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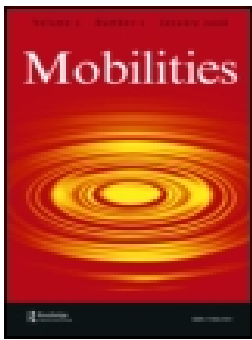
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Mobilising security and logistics through an African port: A controversies approach to infrastructure

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ABSTRACT

Ports form part of the logistical infrastructure of the global economy. This article argues that both recent security and mobilities literatures are placing too much emphasis on supposedly all-encompassing global technologies to govern them. It uses a controversies approach to develop a greater sensitivity to the diversity in the global makings of mobility and security. By looking at the port of Dar es Salaam, it reveals how controversies result from variegated understandings of situated political economies and offer a unique window to reveal more diverse and contested landscapes than is suggested by the literature. Three controversies are analysed: (1) cargo security; (2) delays in dwell time; and (3) modernity 'from scrap' or 'from scratch' (Dar versus Bagamoyo).

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Introduction

Logistical infrastructure, together with finance and extraction, is at the core of contemporary capitalism (Mezzadra and Neilson 2013). Hence, the political geographies of these infrastructures, particularly those of ports, have received increasing attention (Chalfin 2010; Cowen 2014). A global assemblage of supply chain security has led to an internationalised, privatised and digitalised management of 'pipelines' and 'zones of exception' to maintain global trade flows (Cowen 2014, 90). Security practices that complement the rationale of protecting a bounded 'homeland' have increased following attempts to channel flows by means other than those of the technology of state territory (e.g. Cowen 2014). One such element is to design ports both as 'seamless gateways' through which 'the global economy' is enacted, and as outposts of homeland security. This, naturally, potentially undermines or circumvents *de jure* notions of sovereignty being attached to state territory under the current international system, as it extends border management 'outward into the ports of foreign states [... and] inward along domestic transport networks' (Cowen 2014, 81). Not all of this is spectacular or exceptional, of course, but very much mundane and normalised. Research on mobilities and the emergence of a 'global surface of logistical integration' (Martin 2013) pointedly illustrates this last point perhaps even more strongly than the security literature does.

However, in both literatures there has been a tendency to (over)emphasise supposedly common transnational policies and practices to manage mobility and security around ports (Cowen 2014; Martin 2013; Neilson 2012). These common practices are established on the basis of empirical work on US and European ports and, to some extent, other members of the champions league of global ports, such

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as Singapore or Dubai. Cowen, for instance, concentrates on US ports and US policy initiatives. The International Ship and Port Facility Security (ISPS) code was a response to terrorist threats instigated by the 9/11 attacks that is administered by the UN International Maritime Organisation, but was devised with major US involvement (2014, 176ff). Although differences between ports have been stressed in several literatures, the critical security and mobilities literature on African ports illustrates the issue particularly well. Chalfin (2010) and Stenmanns and Ouma (2015) have traced how transnational security standards and mobile technologies play out on the continent, and both studies examine the case of the Ghanaian port of Tema. Stenmanns and Ouma present Tema as yet another instance of 'ISPS almost everywhere' (2015, 96), highlighting it as the archetypical example of global logistics and the securitisation of ports in regard to both theft and terrorist threats. However, against this 'story of ordering logistics politically everywhere', we argue that local variations require more empirical attention and a different conceptual approach. By comparing the West African port of Tema in Ghana – the most heavily studied African port in regard to security, mobility and logistics – with the East African port of Dar es Salaam in Tanzania, the casual observer may discover parallel trajectories – but also glaring disparities between them. In terms of mobility, the port of Dar has only just been managing. Instead of seamless flow, container traffic is slow, the port congested, and technical fixes are introduced after great delays, if at all. In terms of security, the port is a latecomer compared to Tema, and several attempts to introduce new surveillance and control technologies have failed (see Section 'Governing mobility and security in African ports').

Building on the case of the port of Dar es Salaam, this article shows how recurrent controversies amongst port stakeholders challenge the hegemonic aspirations of transnational governance technologies, as well as the local port authority. It achieves this through a controversies approach, which we introduce. By controversies, we refer to disputes that emerge around technical matters, especially those that question technical fixes and standard narratives about infrastructure. These include, therefore, 'every bit of science and technology which is not yet stabilised, closed or "black boxed"' (Macospol 2007, 6; Venturini 2009). Borrowing from Science and Technology Studies, some work in critical security studies has begun to explore the strength of such a perspective (Schouten 2014; Walters and D'Aoust 2015).

Studying such controversies, we argue, contributes to a better understanding of how the supposedly smooth workings of logistical 'seam space' (Cowen 2014; Martin 2013) are negotiated, contested and obstructed in different ways. It brings to light competing attempts to make sense of (dis)order, and highlights the fragile and uncertain undercurrent of technical fixes in ports, thereby opening up the 'black box' of ordering logistics politically. By focusing on African ports, we specifically aim to contribute to a greater sensitivity in capturing the situated and multifaceted 'global makings' (Hönke and Müller 2016) of the mobility and security infrastructures both in and from the Global South.

This complements other work on mobilities that highlights the disruptions and frictions in supply chains (Gregson, Crang, and Antonopoulos 2017). While we embrace the call to move 'beyond accounts that recite global logistical power to further interrogate logistics-in-action' (ibid., 394), by using controversies we offer an alternative take on this work. The controversies that arise as a result of variegated understandings of situated political economies offer a unique frame of reference to reveal more diverse and contested landscapes than the pervasive 'story of ordering logistics politically everywhere' would suggest. Importantly, this approach also maps out multiple agencies and competing political economies. Our work contributes to both mobilities and security literatures, and we emphasise that, apart from smoothing mobility flows or securing logistical space, (port) controversies bring to light underlying issues at stake that are contested by means of discourses and practices that merely pose as being about 'mobility' or 'security'.

The fieldwork supporting this article was carried out in Dar es Salaam in the spring of 2015. The study employs interviews with a variety of port stakeholders and authorities – including the port management – involved in clearing and transporting cargo from and to the port of Dar es Salaam. It also draws on figures and narratives produced by the port authority and international donors in policy papers and expert reports. The latter are complemented with sources from Tanzanian newspapers.

The first section introduces recent developments around security and mobility in African ports and illustrates the limitations of the 'logistics everywhere' arguments by examining the cases of Tema (Ghana)

and Dar (Tanzania) port. The second and third sections discuss infrastructure in critical security and mobilities studies, revealing how a controversies approach offers a valuable entry point that is better able to capture the distinct and variegated way in which techniques to produce order in logistical infrastructure are negotiated and transformed. The remaining parts illustrate this aspect by featuring three controversies in and around Dar es Salaam port: (1) how to secur(itis)e cargo; (2) how to fix delays in dwell time; (3) and efficiency from 'scrap' or from 'scratch' – the Bagamoyo versus Dar controversy. The article concludes with the implications for future research on ports and other logistical infrastructure.

Governing mobility and security in African ports

Africa has seen a boom in external investment in economic infrastructure, including in ports. The 24th summit of the African Union, in Addis Ababa, discussed infrastructure as one of three major themes, integrating the growth of ports, rail and roads into the narrative of developmental statism (AU 2015). In Tanzania alone, several major projects are under way, e.g. the World Bank, the UK's Department for International Development (DFID), and the TradeMark East Africa-funded project to upgrade the port of Dar es Salaam (US \$565–596 million, sources differ as to the actual figure) (*The East African*, 26 January 2017). The most spectacular project is the planned new 800-hectare, US \$10 billion megaport at Bagamoyo, about 60 km North of Dar es Salaam (*BBC*, 7 June 2016).

Despite the overall investment in port infrastructure and the growth of transnational integration, there is widespread and substantial variation in how mobility and security are governed, and how supposedly global standards are implemented. According to Chalfin (2010), transformations of port governance in Tema since the late 1990s have taken place along two lines: (1) the Ghana Ports and Harbours Authority (GPHA) has built up its authority vis-à-vis other stakeholders by partnering with transnational private logistical operators, in part through the roll-out of managerialist technical fixes (i.e. software platforms – see Tettey (1997) – and regional benchmarking) that allow the GPHA and logistical operators to adjudicate flows of cargo and people more conveniently; (2) the GPHA and logistical operators have progressed in securitising cargo and people by subscribing to international standards, notably the ISPS. Tema's 'port security apparatus' reproduces the story of 'ISPS almost everywhere' (Stenmanns and Ouma 2015, 96). In a slightly less enthusiastic study about Tema, which emphasises technopolitical inventions whilst also calling our attention to seemingly mundane technologies, Stenmanns and Ouma underscore how the GPHA and donors employ Twenty-foot Equivalent Units (TEUs) and other 'space metrology jargon' to encapsulate the developmental achievements of Tema vis-à-vis other regional ports (Stenmanns and Ouma 2015, 89).

Although it is less imposing than its Ghanaian counterpart, the Tanzania Ports Authority (TPA) has nevertheless also sought to jump on the bandwagon of 'the story of ordering logistics politically everywhere'. Yet, arguably, the port of Dar has only just been managing lately. Marred by recurrent scams and subsequent reshuffles in its top echelons, the TPA and the Tanzania Revenue Authority (TRA) have both been at the centre of recurrent public scandals. 'Lost' containers and unpaid port and tax duties have remained a habitual feature; dwell times, or the number of days that cargo remains within the port, have worsened, with container vessels queueing for more than 10 days on average; and the port and its adjacent roads have become synonymous with congestion (Dooms and Farrell 2017; World Bank 2016). The TPA has benefitted from much less autonomy than the GPHA, as is evidenced by the Tanzanian presidency regularly bypassing the TPA in leading projects (Dooms and Farrell 2017). Thereby, the trajectories of producing order logistically in Tema and Dar, despite running parallel, have progressed asynchronously. Dar has invariably experienced a 5–10-year lag in reproducing each and every breakthrough in Tema.

Arguably, the port of Dar es Salaam embodies the 'almost' version of Tema's ISPS narrative. Tema remains at the forefront of security technologies as well as in practices in global logistics in Africa. The port of Tema incorporated the ISPS code barely three months after its adoption by the United Nations in 2003. Furthermore, it first commissioned a cargo scanner in 2004; closed-circuit television (CCTV) was installed in 2005; and electronic gates in 2015, which would reportedly enable biometric verification

one year later (GPHA 2014). Both port authorities introduced ISPS; Tema did so in 2004, but Dar did not manage it until early 2010, once the security deficiencies identified by US authorities had been solved (US Embassy Tanzania 2009). Additionally, Dar es Salaam only started to deploy CCTV in 2016 (*AllAfrica*, 26 February 2016; *Ghana News Agency*, 29 June 2005; TPA 2016).

Specific diagnoses of problems, and how to address them, vary widely in different contexts. Tema deployed its first online tax clearance platform in 1991. Dar es Salaam only caught up many years later (Awotwi 2011; World Bank 2007). The World Bank complained early on that 'the Port of Tema in particular ... [has] become heavily congested' (World Bank 2010). As a result of the boom in containerised traffic since the early 2000s, Tema purportedly hit the one million TEUs record in 2014 (GPHA 2014). Yet in 2011 Tema also ranked at the top of the 'hall of shame' of six major, yet poorly performing, African ports – its average dwell time reached 20 days, that is, five times that of Durban and twice that of Mombasa (Raballand et al. 2012). Moreover, at US \$425 per day, congestion charges were ten times that of the continental benchmark of Dakar (Foster and Briceño-Garmendia 2010). Faced with increasing pressures to address congestion, the port of Tema was an early adopter of the landlord model, inviting transnational private logistical operators to undertake the management of part of its quays and terminals (Chalfin 2010). Dar es Salaam also adopted, amidst international praise, the landlord model (Foster and Briceño-Garmendia 2010). Dwell time in Dar es Salaam port stabilised at around ten days in the early 2010s (World Bank 2013) – a notable 50% less than in Tema. Yet, if one narrative still predominates in discourses about the Dar es Salaam port in recent years, it is that of congestion. According to the World Bank, 'as a result of privatization in the 1990s, the port became one of the most efficient in Sub-Saharan Africa, but its performance deteriorated gradually up to the mid-2000s' (World Bank 2013, X). Perhaps unsurprisingly, reports by multilateral institutions came to problematise the port's logistics as involving 'slow processing, particularly the processing of customs clearances, and excessively long storage periods' (AfDB 2010; CCTFA and TradeMark East Africa 2016; World Bank 2013, 35).

This paints a very different picture from that of Tema. The contrast between Dar and Tema shows that there is more diversity in the deployment of transnational logistical and security standards in African ports than is often acknowledged. Controversies over infrastructure hubs reveal important variations. At Dar port, the controversies that arise as a result of contested perceptions of the issues at stake, and how to govern them, help illustrate how the governance of mobility and security is continuously being contested and constructed.

Global infrastructure hubs: critical security studies meets mobilities

Science and Technology Studies have long argued that infrastructure and society are closely related and that contemporary power is exercised by and through complex technical systems and standards. This extends political analysis to include infrastructure hubs and technical systems, which have recently started to receive more attention in International Relations (Aradau 2010; Cowen 2014; Hönke and Cuesta-Fernandez 2017; Mayer and Acuto 2015; Salter 2015). In critical security studies, this discussion tended to revolve around infrastructure and technology as objects or actants of securitisation. It has been shown that infrastructure has become a new issue in domestic and international security (Collier and Lakoff 2008) and how it has come to be perceived as being in need of protection, for which a range of pre-emptive transnational security measures have emerged. In this vein, global supply chain security, for instance, has come to roll out technology for scanning containers for nuclear material, in addition to broader ISPS standards. In this way, domestic border management is extended outward into foreign ports.

In the mobilities literature, attention has been focused on new sociotechnical systems and the emergence of logistical surfaces that make goods flow (Martin 2013, 2014). Much has been written on such flows and how 'multimodal port complexes become the crucial nodes' in new mobility systems which 'aspire ... to establish a continuous and "global surface of logistical integration" (Martin 2013)' (Birtchnell, Savitzky, and Urry 2015, 4). Nevertheless, making things move relies on multiple spatial fixes, including paradoxically those that accommodate immobility (Cresswell 2010) and stillness (Bissell and

Fuller 2011; Cresswell 2011). Growing mobility depends on similarly growing 'multiple fixities or moorings often on a substantial physical scale that enable the fluidities of liquid modernity' (Sheller and Urry 2006). Through offshoring (Urry 2014), national taxation and regulation is circumvented in corridors and zones of exception (Sheller 2016, 21, 22). The better-documented process of financialisation has its counterpart in the massive investment in infrastructure of circulation, such as ports, railroads, and other digital and network trade technology (Birtchnell, Savitzky, and Urry 2015). Capital is mobile, but also builds on offices, national affiliations, off-shore zones and ports; territoriality is not vanishing, but it remains crucial for enabling globality for some citizens, whilst excluding others (Jessop, Brenner, and Jones 2008; Opitz and Tellmann 2012). Others have stressed that logistics has created an abstract space, one in which ports are integrated through processes of containerisation, unitisation and standardisation (Martin 2014), where ports and the technologies of making things flow are contested, and any (idea of) seam space is merely a product that needs to be reified and worked out in different contexts (Gregson, Crang, and Antonopoulos 2017).

However, both literatures have tended to (over)emphasise the commonality of practices of governing and securing ports, and thus, at least implicitly, have assumed the diffusion of transnational standards and practices; whether through the containerisation (Martin 2013, 1028) or securitisation (Cowen 2014) of shipping mobilities. Indeed, Cowen rightly demonstrates the emergence of supply chain security as a global assemblage with rationalities, professionals, and technologies that extend across borders. To secure 'seamless systems' (Cowen 2014, 76–90), she shows that supply chain security has come to work through moving border space inwards and outwards (of the state), as well as through the creation of exceptional zones in which domestic laws and rights are mediated or suspended. According to her, port environments have become such zones (*ibid.*, 81).

Nevertheless, while mobility and security practices around logistics today result from commercial concerns to 'eliminate many forms of friction and insecurity that beset globalised or "stretched-out" production processes' (Birtchnell, Savitzky, and Urry 2015, 3), it is not clear how far these particular, securitised perceptions of infrastructure and homogenised technological zones of 'seam space' hold beyond the US and Europe. The actual empirical effects of transnational policies and standards in practice, and how they play out in diverse social and political settings, remain insufficiently understood. Processes of diffusion and transfer of policies, technologies and procedures are not homogeneous or unidirectional (Amicelle et al. 2015; Hönke and Müller 2016), nor always successful.

This article, therefore, suggests the lens of infrastructure controversies to explore the multifaceted and contested transformations of power and authority in ports. As Pat O'Malley (2001) argued, one must beware of looking for mere examples of already known rationalities and technologies of governing, as this risks producing overly neat, often overly sympathetic, portraits of 'neoliberal' governmentality void of physical violence. In empirical terms, Brenda Chalfin's (2010) work on maritime security in Africa and the port of Tema leads the way in this respect. She highlights how port development and state authority co-evolve and lead to unexpected results in how ports are governed, including how transnational technological fixes and devices – such as cargo scanners and other electronic equipment – operate as actants and transform how power is exercised. Transnational standards and professional practices in the technological zones of global transport are, thus, neither 'internally homogeneous [n]or static' (Barry 2012, 327) and operate in different ways. Certainly, ports are typical instances of new 'calculable spaces' (Rose and Miller 1992), made possible by the quiet revolutions in logistics, among other factors. In these growing transnational technological zones, governance by standards, comparison and by rendering distinct objects as similar proliferates (Hönke and Cuesta-Fernandez 2017). At the same time, however, as Barry (2012) reminds us, new objects become matters over which to disagree. As ports become ever more entwined with transnational standards and technologies, new objects emerge around which controversies arise (see also Marres 2005).

A controversies approach

A controversies approach, we suggest, involves directing our attention towards moments of contestation and controversy around the technologies and regulations that supposedly govern (through) logistical infrastructure. Technical devices and standards not only have a powerful influence on shaping how mobility and security are governed – this is now well established in security and mobilities research (e.g. Aradau 2010; Easterling 2015) – but they are also disputed, and spark (more or less public) controversies. In line with Marres, we argue that it is important to analyse the occasions when issues are debated and alternative accounts proliferate (Marres 2007, 775; also Venturini 2009; in security Schouten 2014). Focusing on these disputes contributes to the understanding of logistics and (port) infrastructure in both literatures by: (1) foregrounding questions of politics over those of governance and powerful logistical assemblages (Walters and D'Aoust 2015, 55); and (2) emphasising processes as fundamentally open-ended.

In Science and Technology Studies, two types of interest in controversies have prevailed (Barry 2012, 326). The first emerged as ethnographic methodology to study scientific laboratories and open the 'black box' of scientific knowledge. The innovative suggestion of these early studies was to understand the settling of scientific debates as 'closure' – the temporary stabilisation of a particular version of things that was most powerful at that point – and not a representation of 'the truth'. This offers insightful guidance for controversies outside of the world of science: instead of searching for the most truthful claim, it redirects analysis towards closure; that is, successfully blocking out contradiction, contingency and alternative accounts of what the problem was and/or how it should be addressed. The second tradition thus revolved around *public* knowledge controversies, such as around the safety of nuclear power plants or the risks and effects of new technologies. This second generation has also been criticised, in particular for not paying enough attention to the historicity of the particular political situation in which knowledge controversies unfold as part of ongoing negotiations of power and authority (Barry 2012, 330). Furthermore, many controversies concern matters other than claims to (technical/scientific) knowledge, which remained overlooked (Wynne 2003). Controversies are a useful tool for analysing disputes beyond scientific knowledge controversies in a narrow sense (Schouten 2014; Venturini 2009).

Building on the above, we use a controversies approach to capture disputes around seemingly technical matters of port logistics and security: issues around 'technology which is not yet stabilised, closed or "black boxed", and is basically used 'as a general term to describe shared uncertainty' (Macospol 2007, 6; op cit. in Venturini 2009). With this third perspective, we draw on Barry (2012) by interpreting controversies as bringing 'political situations' to the fore. Political situations are neither fixed nor focused on political settlements defined by relations between key groups of actors, but are a result of ongoing, contingent processes of order-making in which transnational technologies and imaginaries play a key role.

In these processes of order-making, first, the very definitions of what needs fixing, and how, are contested. As such, they provide an entry point to 'ontological politics' (Mol 1999; Schouten 2014), offering a way to observe the making of situated and distinct infrastructure politics that are otherwise only encountered once they have been 'black-boxed' and taken for granted. Thinking from controversies extends beyond what comes into view through a 'logistics' or 'security' frame. What is understood as 'security' must not be treated as a given, and the starting point of analysis, but as under-construction and re/defined in practice; this being most visible in moments of contestation (see also Coleman and Rosenow 2016, 4; Schouten 2014).

In complex and multi-layered settings such as ports, controversies must, secondly, be studied as part of a political situation to illuminate the existence of multiple controversies that overlap and intertwine (Barry 2012, 332; Foucault 1991). It follows, then, that everyday practice, key ideas, standards and technical devices play a crucial role in negotiating authority and transforming how power is exercised in ordering infrastructure hubs. They reveal the situated, fragile, and 'hybrid regimes of practice' (Hönke 2013) of governing ports, through attention to what is being problematised in a particular situation, the competing diagnoses of such problems, and the different actions considered in response, within and well beyond neoliberal modes of managing logistical space. Additionally, such an approach brings

into view the agency of those governed by travelling technologies and transnational standards as also playing a role in shaping local outcomes. Controversies conceived in this way may also be a tool to unveil shifts in authority and power around economic hubs.

A caveat is in order before we move on to examine Dar es Salaam port. Whilst looking for uncertainty and moments of disagreement, a controversies approach also requires being attentive to (attempts at) 'black-boxing' knowledge and closing a controversy. When something is stabilised, alternative accounts become almost invisible/inaudible: a controversy is closed. It finds expression in the successful black-boxing of (potential) fragility, complexity and heterogeneity. Latour refers to this as a process that 'makes the joined production of actors and artifacts entirely opaque' (1999, 183). Thus, for instance, in the case of a major dam building project in Ethiopia, Abbink (2012) shows how the techno-economic project conducted by central state authorities is presented as a depoliticised, 'necessary' venture, but one which advances the government's hegemonic governance model and defines citizens in the process as displaceable, expendable subjects that can be relocated and re-educated. Transnational regulations and logistical technology might be used to close local port debates via claims of authoritative expertise or procedures. However, as Barry (2013) shows, they do not always serve to reduce controversies. First, whether or not something is framed as (a)political is at the core of what many controversies are *about*. And second, they often instead generate new objects over which to debate and disagree.

Drawing on controversies around Tanzanian ports, the following sections illustrate how such an approach allows us to understand diverse, geographically and historically situated infrastructural orders.

Controversy I: how to secur(itis)e cargo

The first controversy in the port of Dar pits the port and tax authorities against clearing agents and transporters. It emanates from recurrent episodes in which containers have been cleared without due payment of fees, or cargo stolen from within the port premises or from nearby Inland Container Depots (ICD). The controversy has peaked in the last years, since the disappearance of containers from within the port premises became recurrent. Reportedly, in 2016, it was discovered that 3000 containers were 'missing' from port warehouses. Containers had been cleared from the port or, more commonly, from Inland Container Depots outside the port's boundaries, without due payment of taxes and port charges. In late 2015, this issue made it to the headlines of national newspapers immediately after the election of new Tanzanian President John Magufuli. Together with the Prime Minister and the Minister of Transport, Magufuli launched a concerted, disciplinary campaign against corruption and pilfering at the port. On 7 December, Magufuli sacked the Permanent Secretary at the Ministry of Works, the TPA Director General, three additional senior and eight middle management workers, and dissolved the TPA board on allegations of 3000 containers having been cleared from the port without due payment of TZS 80 billion (US \$40 million) (*Daily News*, 7 December 2015). Containers go amiss in many ports (Langewiesche 2004), yet it was the sheer scale of the phenomenon in Dar that was startling. An audit carried out in late December 2016 revealed that 11,884 containers and 2019 vehicles had reportedly been cleared from the port to ICDs without payment of wharfage fees (*Reuters*, 8 December 2015; *The Citizen*, 30 December 2015). In parallel, with the surge in the number of Inland Container Depots in the vicinities of the port, concerns about the security of containers outside the port gates – in transit between the port, ICDs and importer's warehouses – have soared. One freight forwarder recalls how a truck driver manipulated the system whilst hauling a container full of tyres from one ICD to his warehouse, only 1.2 kilometres away, and fled with the cargo (Anonymous Freight Forwarder 2015). In outright contrast to the hi-tech processes of cargo tracking through GPS systems, freight forwarders and consignees instead highlight the low salaries drivers receive, compounded by the night operations brought about by the development of the 24/7 scheme, as the chief cause of insecurity.

The security controversy revolves around what facilitates these thefts and how containers are smuggled out, and how to quell the phenomenon. Concerning the definition of what needs fixing, port authorities signalled the inadequacy of the technical means available in the port. Prior to 2014/2015, security checks and access controls at the port were performed manually. According to the then Acting

Port Manager, the decision to grant access to the port premises was taken by the security guards on the spot, who did so in an inconsistent manner, something which the new Integrated Security System, backed up by electronic swipe cards, would redress once and for all (Mhanga 2015). By contrast, other port stakeholders drew attention to extensive mismanagement and, crucially, the collusion between insiders and outsiders. Freight forwarders, consignees and transporters did not question the opportunity to enhance the technical means available to enforce security in the port. However, they also highlighted the need to address illicit behaviour by port officials in parallel, if not beforehand. Accordingly, to one freight forwarder operating in the port, the associated corruption and a general failure to oversee matters explained the perennial phenomenon of the 'missing' containers (Anonymous Freight Forwarder 2015). Thereby, where the Port Manager blamed human failure and placed trust in electronic vetting, other port stakeholders highlighted the political economy of the functioning of the port.

In an attempt to settle the controversy, the TPA resorted to an exercise in public relations featuring ISPS-inspired measures at its core. By resorting to ISPS – ostensibly a global security standard driven by fears of terrorist attacks – the port authority re-signified the code as being in favour of indigenous security aims. This exercise was embodied by the launch of the Tanzania Ports Handbook. In its first two editions, in 2015/2016 and 2016/2017, the technologies to produce ordering were the major theme. Extolling the possibilities of technical fixes and compliance with international standards, the TPA appealed to ISPS. Hence, the Tanzania Ports Handbook 2016/2017 emphasised how access to the port had been greatly tightened in 2015; how magnetic swipe cards, renewable each year, had been introduced in 2015/2016; and that powerful tower lights had been refurbished or installed, 465 CCTV cameras set up, and X-ray scanners installed. Revealingly, clearing agents did not oppose the deployment of ISPS-inspired technologies, rather the opposite. Only a minority of truck drivers and petty smugglers voiced their opposition or acted surreptitiously against the deployment of such technologies, particularly cargo-tracking measures (Anonymous Freight Forwarder 2015). Donors also contributed to the exercise and, according to the EU, these new technologies should enable a massive reduction in the excessive amount of physical inspections carried out, currently affecting 50% of containers passing through the port. More broadly, scanning ought to facilitate a shift from control through physical inspections to 'light touch' probes focused upon cargo cleared by unreliable forwarders and importers/exporters with a tarnished track record, thus leaving reputable operators largely unhindered.

However, the introduction of new technical fixes in early 2016 only triggered new disputes, as Barry would have predicted. Faced with fresh allegations of 'missing' containers, the government and the TPA accused clearing agents of operating outside the rulebook. Government officials and port authorities somehow tried to convince the public that unscrupulous freight forwarders could be singled out by their arrears in professional fees. Clearing agents retaliated by accusing TPA and TRA officials of being corrupt. In addition, the TPA also tightened its procedures for the release of cargo making a stopover at ICDs, which would henceforth require mandatory TRA approval. In such moves, the TPA had earlier been accompanied by the private operator running the container terminal, the Tanzania International Container Terminal Services (TICTS), which was proud to make the international systems and audits in place known to the visitor upon entrance.¹ TICTS, for instance, had embarked earlier upon public communication of the introduction of new recording and monitoring software, now handling 80% of container throughput. With new software allowing the movement of any single container to be assigned to a specific operator, TICTS could well boast of a superior capacity to pre-empt undesired moves outside the established procedure.

All in all, the controversy over the security of cargo reveals two aspects. First, divergence from supposedly 'global' security concerns is evident in terms of which aspects matter (e.g. loss of containers more than terrorist threats). This is the case in spite of the fact that participants in the controversy are in agreement about the rightness of the ISPS-inspired measures. With the minor exception of truck drivers and petty smugglers, the interests of many appear to align neatly with the TPA's stated claim to use ISPS to improve security. Nevertheless, while the securitisation of cargo appears successful on the discursive level, the issue remains controversial in practice. In order for consignees and freight forwarders to realise the benefits of technical security fixes, the political economy of the port needs to

be dealt with first, or at least in parallel. This opposition, however, plays out in a sphere that only occasionally reaches the public domain. It is within this domain that port authorities attempt to settle the public controversy by mobilising the virtues of ISPS and its attendant technological fixes. This section illustrates our broader argument that the *interplay* between the 'power of logistics' (Neilson 2012) and technical fixes incorporated by ports, and local political economies is crucial to be able to understand the specific, and contested, ordering of ports.

Controversy II: what causes delays, and how to reduce them

The second controversy opposes the same actors as the first, but this time over 'congestion' (or how to cut delays in clearing cargo from the port). To counter the losses induced by stalling cargo, the port authorities have responded on multiple fronts. The first front witnessed the substitution of the Automated System for Customs Data (ASYCUDA), the customs management software (CMS) introduced in the 1990s – later updated to ASYCUDA++ in 2005 – which was superseded by the Tanzania Customs Integrated System (TANCIS) (Keasi 2005). Introduced in March 2014, TANCIS promised to revolutionise the clearing of cargo in the port of Dar. TANCIS was introduced with notorious delays, however, as its roll-out was allegedly marred by the reluctance of key actors within the TPA to cooperate (Anonymous Freight Forwarder 2015). According to the TRA, TANCIS is 'built on hi-tech principles with a view to increasing effectiveness, efficiency, transparency, and reliability in the Customs administration,'² and rides the wave of earlier similar systems that have been introduced in Hong Kong (1986), Singapore (1989–1991), Malaysia (1996–2004), Ghana (2001) and Nigeria (2009). TANCIS is the latest of many moves by the TRA and TPA to facilitate tax compliance by importers, and, crucially, to speed up the clearing of cargo from the port. Other related recent developments by port authorities include the currently embryonic electronic Single Window System (eSWS),³ the One Stop Centre, and the Single Customs Territory (SCT) – the latter of which states six categories of products that pay taxes in the first port of entry into the East African Community, regardless of their final country of destination.

What is even more interesting, TANCIS has become central to efforts by the TRA and TPA to eliminate delays, and for good reason. These electronic devices promise a handy managerialist fix to issues that outside actors – notably freight forwarders, transporters and shippers – understand as driven by less aseptic – and more pernicious – political incentives. Again, the controversy on the causes of delays, and the solutions needed to reduce them, pits managerialist fixes against a more political framing of the issue. The latter encapsulates two claims: too much state, and corruption. Whilst the TPA and TRA believe that the progressive roll-out of TANCIS, the electronic single window and the One Stop Shop Centre will in time smooth the flows of cargo entering and leaving the port, other port stakeholders believe the political economy of the taxation and certification agencies renders the authorities' expectations unjustified. Under new regulations, the TRA retains the core jurisdiction over taxation and, crucially, over authorising the displacement of containers or bulk cargo inside and/or outside the port boundaries. Yet an array of other public agencies is also legally mandated to perform a variety of controls.

Thus, the Weights and Measures Agency must compare the quantities in the consignment with those stated in the Pre-Arrival Declaration. The Ministry of Agriculture, the Government Chemist Laboratory Agency, and the Sugar Board, have the prerogative to inspect pallets, the nature of chemicals, and the quantities and quality of sugar, respectively. And whilst the Tanzanian Food and Drug Authority almost exclusively performs documentary controls of food, pre-packaged goods, and medicines, the Tanzania Atomic Energy Commission may dispatch samples to its laboratory in Arusha in order to ascertain the absence of radiation. Likewise, the Tanzanian Bureau of Standards may visit the importer's warehouse to assess conformity with regulations.

All these agencies have a stake in processing documents, yet most may, at the will of their officers, instigate a physical verification as well. Accordingly, many stakeholders fail to understand why the same checks are carried out by different agencies: 'Most are doing the same tests ...: the same colour, porosity, density ... The whole thing is designed in such a way that they keep on doing [*sic*] their revenue, their income, etc.' (Anonymous Consignee 2015). Indeed, some associate these checks with road-blocks manned by unscrupulous police officers, who ask for bribes to let vehicles pass, or to overlook

documentation so clearance may be granted at the port. Accordingly, for some freight forwarders, shippers and transporters, fixes to delays may come from more efficient procedures and software, but also from more forceful initiatives to thwart corruption. A controversy about how to diminish immobility also helps to reveal the practices of state actors to routinely regulate immobility (Cidell 2012).

Even though TANCIS had not been fully deployed when fieldwork was carried out (in mid-2015), it has nonetheless triggered at least two substantial alterations in the everyday working of cargo clearance producers. First, it has replaced physical, more informal, encounters between tax officials and clearing agents in favour of virtual procedures. One consequence of this is that TANCIS has resulted in the laying off of a legion of cashmen and messengers who previously roamed around the city and the port. Second, TANCIS has also created a dual space for encounters between tax agents and freight forwarders, as some procedures were still being carried out on paper. Thus, tax agents and freight forwarders swing back and forth between the physical and the virtual environment and, consequently, abide by different rules of engagement. This offers a precious tactical advantage for tax agents in their (legal and not so legal) encounters with other port stakeholders. The parallel with the introduction of the Customs Management System (CMS) in Tema, in 2003 cannot be overstated, where customs personnel lost substantial facilitation payments to look elsewhere when cargo left the port without a declaration (De Wulf 2004).

Again, the controversy over delays and inefficiencies, where they derive from, and their solutions not only attests to two coexisting frames – i.e. managerialist versus political fixes – but also to two concomitant projects to close the controversy; one on the premise of technical and transnational standards, the other on fixing the political economy of the port first. This evokes how ‘the consolidation of transnational technological zones both constitutes new objects of measurement ... and translates them into matters about which it is possible to disagree’ (Barry 2012, 328). However, an insight that is specific to this controversy emerges forcefully. The controversy over delays reveals how the shifting of conflicts to virtual environments is contested by horizontal wrangles across and within governmental agencies, as well as by vertical skirmishes between top and rank-and-file port authorities. It thus provides a glimpse of complex interactions between the global logistical agenda and the local political economies, and diverse, situated outcomes of transnational technologies of governance.

Controversy III: efficiency from scrap or from scratch? Bagamoyo versus Dar

In the final controversy, which is perhaps the most publicly discussed, the positions of each category of participants are less clear-cut. For a section of the Tanzanian economic and political elites, the ultimate fix to the delays in the port of Dar is the construction of a new US \$10-billion mega port in Bagamoyo, some 60 kilometres north of Dar. Inspired by the ‘Dubai model’, Bagamoyo, an altogether new port (thus our label ‘efficiency from scratch’) to be funded by China and Oman, is portrayed as the solution to the irredeemable spatial inefficiency of Dar. Those in the opposite camp suggest demolishing some existing buildings instead as the first step towards a re-organisation of flows within Dar port (thus ‘efficiency from scrap’). The future of the port of Dar is put to debate by competing views on reformability, and, in fact, competing visions of modernity and efficiency.

The Bagamoyo project is hardly new. The idea of a new port in Bagamoyo has been present in the port community since at least 2007. However, the project did not actually start to take shape until October 2014, when Tanzania signed a memorandum of understanding with China and Oman. Thereafter, reports in the media about the progress of the project were contradictory, until a major breakthrough occurred in October 2015 when, two months before his mandate expired, President Kikwete laid the foundation stone for the 800-hectare port, and an adjacent 1700-hectare Export Processing Zone in his hometown. However, it took only one month for the new Magufuli administration that took office in late 2016 to announce that the Bagamoyo project would be temporarily shelved for at least six months until further studies were conducted. To many, this move signalled that President Magufuli might have chosen instead to refurbish the existing port of Dar es Salaam in line with the funding already approved by

the World Bank. However, in 2016, the Omani State General Reserve Fund opened an office in Dar es Salaam, and the construction of the port was put back onto the agenda. The government variously blamed one sponsor or another for the delays but has announced in October 2017 that the new port will be operational from 2020/2021.⁴

The ongoing controversy over Dar versus Bagamoyo confronts arguments of economic and spatial efficiency. For those in the efficiency camp, Dar port is underutilised and there still remains plenty of room for efficiency gains that might accommodate the projected growth in throughput over the coming years. They dismiss the need for a new megaport in Bagamoyo based on arguments that highlight the lack of economic and logistical rationale. In the words of a consignee, 'expert' international designs will be able to produce the much-desired boost in efficiency at Dar port, as much as 50% (Anonymous Consignee 2015). This position is echoed by a freight forwarder, in a telling analogy: 'If I have a car that I don't service ... buying a new car is not gonna [sic] solve my problem' (Anonymous Freight Forwarder 2015). Furthermore, those of a political mindset highlight the eventual loss of control on lucrative checkpoints as a sticking point for such a gigantic project, thus casting doubts on whether developments at Bagamoyo will actually occur in the near future (Anonymous Consignee 2015).

Not all freight forwarders see the Bagamoyo project as ill-conceived (Secretary 2015), though; similar divisions exist amongst the authorities. Whilst some of the latter extol the virtues of Bagamoyo, others promote the 'increasing efficiency' argument. The latter seem to have gained the upper hand so far, as the Dar es Salaam Maritime Gateway Project with the World Bank and other donors is set to open new logistical space by demolishing two sheds; redrawing the flows of traffic within the port, instituting a one-way system of truck and cargo flows; assigning distinct gates for entrance and exit; and reviewing general cargo procedures (World Bank 2016).

However, the Bagamoyo megaport has many ardent supporters amongst another section of the authorities. They consider the new port in an undeveloped location to be the lasting solution to the problems of space within the port and of congestion around it. The latter was significantly true of the Kikwete administration. Unsurprisingly, the Chinese operator of the container terminal, CMHI, seconds the idea that the new port 'will fundamentally decongest Dar es Salaam port and city'⁵; and that it might eventually make inroads into the epic scheme of China's New Silk Road (*Forbes*, 12 March 2017; *The Diplomat*, December 1 2015). Other supporters emphasise that it would finally be the materialisation, just 60 km from Dar, of a vision that former president Kikwete put forward for all Tanzania: 'If we invest in logistic centres, improve on infrastructure and create a facilitative environment, we can easily turn Dar es Salaam into another Dubai of its kind' (*Reuters*, 11 April 2014).

Interestingly, the vision of a new Dubai via the Bagamoyo option reveals how political elites present new infrastructure projects to supersede problems of 'the old'. Pitching 'modernity from scrap' (Dar) against 'modernity from scratch' (Bagamoyo/Dubai) is a telling example of using legitimising discourses to rally political and financial wills behind port authorities. Evidently, the seamlessness that the Dubai Logistics City so aptly epitomises (e.g. Cowen 2014; Easterling 2015) is mobilised in this controversy. For proponents of Bagamoyo, the failure of Dar es Salaam to curtail disruption, congestion and hindrances to seamless flows provides the proof that modernity and efficiency cannot be instilled upon old infrastructures to the degree required by global logistics and the global economy. New, mega-infrastructure comes to represent 'the possibility of being modern, of having a future, or the foreclosing of that possibility' (Larkin 2013, 333; also Sneath, Holbraad, and Pedersen 2009).

Importantly, Dubai's exceptional development is presented in Tanzania as the alternative development model to be emulated (even though, or perhaps because, the contours of the 'model' remain vague, and emulation is more than uncertain due to Dubai's extremely specific context conditions (see Chorin 2010)). The Bagamoyo-Dar controversy thus evidences our broader argument: that greater attention is required to situated and multifaceted 'global makings' (Hönke and Müller 2016) of infrastructures that draw on imaginaries well beyond the techno-science of 'global logistics' and Western modernity.

Conclusion

Logistical infrastructures and technologies powerfully shape how mobility and security are governed, as Easterling (2015) and others have argued. However, they are also disputed and contested. This article has sought to show that the mobilities and security literatures could do more to differentiate, and sometimes move beyond, the idea of supposedly encompassing, global technologies of governing mobility and security in ports and other infrastructure hubs. In order to question 'the story of ordering logistics politically everywhere', we proposed a controversies approach. Controversies alert the observer to often overlooked diversity, frictions and the overall more fragile and contested nature of port logistics. Attention to disputed knowledge (rather than the dominant securitising discourse) and attempts at closing such controversies have brought to light non-hegemonic positions, competing projects and contesting practices to a supposedly smooth integration of Dar port into regimes of global security and mobility. The use of the approach has shown how Dar port assembles a multiplicity of agents, imaginaries and technologies of governance that delay and transform a supposedly integrated 'global surface of logistics'. First, the controversies around Dar unveiled differences in the appropriation of global standards to produce order. Even though all port stakeholders may agree in principle about the opportunity to roll out managerialist, technical solutions to problems of securing and moving cargo, they are also at loggerheads about the need to address prevalent settlements in the political economies of taxation and cargo clearance. Managerialist and political economy framings clash, emerging as concomitant projects to close controversies and thus impose a fix to contested issues. Second, the controversies approach helped to bring attention to how port authorities attempt to mobilise global standards, such as ISPS, to settle public controversies. Third, it revealed how the introduction of electronic platforms and software have an effect on expanding the autonomy of port authorities vis-à-vis other port stakeholders and, revealingly, colleagues in governmental agencies and within their own ranks. This, in turn, creates horizontal wrangles within bureaucracies.

In examining these points together, our controversies approach illustrates the extent to which the emphasis on the prevalent 'story of ordering logistics politically everywhere' is misleading. In particular, it brought to the fore the need to unearth the variegated projects for the governance of ports that may underlie opposite discursive positions in controversies, as well as the everyday practices of port stakeholders. The core of all of this is to call into question how we understand mobility and security in the first place. They cannot be fixed in an ontology of *a priori* research, and controversies is a lens that leads us to capture the 'ontological politics' over the understanding of these terms in practice.

Furthermore, and this requires particular attention, the Bagamoyo-Dar debate highlights the different visions of modernity mobilised in many parts of the Global South today – here the 'Dubai model' – as alternative projections of 'how to be modern' (Larkin 2013) and how to step out of traditional postcolonial relations with the West. New white elephants might be part of such 'new geographies of development' (Sidaway 2012), not too dissimilar to the old ones of the 1950s and 1960s, but the diversity of visions and practices at play in infrastructure hubs merits more attention and scrutiny. This opens up 'the story of logistics everywhere' in yet another direction: to powerful alternative imaginaries and situated political economies beyond Western scripts that appropriate, redirect or quell the incorporation of global logistical standards in ports. To date, these are most visible in the margins of supposedly global regimes of mobility and security, which calls for more research and theory building from the Global South (Comaroff and Comaroff 2012; Hönke and Müller 2016).

Overall we hope our piece contributes towards generating more work on 'logistics-in-action' that approaches issues of mobility and security in new ways. Whilst work through the notion of frictions, as recently suggested by Gregson, Crang, and Antonopoulos (2017), zooms in on ruptures and the patchwork-like nature of logistical landscapes, controversies offer an important alternative and complementary approach in that they reveal the competing visions, claims to expertise and practices of resistance to the overall project. While in many instances, 'flows of global commerce trump local economies and ecosystems' (Carse 2012), and logistical hubs such as ports are part of a system of mobility that supports uneven geologies (Sheller 2016), the above has shown that not only competing

visions and models, but also competing political economies, must be considered to understand how mobility and security are governed.

Notes

1. <http://ticts.net/contact-us/visiting-ticts/>. Accessed 17 June 2016.
2. <http://www.tra.go.tz/index.php/faqs/405-what-is-tancis>. Accessed 13 February 2016.
3. <http://www.eswstz.org/>. Accessed 17 June 2016.
4. Tanzania Daily News. Bagamoyo Port Set to Start Operations by 2020, 29 October 2017.
5. <http://www.sctcn.com/en/news/detail.aspx?id=720>. Accessed 5 December 2016.

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