

Abstract – Lynn Faut

Large volumes of raw materials, fuels and goods pass through ports every day. Ports are more than points of transit, however. Within and around port areas, refineries, chemical plants, recycling firms, waste processors and logistics companies operate alongside one another. This concentration of activities gives ports an important role in the circular economy (CE), which aims to keep materials and products in use for longer and at a higher value through activities such as reuse, repair and recycling.

The CE is becoming increasingly relevant to European ports, and port managing bodies (PMBs) are taking steps to engage with it. Yet, it is not always clear how far this transition has progressed in ports, and how it can be monitored such that PMBs can reflect and adapt accordingly. This dissertation therefore asks: how do PMBs adopt and monitor their CE transition, and which organisational, data-related and social implications emerge from this transition?

The research approaches this question from four connected chapters.

First, the dissertation examines how European PMBs are engaging with the CE transition. The findings suggest that CE adoption in ports is still generally at an early stage. Port authorities are undertaking initiatives across areas such as strategy, operations, investment and collaboration, but the extent of engagement varies. In particular, monitoring and reflection tend to lag behind more strategic activities. The research also shows that the role of PMBs can extend beyond that of a traditional landlord. In addition to providing land, some PMBs act as facilitators, bringing stakeholders together, supporting CE activities and, in some cases, investing in them.

The second and third chapters build on the first one by examining how the CE transition can be measured by developing and measuring a set of CE indicators, specifically for the port context. When these indicators were tested in practice on the three Flemish seaports (Port of Antwerp-Bruges, North Sea Port and Port of Ostend), measuring them proved more complex than their initial development suggested. Data availability and data governance were important challenges, particularly because relevant information is often held by different actors within and beyond the PMB. The feasibility of measurement also varied according to the indicator and the specific context of the port.

The research also shows that monitoring the CE transition is not simply a matter of calculating indicators. An indicator that is relevant and feasible at one point in time may become less appropriate as a port's strategy, available data or wider context changes. Monitoring can therefore be understood as an ongoing process in which results are used to reflect on progress and, where appropriate, reconsider strategies, activities, and indicators. This highlights the importance of treating CE monitoring as something that can evolve alongside the transition itself.

Meanwhile, Chapter 4 considers the possible employment implications of the CE transition. Interviews with companies involved in CE activities and projects in the three Flemish ports indicate that the employment effects appear relatively limited. The transition does not appear to require a fundamentally different set of skills for most positions, while previous experience in related sectors can remain valuable. On this basis, the findings suggest that existing workers may have considerable potential to move into circular activities, with targeted matching of linear economy workers to CE jobs and on-the-job training playing an important role.

Taken together, these findings provide a more detailed picture of what the CE transition means for ports. They show that PMBs are already engaging with the CE in different ways, while also facing practical challenges in understanding and monitoring their progress. For ports, this points to the value of connecting CE strategies with monitoring, while recognising that the availability and ownership of data can limit what can realistically be measured. For policymakers and port organisations, the findings highlight the importance of supporting ports in this transition and of developing approaches to monitoring that take into account of the different roles and contexts involved.