

CIRCULAR ECONOMY TRANSITION IN THE CONTEXT OF MULTI-LEVEL EUROPEAN GOVERNANCE: THE CASES OF FINLAND AND SCOTLAND

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Abstract - The aim of this study is to outline how a circular economy (CE) is emerging as public policy programs in the context of European multi-level governance. Our findings highlight strong and relatively functional vertical governance relationships visible in the Finnish effort to promote a CE transition. We also found that Scotland faces difficulties with its ambitious CE policy, because it tries to follow the framework of the European mainstream multi-level governance as a non-EU-member country which contrasts with more conservative policies of the United Kingdom. Furthermore, the study identified clear horizontal governance relationships at national levels of both countries, because the central governments have to acquire know-how and support services from many arm's length bodies which have the necessary expertise and capability to work flexibly with local governments and other stakeholders.

Keywords - Circular Economy, Multi-Level Governance, European Union, Finland, Scotland, Local Governments

I. INTRODUCTION

Circular economy (CE) emerged initially as a response to the problems and threats caused by the linear economy based on widespread exploitation of natural resources and the generation of waste [1]. As a consequence of such a take-make-dispose model, humankind has faced biodiversity losses, the depletion of non-renewable natural resources, climate change, overproduction and overconsumption as well as increased volumes of pollution. More recently the ideas of CE have been developed as public policies demonstrating how sharing, repairing, reusing, and recycling activities could be used to improve resource efficiency and close the resource loops.

The aim of this article is to outline how CE is emerging as public policy programs in the context of European multi-level governance. First, we summarize how the European Union (EU) has started to develop community-wide CE policies and steer the policies and operations of its member states and their institutions. Second, we present brief country cases of Finland and Scotland, of which the former is an EU state while the latter operates outside the EU. Third, on this basis we will compare the CE transition of these two countries vis-à-vis the EU policies and multi-level governance.

II. ANALYTICAL FRAMEWORK

2.1 Circular economy transition

Despite its growing popularity, there is no single definition for CE in the literature [2]. While the origins of CE can be found in ecological and

industrial economics, its latest developments have created an alternative socio-technological future of societal systems that are restorative or regenerative by intention and design [3].

In this study, we review the adoption of CE through the lens of sustainability transitions. Sustainability transitions refer to fundamental changes in socio-technical systems such as energy or build environment that are guided by sustainability objectives [4]. A system change is seen as 'a radical shift of resources' that not only changes the economic, material and technical processes but also shape political and socio-cultural practices in a given system. Recent transitions research has especially emphasised the importance of social and political drivers in system change [5].

Taking a transitions approach to CE is useful for many reasons. First, many scholars have recently noted that current conceptualisations of CE risk are overly apolitical and technocratic [6]. There is a need to shift research interest from the desired outcomes and techno-economic business models of CE to the ways in which the goals of CE can be achieved [7]. Second, a transitions approach allows us to see CE both as a research topic and a normative policy concept. CE is no exception; while it can be studied as a case of system change, it contains the idea of what a society that has fully adopted circularity should look like.

Third, sustainability transitions research considers context sensitivities and steers the focus to multi-level governance. It has been shown that the European transition toward sustainability consists of

many parallel transitions that are likely to unfold differently depending on the contexts and levels of governance [8]. Context sensitivity is useful for studying CE given that the concept is being actively promoted by actors representing different sectors and institutional levels.

2.2 Multi-level governance

As an abstract term, multi-level governance refers to a set of interactions between governments across more than one level of public administration [9]. Europe has an advanced case of multi-level governance including the EU, its member states and local governments aiming to agree and implement coordinated public policies [10]. Theoretically the division of labour between different administrative levels may operate on a functional, hierarchical or incremental basis [11].

III. SELECTION OF CASE COUNTRIES AND ANALYSED RESEARCH MATERIALS

We selected Finland and Scotland as our case study countries. They are roughly the same size – about 5 million inhabitants – and located in the Northern part of Europe. It is interesting to compare them for while Finland is an EU member state, Scotland reluctantly left the EU at the end of 2020 together with the rest of the UK after the Brexit referendum and related government decision. Still, like Finland that is a part of a larger group of states (EU), with regulatory, budgetary, and other influences, Scotland is also a part of a larger group of nations (UK), that influences and potentially constrains some of its policy and decision making.

We used a two-pronged approach to our data collection. First, we collected secondary research data, utilizing publicly available governmental reviews, legal proposals, and policy documents. Second, we interviewed circular economy experts. The Finnish interviewees were municipal CE experts, while the Scottish ones were national and third sector CE specialists. We used both data by analyzing the most important viewpoints related to, how the relationships between supranational, national and local are considered in the context of the CE transition. Reviews of the EU's CE policies, in particular, is based on relevant policy documents and previous studies.

IV. RESEARCH FINDINGS

4.1 CE policy program of the EU

The EU has adopted the circular economy as a key strategic goal and considers it both a necessity and

opportunity. European policymakers have understood that CE is a global and irreversible megatrend. Climate change, losses in biodiversity and resource scarcity are environmental challenges that make public policy changes indispensable. At the same time, new investments in clean energy supply and resource efficiency and the efforts to reshape supply chains and increase recycling and reusing of materials are seen as promising opportunities to renew the industrial foundations of Europe and create a sustainable, low-carbon, and resource-efficient economy [12]. The aim is to maintain the value of products and materials as long as possible while creating: environmental benefits by cutting down waste hazards and the use of virgin and non-renewable resources; and social benefits by creating new jobs and developing new skills, thereby alleviating social inequalities [13].

The core elements of the EU's circular economy strategy have been outlined in these documents: 1) the roadmap to a resource-efficient Europe in 2011; 2) Towards a circular economy: a zero waste program for Europe in 2014; and 3) Closing the loop – An EU Action Plan for the Circular Economy in 2015 (CEAP). Alberich et al. [14] (2023) have analyzed the strategy and related documents to find out how the EU has planned to operationalize the CE strategy. As illustrated in Table 1, they found that in production issues CE policies aim to encourage the efficient use of resources, the application of circular production methods, and the adoption of circular practices through rules and standards. In the area of consumption, the CE strategy aims to disseminate better information for citizens on sustainable alternatives, eliminate misleading information, and make sure that the information provided to citizens is truthful and comprehensive.

Based on the adopted strategy, EU has issued many new directives and regulations [14]. The EU's regulations are binding rules which every member state has to follow. Whereas the directives define specified aims and results which all member countries have to achieve, they can decide how to change their national laws or introduce new laws in order to integrate the directive into their judicial systems. Most of the CE directives relate to different fractions of waste materials such as packaging waste, end-of-life vehicles, batteries and accumulators, and plastics. The Waste Management Directive gave also instructions to the member states to plan and manage national waste prevention programmes, including certain minimum actions such as encouraging the reuse and repair of products and reducing industrial waste in manufacturing and construction sectors. Other CE directives focus, in particular, on eco-design and consumer rights [12].

	2011 Roadmap	CEAP2015	CEAP2020
Production	Encourage efficient use of Resources.	Encourage circular production methods.	Mainstream circular practices through regulations and standards.
Consumption	Provide better information to consumers on sustainable options.	Ensure the reliability and comprehensiveness of the information provided to consumers.	Provide better information to consumers. Ban misleading information on sustainable options. Establish the right to repair.
Waste Management	Set standards for safe disposal that protect human health and the environment.	Develop economic instruments to discourage the generation of waste and restrictions on landfilling.	Update targets on recycling.
Illustrative reference to multi-level governance	“The Commission, with Member States, will: bring together business, scientists, NGOs, local and national authorities to examine the opportunities and the challenges and recommend new pathways to action on sustainable resource-efficient growth.”	“Making the circular economy a reality will however require long-term involvement at all levels, from Member States, regions and cities, to businesses and citizens.”	“The transition to the circular economy will be systemic, deep and transformative, in the EU and beyond. ... It will require an alignment and cooperation of all stakeholders at all levels - EU, national, regional and local, and international.”

Table 1. Temporal development of the main ideas of the EU's CE policy program [Adapted from 14].

4.2 CE Transition in Finland

The EU's CE strategy has caused some specific legal changes in Finland but also launched high-profile reformist policy programmes at national and local levels. Prime minister Sipilä's cabinet was the first central government to include a CE target to its programme in 2015 by stating that Finland will be a pioneer in CE within ten years. His cabinet also directed a message to the EU by stating that it must create conditions for Europe to develop as a pioneer of CE by issuing regulations promoting resource efficiency and eliminating conflicting rules in different economic sectors [15]. (Prime minister's office, 2015).

The Finnish Innovation Fund Sitra, a semi-autonomous non-governmental body published a national road map to CE in 2016 [16]. The programme of Prime Minister Marin's cabinet emphasized very positive opportunities by claiming in 2019 that CE can contribute to national well-being and wealth by generating economic growth in manufacturing industries. The cabinet declared that CE will be the country's foundation for the new economy and claimed that it will strengthen Finland's role as a leader in the circular economy. The Cabinet's measures to advance CE included, among others, a data platform for vehicles to be scrapped, increase in the waste tax levied on landfill waste, and

actions to halve the amount of food loss and food waste by 2030 [17]. (Programme of Prime Minister Sanna Marin's Government, 2019).

Finnish local governments have started to publish their own CE road maps and actions plans since 2020. We interviewed municipal experts in three cities, and they claimed that the EU's CE strategy and the policies of Finland's central governments have played only a minor role in municipal decision making. Municipal CE road maps and action plans are voluntary local policy visions guiding municipal committees and other decision-makers to take account of needs to improve resource efficiency and reduce waste materials.

The CE transition made notable steps forward in 2021. Based on EU directives the Finnish parliament reformed the waste act which now says in its first section that the objective of the act is to promote the CE. The new act: imposed obligations on manufacturers and distributors to ensure that their products are resource efficient and durable; increased requirements concerning the collection of source-separated waste streams; tightened recycling targets; it increased reporting requirements; and it called for public-private collaboration. Some of these new rules had direct impacts on the duties of municipal waste management organisations.

In 2021, the cabinet made also a noteworthy decision in principle “Government Resolution on the Strategic Programme for Circular Economy”. The aim of the programme is to set objectives, key measures and allocate the necessary resources to strengthen Finland’s role as a pioneer in the circular economy [18]. It sets the vision that Finland will be a carbon-neutral circular economy by 2035. Overall, the programme illustrates how the Finnish government is aiming to build connections between vertical tiers of government ranging from international regimes to the local level [19].

The government resolution is firmly rooted in the European Green Deal and CEAP of 2020, as well as in the UN’s Sustainable Development Goals. It also expects Finland to take an active role in shaping these global policy processes, mainly under the auspices of the EU. The government resolution states that Finland will cooperate with the EU and its member states on multiple thematic areas. These include promoting a stronger market for recycled materials, developing digital solutions, and being active in alliances and networks, especially when promoting circular economy ecosystems and accelerating international piloting and commercialisation. Moreover, Finland seeks agency through different forms of supranational governance. The government resolution sees foreign policy as a key means to attain Finland’s status as a pioneer in circular economy. A global transition to circular economy is also to be promoted through mainstreaming circular economy in the UN processes and multilateral trade activities.

Municipalities and regional councils are seen as key actors in promoting, developing, and implementing circular economy measures. The national government is not only inviting municipalities to develop concrete circular actions together with other actors, it also explicitly requires cities to steer the transition to a circular economy at the local level. The programme requires municipalities to develop circular criteria for public procurement, planning and promoting new services and operational models together with local companies and other actors, and strengthening the market for circular solutions. Based on the Cabinet’s decision in principle, the Ministry of the Environment started to fund a new hub for circular economy know-how (Circular Economy Finland, KiSu) to disseminate knowledge and functional operating models and support the CE measures of municipalities, enterprises and circular economy ecosystems. The hub is run by an arms’ length body Motiva Oy and the Finnish Environment Institute.

The government also seeks to actively accelerate the circular economy transition in municipalities and regions. The government resolution sets clear objectives for the state to provide funding, create networks and help to solve legislative and

bureaucratic bottlenecks. The government also relies on voluntary instruments in steering the local level transition. Voluntary agreements for joint action (the so-called green deals) between the government, municipalities and other bodies representing the business or industry sector are to be developed in many sectors. Municipalities are also invited to commit to more ambitious targets, and for example take up a voluntary natural resource target outlined in the programme.

4.3 CE Transition in Scotland

Scotland has a remarkable industrial history. For a long time, little attention was paid to environmental conditions, giving it a reputation as ‘the dirty man of Europe’. A turning point took place when the Scottish Environmental Protection Agency (SEPA) was established in 1996 and the country started to develop its own environmental legislation and regulation. The Scottish government introduced the nation’s first Waste Strategy in 2003 aiming to increase recycling and reduce landfilling before it published its Zero Waste Plan seven years later. With that plan, Scotland devoted to a zero-waste approach labelled as Zero Waste Scotland that revolves around the idea of reusing and recycling materials instead of treating them as useless waste. The Zero Waste Plan demonstrated four focal areas: resource flows, economic possibilities, resource management sector and education advancing awareness [20]. A detailed timeline illustrating the key reforms and events of the Scottish CE policy actions is presented in Table 2.

A not-for-profit company called Zero Waste Scotland (ZWS) registered in 2014 as a kind of arm’s length organization to deliver Scotland’s distinct CE ambitions, for instance, by providing education, managing public CE funding and running ‘Resource Efficient Scotland’ as an advice and support programme. The zero waste strategy has also generated two specific third-sector programs. The first is the ‘Zero Waste Scotland Volunteers’ policy initiative, which has established local volunteer task forces disseminating information for individuals and households. The second is a partnership called ‘Revolve’, which has been running as a re-use quality standard labelling scheme, in particular, for second-hand domestic appliances and furniture [20], but in the near future it will be redirected to operate as a training and support programme sharing support free of charge to anyone that wants it.

Beside ZWS Scotland has many other intermediary organizations and knowledge brokers. For example, Scotland’s national economic development agency “Scottish Enterprise” is a non-governmental public body which gives CE guidance for the Scottish business community. Nesta is the UK’s innovation agency operating also in Scotland and The UK’s innovation agency designing and testing new solutions

and disseminating practices supporting the CE transition.

In 2016, Scotland launches its circular economy strategy “Making things last” which expressed a commitment to transform food and drink, remanufacturing, construction and energy sectors into CE. In 2017, the Scottish Government was awarded for its CE measures by the World Economic Forum [21]. The Scottish environmental legislation has been progressive and distinct from the rest of the UK, while it has also applied more advanced waste legislation than England [22].

In 2022, the Scottish government performed a consultation concerning a national route map to 2025 and beyond and a circular economy bill. The route map demonstrates Scotland’s progress towards a circular economy, highlights potential steps to increase resource efficiency and defines a clear vision for the next ten years, while the circular economy bill includes legal powers supporting the achievement of the vision, in particular, reducing, reusing and recycling measures [23]. The aim of both consultations was to invite communities to join in and contribute to national discussions on how Scotland should manage waste materials and organize the CE transition [24]. It is noteworthy that the route map corresponds to the environmental strategy of Scotland, takes account of several key principles to achieve net zero by 2045, and aligns with EU requirements. The Scottish government has declared that it is committed to keeping close connections with the EU and wants to meet the high-level EU standards on the environment, as it aspires to regain its status as an EU member state.

As the central government of Scotland is only a regional government within the UK, it must follow the rules of the UK Internal Market Act. A significant feature of the UK’s market policy is that the UK is less liberal of regulatory diversity among its constituent units (i.e., devolved nations) than what the EU rules of free movement are [25]. This is causing fundamental public policy challenges for Scotland resulting in confrontations with the UK government.

The challenge of Scotland is that it prefers more ambitious environmental policies than England and wants to develop its own legislation [26]. Some of the

CE policy actions planned by the Scottish Government require exemptions from the UK Internal Market act or some other legal changes. Scotland was successful in 2022 by banning numerous types of problematic single-use plastics after an agreement was signed with the UK Government giving an exclusion from the effects of the Internal Market Act [27]. However, Scotland’s long-term intention to introduce the deposit return scheme (DRS) for drink containers has proven to be a problematic plan. Its legal model is the EU Packaging Directive (94/62/EC) which introduced a take-back-scheme for empty drink bottles and containers. The Scottish government is motivated to progress with DRS also because the previous take-back-schemes of bottles and cans have been very successful in other European countries and achieved return rates between 82% and 98% [28]. However, the UK government didn’t agree with Scotland’s plans for DRS and gave the exemption only for PET plastic, aluminium and steel cans from the UK Internal Market Act, while glass was excluded from the exemption in June 2013. The Scottish Government was very disappointed with the limited exemption. Now it has to wait for England and Northern Ireland to be ready to launch a limited DRS (e.g., not including glass) with Scotland at the same time in October 2025 at the earliest [29].

Brexit has also had an impact on the possibilities of funding of the CE transition. Our interviewees told that the impact has not been dramatic but Brexit has eliminated some EU funding sources (e.g., the European Regional Development Funds).

The Scottish Government’s CE targets are considered ambitions also from the perspectives of Scottish local authorities. They welcome and support the aims of CE policy set by the central government, but they consider the speed and scale of necessary investments needed in municipal waste management to extend beyond their current financial and human resources [30].

V. DISCUSSION AND CONCLUSION

Table 2 illustrates the temporal evolution of key CE-based law reforms and policy interventions in Finland and Scotland. It shows that both countries have taken determined steps but including slightly different emphases to advance the CE transition.

Finland	Year	Scotland
The Cabinet proposed a new waste law to increase recycling. It was accepted on the following year.	2010	Scotland’s first zero waste strategy was accepted ZW Scotland was established an expert body and intermediate organization
Sipilä’s Cabinet published the first CE targets	2015	Scottish Government consulted its strategic proposal “Making Things Last”
Central government’s arm’s length body	2016	Scottish Government published a new strategy:

called Sitra published the first national CE road map		Making Things last.
The first regional CE road map was published	2017	Scottish Government was awarded for its CE measures by the World Economic Forum
Marin's Cabinet published extended CE targets	2019	Food Waste Reduction Action Plan defined the actions to prevent food waste
City of Helsinki (Finland's biggest city) published its own CE route map	2020	City of Glasgow (Scotland's biggest city) published its own CE route map
Hub for circular economy know-how started its operations	2022	CE bill was published and consulted
New Land Use and Building Act advancing CE principles was accepted by the Finnish Parliament	2023	Scotland applied and got a limited exemption from the UK Internal Market Act for DRS

Table 2. Some key CE reforms and actions in Finland and Scotland.

Finland is the EU's well-behaving member state which seems to implement EU's CE strategy relatively consistently and with a high profile. Beside the national CE measures, local governments have recently introduced their own CE policy programmes, but municipal CE experts consider that the EU's CE strategy has not played a major role in the CE decisions of municipalities. These views can be explained by the relatively strong local self-government of municipalities supported by their constitutional taxation rights.

Scotland still tries to follow the framework of the European multi-level governance including the environmental legislation and the EU's CE strategy even though the country is no longer an EU member state. These Scottish aspirations have to be understood through the country's strong willingness to regain its status as an EU member state through its possible independence in the future. However, this policy faces difficulties associated with the multi-level governance of the UK. The Scottish Government has to challenge the core principles of the UK's internal market and apply for exemptions, because it wants to promote the CE transition more quickly or thoroughly than England or the rest of the UK.

Our findings highlight strong vertical governance relationships visible in the CE policies. In Finland, the CE transition is advanced through the parallel measures by supranational, national and local levels of the political institutions, but in the case of Scotland, the supranational level is missing and the CE policies of the UK government and the Scottish governments are not progressing simultaneously while emphasizing somewhat different ambitions. Furthermore, Scottish local authorities consider that they are not able to implement necessary CE measures included in the CE bill unless they receive more resources. They hold a different financial position than the Finnish municipalities which enjoy relatively large revenues from a local income tax.

Furthermore, we found clear evidence of essential horizontal governance relationships at the national levels. In both countries, the central governments have to rely on the support of many arm's length bodies (e.g., Sitra, Motiva, ZWS, Scottish Enterprise, Nesta). They are non-governmental but not-for-profit organizations capable of providing such high level expertise missing from central government bodies and having experience of working through flexible and agile operating models. The central governments apply a mix of governance doctrines which demonstrates, on the one hand, the extent of the CE challenge, and on the other hand, the commitment of national policy-makers. However, further studies are needed to identify possible governance consistencies, gaps, overlaps, and coordination difficulties.

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