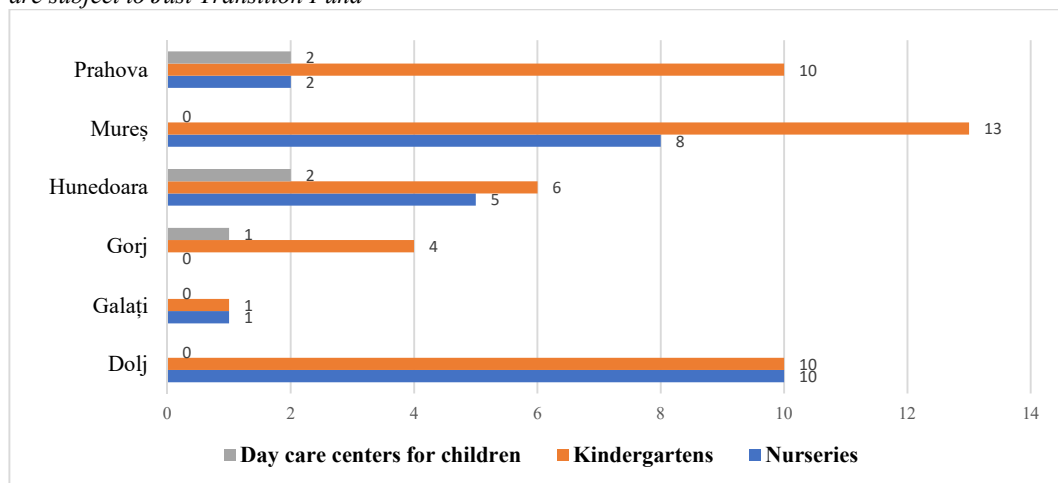
Table no. 1 Nurseries and kindergartens (no.) built and/or modernized with funding from European funds (Regional Operational Program) between 2014-2021/2023 within the 6 counties that are subject to Just Transition Fund

County	POR – Priority Axis no.	Nurseries (no.)	Kindergartens (no.)	Day care centers for children (no.)
Dolj	4	0	4	0
	9	0	0	0
	10	0	1	0
	13	10	5	0
	total	10	10	0
Galați	4	0	1	0
	9	1	0	0
	10	0	0	0
	13	0	0	0
	total	1	1	0
Gorj	4	0	2	0
	9	0	0	0
	10	0	2	1
	13	0	0	0
	total	0	4	1
Hunedoara	4	1	2	1
	9	1	0	1
	10	3	3	0
	13	0	1	0
	total	5	6	2
Mureș	4	2	1	0
	9	0	0	0
	10	5	12	0
	13	1	0	0
	total	8	13	0
Prahova	4	0	1	0
	9	0	0	0
	10	0	7	2
	13	2	2	0
	total	2	10	2
Total		26	44	5

Source: Comparative situation created by author based on statistic data. Information Center for European Investments (MFE), MySMS 2014, *List of contracted projects with implementation by county*, 2023, <https://www.fonduri-ue.ro/statistici>

We observed that, of the 6 analyzed counties, most nurseries were developed in the range chosen by the POR in Dolj and Mureş counties, with Gorj county at the opposite pole. At the same time, we noted that the number of nurseries is significantly lower than that of newly built or modernized kindergartens (which are aimed at children over 3 years old), excepting Dolj.

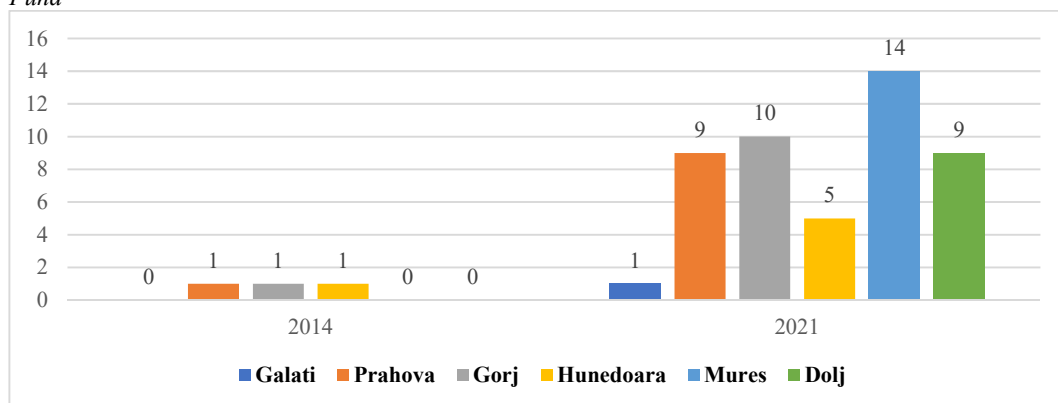
Figure no. 2. Graphic overview on nurseries and kindergartens (no.) built and/or modernized with funding from European funds (Regional Operational Program) between 2014-2021/2023 within the 6 counties that are subject to Just Transition Fund



Source: Comparative situation created by author based on statistic data. Information Center for European Investments (MFE), MySMS 2014, List of contracted projects with implementation by county, 2023, <https://www.fonduri-ue.ro/statistici>

Furthermore, studying the official statistics (INSSE, Tempo 2, 2023), we made a comparative analysis between the number of nurseries reported in 2014 (the first year of implementation of POR funding) and 2021 - the last year for which data were recorded.

Figure no. 3. Number of nurseries in 2014 vs. 2021 within the 6 counties that are subject to Just Transition Fund



Source: Comparative situation created by author based on statistic data. The National Institute of Statistics, <http://statistici.insse.ro:8077/tempo-online/#/pages/tables/insse-table>

Progress has been registered for all 6 counties, especially in Mureş, although the number of units is still numerically reduced.

We continued the comparative analysis by putting together the data reported in the last year from the official statistics (2021) with the numerical results obtained by us by researching the POR projects database.

Table no. 2 Nurseries reported in 2021 and those built and/or modernized with funding from European funds (Regional Operational Program) between 2014-2021/2023 within the 6 counties that are subject to Just Transition Fund

County	Reported in 2021	Developed with POR (2014-2020/2023)
Galați	1	1
Prahova	9	2
Gorj	10	0
Hunedoara	5	5
Mures	14	8
Dolj	9	10

Source: Comparative situation created by author based on statistic data. For data reported in 2021: The National Institute of Statistics, <http://statistici.insse.ro:8077/tempo-online/#/pages/tables/insse-table>; for data referring to POR projects – the tabel nr. 1 in this paper

We observe, therefore, that in the counties of Galați and Hunedoara the only nurseries built were those financed by the POR, while the situation is totally different in Gorj, where none of the existing nurseries are developed from this source of funding. A particular aspect we found in Dolj, where compared to the data officially reported in 2021, in 2023 there is a greater number of nurseries developed through the POR.

The results obtained reveal the need to support the capacity of local authorities in the targeted areas so that they can address the challenges of the gender issue, so that the principle of leaving no one behind is achieved from a social and economic perspective in the current context of decarbonization.

If for some of these counties the funding from the POR was the necessary impetus for the emergence or development of the nursery infrastructure, in others this source of funding was a complementary, but necessary, solution. Basically, each of the pre-school units developed represents a better chance for reducing women's vulnerability in the challenging process of professional training and employability on the long road of the just transition to a zero-carbon economy.

5. Conclusions

Considering the important sums that will be allocated through European funds and PNRR and in the period 2021-2027 for the development of preschool education infrastructure, including in the 6 counties targeted by the analysis in this paper through the Just Transition Program, we conclude that the aspect of gender inequality in terms of employment opportunities will continue to exist in the time horizon of the next years in the counties that are affected by the transition to a green energy, as the responsibility of caring for small children considering the lack of nurseries is one of the causes of higher unemployment among women.

The limits of the research are given by the time interval for which the analysis was carried out (2014-2020/23), the type of financing analyzed (European funds, through POR) and the implementation area of the analyzed projects (counties (Hunedoara, Gorj, Dolj, Galati, Prahova and Mureș).

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