

## **The socio-economic interfaces of the Port City of Ghent: acknowledging its potential towards the third industrial revolution**

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Since the 1950s, the historical strong link between port and city changed and became weaker. Following the second industrial revolution based on petro-chemical processes, the maritime industrial and transport sectors focussed on economies of scale. This forced port activities to move away from their host cities in search of better accessible areas to develop (Olivier & Slack, 2006). Next to these spatial effects, the revolution also induced the upcoming of a powerful, but limited, group of multinationals (OECD/ITF, 2015). The combination of the enlargement of (bulk, liquid or container) cargo and the growing power of multinationals changed the governance of port cities. Already in the 1990s, Slack (1993, p. 580) stated that “Ports are becoming pawns in an game of commerce that is global in scale”. This change of power towards the private sector induced the establishment of independent port authorities and delineated port areas around the world (Verhoeven, 2010). It seemed that the former tight interweaving of urban and port governance was not suited to react fast enough to the ever changing requirements of the multinationals, resulting in a competitive disadvantage.

The second industrial revolution thus forced ports and cities to break up their different interfaces: economic, social, cultural, institutional and geographical. Consequently, worldwide ports grew with an increasing pace, this fuelled by the reciprocal relation between the competing port authorities and the economies of scale of the maritime petro-chemical and transport industry. However, since the global financial crisis of 2008 and the subsequent economic downturn, this evolution is more and more questioned (ESPO, 2010; OECD, 2013; OECD/ITF, 2015). On the one hand, port authorities do no longer hold the financial power nor the legitimacy for

implementing large scale transformations. On the other hand, the bulk-chemical and the maritime transport industry have some structural long term problems. These sectors demand (i) a lot of, increasingly scarce, space and induce as such spatial economic-ecological dilemmas (Van den Berghe & De Sutter, 2014). They (ii) lack innovation, (iii) have low employment rates, following standardization and automation, and (iv) don't generate much direct value added (Atzema, Boelens, & Veldman, 2009). As such, ports became a burden instead of a benefit for their region which Hesse (2006) describes as 'a dichotomy between global chains and local pains'.

Considering these problems, the OECD (2013) called to 'renew the relationships' between port and city. It is precisely by linking the knowledge and services available in the city to the port economy that has the potential to generate innovation and economic impulses. Moreover, insights are growing that a closer collaboration of port and city has the potential to coop with the major (urban) socio-economic and ecological issues of our time: climate change, energy transition, economic clustering, sustainable transportation system and the third industrial revolution.

However, in this paper we question if the current institutional separated construction of the port city is able to make this transition. We state that before (spatial) policy can find solutions to the existing long term problems, first of all we have to theoretically discuss what we define as the port city. In the first part of the paper we will demonstrate how the prevailing structuralist paradigm in spatial research during the 1960s, in combination with the second industrial revolution at that time, has induced spatial planning to define port and city as two separate geographical entities. Path dependent processes eventually led to the neo-liberal reformation of port governance. In the second part of this paper, we will discuss the potential of the more post-structuralist definition of space for port city research. Instead of defining the port city as a static entity, we argue that the port city is a 'glocal' dynamic assemblage (De Roo, Van Wezemael, & Hiller, 2012; Swyngedouw, 2004), constructed by different global actor-networks coming together at a certain location. In the third part, we use this theoretical actor-network framework to construct a methodological framework focussing on the 'leader firms' (Nijdam & de Langen, 2003) and their relations. Supported by interviews

with these leader firms, the socio-economic network analyses of the port city of Ghent, Belgium, show some interesting implications. First, we are able to define the socio-economic centrality of the different actors in the port city actor network. This gives different results than defining firms based on their quantitative socio-economic parameters. Second, the actor-relational approach gives us the possibility to estimate the socio-economic embeddedness in the port city. This gives us valuable knowledge to inform policy makers about the existing or missing socio-economic links between the present port city actors. The main conclusion of this research is that the port city of Ghent, in contrary to its absence in global port top rankings (AAPA, 2014), is well suited to transit to the third industrial revolution. Implications for spatial development policy regarding the call of the OECD (2013) are also addressed.

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