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David Jaffee  
UNF, [djaffee@unf.edu](mailto:djaffee@unf.edu)

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# Neoliberal urbanism as ‘Strategic Coupling’ to global chains: Port infrastructure and the role of economic impact studies

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[journals.sagepub.com/home/epc](http://journals.sagepub.com/home/epc)**David Jaffee**

University of North Florida, USA

**Abstract**

This paper identifies and delineates a variant of neoliberal urbanism that grounds city-region economic development on the ability to gain financial and public support for large-scale infrastructure projects advancing particular forms of capital accumulation. More specifically, the focus is on the effort of city-regions to strategically exploit and expand geographic and physical assets to capture economic benefits associated with global value chains through the expansion of maritime ports. This development strategy requires sizable public investments in port infrastructure. In order to justify and convince the public and political officials of the wisdom of such investments, port officials commission economic impact studies. These are designed to demonstrate how the public investments will pay off in terms of economic development. This paper will critically examine this feature of the urban development strategy and its role in advancing a particular neoliberal development agenda. The analysis is placed in the larger context of actual existing neoliberalism, the shifting economic prospects of cities and regions, the rise of logistics and transportation, and inter-port competition for containerized cargo.

**Keywords**

Neoliberalism, urban development, global value chains, port logistics

**Corresponding author:**

David Jaffee, Department of Sociology, Anthropology, and Social Work, University of North Florida, Jacksonville FL 904, USA.

Email: [djaffee@unf.edu](mailto:djaffee@unf.edu)

This paper seeks to identify and delineate a particular city-region development strategy and determine whether it conforms to the precepts and policies associated with neoliberal urbanism. More specifically, the focus is on the effort of city-regions to strategically exploit and expand geographic and physical assets in order to capture economic benefits associated with global value chains (GVCs) through the expansion of maritime ports, and the ability to gain financial and public support for large-scale infrastructure projects advancing this objective. These development strategies require sizable public investments in port infrastructure. To justify and convince the public and political officials of the wisdom of such investments, port officials commission economic impact studies. These are designed to demonstrate how the public investments will pay off in terms of economic development. This paper will critically examine this feature of the urban development strategy and its role in advancing a particular neoliberal development agenda. The analysis is placed in the larger context of actual existing neoliberalism alongside recent developments that include the shifting economic prospects of cities and regions, the rise of logistics and transportation, and inter-port competition for containerized cargo.

### **Neoliberal urbanism**

Today, neoliberalism serves as a widely employed lens through which political economic policy is studied and analyzed (Duménil and Lévy, 2004; Harvey, 2007). As the dominant hegemonic political economic paradigm, it has shaped economic development policies at the global, national, and city-region level. Much of the massive literature on neoliberal political economy operates at a broad abstract theoretical level focusing on the philosophical assumptions, neoclassical underpinning, class interests advanced, and generic policy implications. For the purposes here, we will define neoliberal urbanism as “a form of urbanism subordinated to the dictates of capital, where urban powers attempt to position their cities in higher positions of the hierarchical global urban network in which competitiveness is the key” (Vives Miró, 2011: 2). This describes the ends, but what are the means? In what specific ways does neoliberalism manifest itself at the city-region level? Brenner and Theodore (2002: 351) argue for the analysis of “actually existing neoliberalism” that “must explore the path dependent contextually specific interactions between inherited regulatory landscapes and emergent neo-liberal market-oriented restructuring projects” as embedded in specific geographic locales. For this reason, there is a need to develop some specific policy areas and case studies that show how neoliberalism is manifested at various levels. This is a relevant approach for the present purpose given that the “neoliberal restructuring strategies interact with preexisting uses of space” and “established institutional arrangements” can “constrain the scope and trajectory of reform” (2002: 362). We will consider whether and how the expansion of the urban port economy fits into this framework.

Neoliberalism is often conceptualized as a form of “creative destruction” (see Harvey, 2006). Brenner and Theodore (2002: 369–371) see this dynamic playing out at the urban level with the destruction of “extant institutional arrangements and political compromises” and the creation of “new infrastructures for market-oriented economic growth, commodification, and the rule of capital.” The creation side includes public–private partnerships, underwriting private investment with state/public subsidies, new networked forms of urban governance through which elite business interests can directly influence local development decisions, creation of customized networked urban infrastructures intended to position cities within supranational capital flows, mobilization of “glocal” strategies to rechannel economic capacities and infrastructure investments into “globally connected” local regional

agglomerations, and the construction of large-scale megaprojects intended to attract corporate investment and reconfigure local land-use patterns.

As part of this shift toward neoliberal economic policy, observers of urban political economy have noted the growing significance of particular forms of public investment in service to private interests (Kirkpatrick and Smith, 2011). Swyngedouw et al. (2002) emphasize the importance of large-scale urban development projects (UDPs) as part of the new urban policy. This form of urban governance privileges state-financed development projects driven by private–public partnerships but is restricted in scope to the imperatives of capital accumulation. Described by Swyngedouw et al. (2002: 552), these large-scale UDPs

reorient state intervention away from monopoly market regulation and towards marshaling state resources into the social, physical, and geographical infra- and superstructures that support, finance, subsidize, or otherwise promote new forms of capital accumulation by providing the relatively fixed territorial structures that permit the accelerated circulation of capital and the relatively unhindered operation of market forces.

Similarly, Harvey (1989) described the process by which city/region governmental units compete for, encourage, and actively facilitate capital investment as the larger neoliberal shift from a “managerial” to “entrepreneurial” role (Harvey, 1989). The former involved regulation, redistribution, and service provision, whereas the latter represents neoliberal supply-side-oriented policies designed to attract, facilitate, and subsidize capital investment and accumulation.

Urban governance has thus become much more oriented to the provision of a ‘good business climate’ and to the construction of all sorts of lures to bring capital into town. The task of urban governance is, in short, to lure highly mobile and flexible production, financial, and consumption flows into its space. The speculative qualities of urban investments simply derive from the inability to predict exactly which package will succeed and which will not, in a world of considerable economic instability and volatility. (Harvey, 1989: 11)

This description of the neoliberal entrepreneurial city-region is particularly applicable to the maritime port development strategy that relies on speculative infrastructural megaprojects.

## **Global chains and urban port infrastructure**

Urban neoliberal development strategies based on transportation and logistics are closely tied to the larger process of globalization that has involved the geographic dispersion of commodity production processes, and the spatial separation of production and consumption activities. The conceptualization of these sequentially interdependent processes and structures has been framed in the context of “chains”—commodity chains (Gereffi and Korzeniewicz, 1994), GVCs (Gereffi et al., 2005), or global production networks (GPNs) (Coe et al., 2008). Each of these concepts highlights the globalized and geographically dispersed phases and segments of product development, production, and consumption and the relative economic value and power of the participating activities and parties. The focus here will be on the increasing importance of transportation, distribution, and logistics, the role of maritime ports (Bonacich and Wilson, 2008) in urban and regional development (Hesse, 2008), infrastructure requirements, and the system of determining the economic impact of these activities.

With regard to the global chain models, the GVC literature identifies the potential value derived, extracted, and captured by the various activities, while those employing the GPN approach have more directly considered the relationships between chains of commodity production/movement and urban/regional development (Coe et al., 2008; Yang, 2009; Yeung, 2009). Most notable in this regard is the work of Coe et al. (2008: 471) who define GPNs as “the globally organized nexus of interconnected functions and operations by firms and non-firm institutions through which goods and services are produced and distributed.” More significantly, they have introduced the concept of “strategic coupling” in order to “explore how the strategic coupling of GPNs and regional assets may (or may not, depending on the context) facilitate the processes of the creation, enhancement and capture of value upon which regional development ultimately depends” (2008: 469). This coupling is considered as an interactive/relational process, thus rejecting notions that regional development is the product of fixed locational traits or that globalization processes are rigidly configured. Therefore, regional development can involve the creation, enhancement, or capture “insofar as such region-specific economies can complement the strategic needs of trans-local actors situated within global production networks” (2008: 471).

In the larger context of the study of globalization and international development, the primary focus of chains has been on how developing countries have inserted themselves into these production/value chains and how this has translated into national development based on the nation’s participation in a particular socio-economic activity. Most of the attention has been devoted to the geographic dispersion of productive activities that involve the provision of raw materials and primary products, inputs and components, and assembly and manufacturing contributing to the production of a single commodity (Henderson et al., 2002). But equally critical is the movement of the finished and semi-finished commodities to the point of final consumption (Bonacich and Wilson, 2008). Logistics operations physically connect the links in the chain from the point of production to the point of retail consumption. Containerization of cargo and the associated intermodal system of transportation that includes primarily truck, rail, and container vessels have facilitated this process. Goods are transported by large container vessels, the containers must pass through nodes, gateways, and portals—maritime ports—to reach inland consumer markets. Cities and regions are now interested in being selected as the site for these goods-moving activities as a way to replace the long-term decline of goods-producing activities (Hesse, 2008; Sheffi, 2012).

At one time, the urban port served the function primarily of an entry point for materials and goods used and consumed in the immediate urban economy and as an exit point for the export of goods and materials originating from that urban economy or region. Today, this is no longer the case. Most of the containerized cargo entering ports is “discretionary cargo.” This means that shippers and carriers can bring the goods into almost any US port and, with containerization and the well-developed truck-rail intermodal transportation system, get the goods to their final destination within the national market. Ports compete for this cargo and its discretionary nature intensifies that competition.

For ports to be competitive, they must have the physical infrastructure and intermodal logistics capabilities to move the goods quickly and cheaply. There are a wide variety of factors that determine port competitiveness (Song and Panayides, 2008), but the emphasis in this paper will be on the maritime container port infrastructure and the effort to both upgrade and expand that infrastructure to attract the discretionary cargo. Most recently, this has been driven by the increasing size of container vessels now capable of holding up to 20,000 twenty-foot equivalent units that also require larger terminal and quayside space, taller and wider cranes, and deeper channels.

In terms of an urban economic development strategy that links the port economy to global commodity chains, there are several recent theoretical and case study contributions that provide some conceptual specificity for analyzing the dynamic of interest in this paper. The GPN concept of “strategic coupling” is used by Jacobs and Lagendijk (2014) to outline a theoretical framework applied specifically to maritime ports. Ports are regarded in this scheme as a fixed node, while the containerized cargo represents the global flow. The urban and regional development strategy therefore depends upon coupling the geographically fixed node with the intermodal commodity flow. This is accomplished when a government and business coalition can establish and secure the need and financing for a “structure of provision” (Ball, 1986); or more specifically, “The provision and deployment of key infrastructure—physical as well as regulatory—is one of the prime vehicles through which to facilitate the insertion of a place into a GPN and, thus, to accomplish strategic coupling” (Jacobs and Lagendijk, 2014: 51).

Clark and Hall (2010) advance a similar analytical approach in their study of the Vancouver port, identifying a “politics of reconnection” between global shipping interests and port city-regions. The twin forces of discretionary containerized cargo and intermodal transportation have weakened the historical connection between ports and cities, the fixed infrastructural requirements have facilitated a reconnection. The site of reconnection is made with both ‘spaces of dependence’ (Cox, 1998)—referring to the necessary physical logistics infrastructure—as well as ‘spaces of engagement’ involving local political activity aimed at securing infrastructural investment and provision.

Successful and sustainable coupling and reconnection requires that shippers and carriers choose to move the cargo through a particular port. As ports compete with each other for the discretionary cargo, shippers and carriers strengthen their bargaining position and communicate, request, and even demand that certain conditions be in place in order for the port to receive their cargo. This can include a deeper channel, a new container terminal, new cranes, a more automated and less labor-intensive terminal operation, new and upgraded transportation arteries, etc. Luberoff and Walder (2000: 7) identify the challenges facing US ports under these conditions

Because containerization is linked to consolidation at a relatively small number of ports, it is putting intense pressure both on the ports that are attracting new business, and those ports seeking to reaffirm their historic roles as significant portals for trade. In general, such ports face three interrelated problems. First, they need adequate channels and berths for increasingly large ships. Second, the growth in ship sizes creates a need for larger and better-designed docks and other landside facilities. Third, the fact that ships are carrying increasingly large amounts of cargo often overwhelms existing connections between ports and the nation’s road and rail systems (and areas where rail lines and highways directly intersect). Because of these challenges, most of the major U.S. ports have launched extensive long-term capital investment programs.

In most cases, the physical or coastal infrastructural requirements to remain competitive are funded with public dollars. The large-scale infrastructure, or what are sometimes described as “megaprojects,” typically cost hundreds of millions of dollars, and often exceed one billion. For port cities large and small, the prospect of becoming a major receiving port for the imported cargo has enormous appeal for public officials desperate to find sources of economic dynamism and job creation. Just as less developed nations seek to insert themselves in the GVCs/GPNs as a way to upgrade their national economies and participate in global production, cities and regions in the United States have attempted to leverage their

geographic location in order to establish “logistics clusters” that can serve as engines of regional and urban economic development (Sheffi, 2012).

There are also private corporate interests—local, national, and international—that stand to gain economically from infrastructure projects and port expansion, funded with public dollars, and thus actively participate in their promotion. At the local level, one typically finds a “growth machine” (Logan and Molotch, 1987) coalition supporting, in most cases unconditionally, any project that promises economic growth (Jaffee, 2015). Flyvbjerg et al. (2003: 7) outline the rationale for the enthusiastic support for such projects among this segment of the population.

Special interest groups can promote projects at no cost or risk to themselves. Others will be financing the projects, and often taxpayers money is behind them, including in the form of sovereign guarantees. This encourages rent seeking behavior for special interest groups.

In their extensive study of the politics of urban public investment, Altshuler and Luberoff (2003: 220–223) confirm the point:

Mega-project support coalitions were, with rare exceptions, spearheaded by business enterprises with very direct interests at stake. Nearly all projects conferred disproportionate benefits on specific enterprises and locations, however, and the support coalitions for these tended to be led by companies that stood to be prime beneficiaries.

A study of interport competition in the United States concludes that interport competition results “in the transfer of wealth from local users and taxpayers to private companies” (Potter, 2010: 187).

These urban political economic dynamics associated with expanding the port economy and infrastructure are consistent with the features of neoliberal urbanism highlighted above. First, the maritime port strategy is aimed at elevating the city-region to a higher position in the port hierarchy (Vives Miró, 2011) which results in intensified competition with other ports for capital investment and jobs. Second, strategic coupling policies by city/region governmental units actively facilitating capital investment conforms to the larger neoliberal trend involving the shift from a “managerial” to “entrepreneurial” role (Harvey, 1989). Third, port infrastructure is a prime example of a state-financed UPDs designed to “re-enforce the competitive position of their metropolitan economies in a context of rapidly changing local, national, and global competitive conditions” (Swyngedouw et al., 2002: 548).

One of the contradictions that faces this capital subsidized urban development strategy is the tension between fiscal austerity on the one hand and public financing of megaprojects on the other (Kirkpatrick and Smith, 2011). As O’Connor (1973) highlighted many years ago, the twin functions of the capitalist state—accumulation and legitimation—will produce an inevitable fiscal crisis. The accumulation function entailed state policies and expenditures designed to support the business climate and encourage capital investment; the legitimation function was aimed at quelling potential discontent under an inherently inequitable system through social welfare payments and public services. Together, the two functions would inevitably produce the “fiscal crisis of the state” as accumulation and legitimation expenditures would far exceed state revenues. Today, under neoliberalism, the accumulation function is king. Creating a favorable business climate now serves as its own form of legitimation through the logic of trickledown economics. In order to make this claim credible, however, the public and those in a position to weigh-in on the local financing of infrastructure

projects must be convinced that the projects will have some broader public benefit; that there is a convergence of particular and general interests (Jessop, 2002). Promoting logistics as an economic strategy—particularly for port cities—involves advocating for massive coastal and transportation infrastructure projects funded from public federal and local sources. Under conditions of financial stress and social needs, public investment in such “mega-projects” must be justified based on expanding tax revenues and employment opportunities. This task is addressed using officially commissioned economic impact studies designed to quantify the economic benefits to the city, region, and larger population.

## Economic impact studies

Economic impact studies have now become one of the leading methods for justifying and legitimizing large-scale urban development megaprojects associated with neoliberal urbanism (Hall, 2006). However, the studies employed for this purpose are vulnerable to challenge and critique as their ability to accurately measure the economic impacts of public infrastructure and transportation projects has been a long-standing issue. As Eberts (1998: 130–131) puts it,

Most of the benefits listed by the National Commission on Intermodal Transportation... involve externalities, although there is no way to determine the relative size of the externalities. Empirical research on the benefits of freight transportation does not offer estimates of the benefits and costs with sufficient precision to be of much help in making these decisions.

Flyvbjerg et al. have examined a large number of what they describe as “megaprojects” from the development phase to final completion. They are emphatic in their finding that

Megaproject development today is not a field of what has been called ‘honest numbers’. Whether we like it or not, megaproject development is currently a field where little can be trusted, not even—some would say especially not—numbers produced by analysts. (2003: 5)

Flyvbjerg et al.’s (2002) statistical analysis of 258 transportation infrastructure projects finds that estimates are not only highly and systematically misleading but best explained by “intentional strategic misrepresentation” (or, as they also put it, “lying”). In fact, Flyvbjerg (2005: 18) has developed the following equation that summarizes the strategy project proponents employ to secure public and megaproject approval:

PROJECT APPROVAL = (underestimate costs) + (overestimate revenues) + (undervalued environmental impacts) + (overvalued economic development effects)

Crompton (1995, 2006) comes to similar conclusions in describing economic impact studies as “political shenanigans” and “mischievous practices” often designed to “mislead and distort”. He outlines some of the most common procedures used in economic impact studies that tend to produce numbers representing “deliberate malfeasance” (2006).

As it pertains specifically to maritime ports, the same concern has existed regarding the accuracy of impact studies (Chang, 1978; Davis, 1983; Yochum and Agarwal, 1987; Waters, 1977). In an early analysis of port impact studies, Waters (1977: 17) concluded that

Hence, most port economic impact studies cannot provide much useful guidance for port planning. They apparently are used principally as public relations tools... they cannot answer the key question of whether a community should finance the development of another port facility. At present, there are no data available to evaluate the full impact of imports on citizens.

Those who have studied how the changing relationship between the port and the city, as a result of containerization and intermodal transport, also shapes economic impacts remark

...it is easy to exaggerate the existing and potential role of ports in regional economic development. Ports are not big users of labour and are no longer the inter-related complexes that they once were. The result is that, in most cases, ports serve industry in other areas than their own. They are not, therefore, efficient vehicles of economic development... (Gripaios and Gripaios, 1995: 22)

Others address more directly the methodology in concluding that “although methodologies to determine economic impacts of port activity have been under continuous development and most studies adopt a scientific approach, figures are often exaggerated” (Dooms et al., 2015: 3). Hall (2004: 363–364) provides an even more sweeping statement, “Port impact studies offer very little useful analysis of . . . short-run substitution behavior. . . . Port impact studies also offer very little useful analysis of . . . long-run effects because they assume fixed production techniques, industrial structures, and associated logistics arrangements.”

Despite these widespread concerns and reservations, port impact studies are conducted on a routine basis for port authorities in the United States intent on making the case for the infrastructural investment that will strategically couple the local/regional economy with global commodity flows. But the project costs can be astronomical. A survey of U. S. seaports conducted by the American Association of Port Authorities (2012) reports that port authorities and private sector partners plan to invest \$46 billion in port-related infrastructure projects. Support for such expenditures, 40% of which is expected to come from public coffers, will be based on port impact studies which, in this case, have estimated that such investment would create more than 500,000 direct, indirect, and induced domestic jobs.

Here, we see the significant role of port authorities in advancing and promoting infrastructure projects, and commissioning economic impact studies—another significant hallmark of the neoliberal urbanism paradigm. Under this development model, economic development planning and decision-making are shifted increasingly to quasi-public agencies and public–private partnerships that are insulated from democratic deliberative forms of governance, lacking inclusion, representation, or accountability (Swyngedouw et al., 2002; Brenner and Theodore, 2002).

The nation-wide economic impact figure cited above was calculated by the economic and transportation consultant firm of Martin Associates. This brings us to what may be unique to the port industry—the fact that almost every port economic impact study in the United States is conducted by this single consultant. The firm has a well-established reputation as the go-to economic analyst for conducting port strategic plans and impact studies, having conducted over 500 studies for 72 ports, as well as broader analyses for the shipping and port industry regionally and nationally. And again, in spite of the widespread belief that the impact studies are unable to produce accurate estimates, the numbers produced by Martin Associates impact studies, commissioned and paid for by the very port authorities that stand to gain from the positive public relations associated with large numbers, are routinely offered as sole and sufficient justification for the large-scale public investment in new and expanding port infrastructure that entails the dredging/deepening of rivers and harbors, and the building of container terminals and supporting transportation networks.

Any critical examination of port impact studies, and the numbers they produce, will inevitably focus on the work of Martin Associates. In this section, we present some concrete

examples of how these impact studies have been used, and misused, to support the urban neoliberal megaproject strategy. There are at least two issues pertaining to accuracy and reliability of impact studies. The first concerns the basic procedures and methods used by the paid consultant to estimate the economic effects and the resulting figures included in the studies. The second involves the use, or misuse, to which the numbers are put in order to advance the interests of the port authority and public/private sector stakeholders.

One of the central promises of neoliberal supply-side policy is the trickle down effects on job growth. For this reason, we focus first on the job estimates. These are especially critical because these numbers are the most commonly used for promoting the value of the port and arguing for the positive benefits of further expansion and public investment. From the perspective of the general public—especially during extended periods of economic decline, job loss, and persistent unemployment—this is a highly salient factor. For this very reason, there may be an even greater motivation to produce, and then use (or misuse), inflated job numbers to support the port and its expansion.

A basic methodological practice for impact studies, as it relates to job figures, is the division between the various job estimate categories. In their port impact studies, Martin Associates (2014) uses a conventional breakdown of the three major types of jobs stemming from the economic activity of the port. The first and most important category is the “direct” jobs defined by Martin Associates as those jobs with local firms providing support services to the seaport. These jobs are dependent upon this activity and would suffer immediate dislocation if the seaport activity were to cease” (2014: 2–3). Second are the “induced” jobs—those that exist as a result of the demand for goods and services stimulated by the spending of workers occupying the direct jobs. This can include retail sector employment (e.g. based on the spending of direct job workers in grocery stores or restaurants) as well as the jobs in the wholesale sector that supplies the retail enterprises. Third are the “indirect” jobs—those in the businesses that provide goods and services to the firms generating the direct jobs (e.g. office supplies, utilities, construction, etc.).

When these three categories are lumped together, they can produce a total job number that is both very large and potentially misleading. The average citizen, uninitiated in the subtleties of employment impact methodology, will assume that a total jobs figure pertains to people directly employed in that particular business or sector. The threefold breakdown is often neither revealed nor defined.

There is a final jobs category—“related jobs”—that is frequently estimated by Martin Associates but that is far less conventional. As one of the follow-up studies (Center for Economic Development and Research, 2012: 15) put it: “This is a fairly unique element to Martin Associate studies that does not appear in most economic impact analyses.” According to a study of the Jacksonville (Florida) Port Authority (JAXPORT) by Martin Associates (2014: 3), these related jobs are “held throughout the state with manufacturing and wholesale and retail distribution firms using the seaport terminals for the shipment and receipt of cargo.” Of the four job categories estimated, this turns out to be by far the largest, and in some cases the most controversial, job category due to its size and the way it is often used by port officials. As one analyst reports

The nuances of the different categories of employment effects usually are lost in brief public statements. This is particularly troublesome with the term ‘direct employment’, which suggests the number employed by the terminal itself, but is not, and the term ‘related employment’, usually associated with some very large numbers, which also suggests something other than what Martin Associates states. (Risingwater Associates, 2010: 5)

Including these unconventional job categories increases the likelihood that the growth coalitions and the port authorities will engage in “political shenanigans” and various forms of misrepresentation. Economic impact numbers are then used and misused by those supporting the costly port infrastructure development scheme. As Wachs (2001: 369) has observed, “The politicians and administrators who commission forecasts rarely understand them and often quote their conclusions without subjecting them to critical review. They tend to repeatedly cite projections that support their positions while ignoring those that do not.”

This can be illustrated, again, from the case of Jacksonville and JAXPORT. The port authority, local public officials, and other supporters of port expansion and channel deepening have used a 65,000 job figure to argue for the indispensability of the port and the need for its publicly financed expansion. Ever since Martin Associates completed an economic impact study in 2009, port proponents have claimed that the port “supports 65,000 jobs.” This number itself is not manufactured as it is included in the Martin Associates economic impact study but it combines not just direct jobs, induced jobs, and indirect jobs but also what are called “related user jobs” (as defined above). The inclusion of related jobs into the total number is even contrary to the advice of the Martin Associates study (2009: 25) which contains the following admonition:

It is to be further emphasized that when the impact models are used for planning purposes, related jobs should not be used to measure the economic benefits of a particular project. Related jobs are not estimated with the same degree of defensibility as direct, induced and indirect jobs. Therefore, only these three types of job impacts should be used in evaluating port investments.

In fact, these “related jobs” do not depend on the Jacksonville port; if the port were to close the jobs would still exist.

But JAXPORT has consistently included the related jobs in its claims about the economic impact of the port, as have others who champion the port, such as the Mayor of Jacksonville. One reason JAXPORT has probably been reluctant to remove related jobs is that they account for wholly 66% or 42,647 of the 65,000 total. The more justifiable number, although it includes not just direct but also induced and indirect, is 22,353. More recently, based on a second economic impact study of the Jacksonville port conducted in 2014, the number of jobs now claimed by JAXPORT to be “related to port activity in the Port of Jacksonville” is 108, 260. Again, this includes the “related jobs” that even Martin Associates has warned “*are not estimated with the same degree of defensibility as direct, induced and indirect jobs*” (Martin Associates, 2014: 24).

In addition to the obvious forms of obfuscation and misrepresentation, there have been several independent studies that have attempted to replicate and then evaluate the projected economic impact that Martin Associates estimated for two port projects. Two of these studies—one conducted by Risingwater Associates (RA) the other by the University of North Texas Center for Economic Development and Research (CEDR)—reviewed the Martin Associates projected impact of the proposed North Carolina International Terminal. A third, TranSystems (TS), carried out the same evaluation of economic impacts for a container terminal in Gulfport Mississippi.

In calculating the economic impact of port operations, Martin Associates reports using the conventional and widely accepted Bureau of Economic Analysis regional input-output modeling system supplemented with survey data derived from port tenants and service providers working with the port authority. But any details about these data, or the assumptions or factor multipliers used in the economic impact model, are unavailable. In a public

records request to obtain this information, legal representatives for Martin Associates indicated “the model used by Martin Associates is proprietary technology that is a ‘trade secret’...”

According to the analysts who have reviewed the Martin studies, some of the problems originate with the assumptions and/or methods that tend to yield larger rather than smaller numbers. Among the many issues raised, we focus here on two of the most common and significant.

The first involves confining economic impacts to a restricted geographic space. In the RA report, they identify “geography” as one of the shortcomings or “qualifications” in evaluating the Martin Associates estimates. More specifically, they note that:

The Martin Associates report appears to treat the State of North Carolina as a geographically separate region, an island without land connections to neighboring states. Interstate movements of containers are ignored. All economic impacts of container movements projected for the proposed terminal are treated as impinging within the State of North Carolina... Stuffing all of the effects of such regional traffic into one state results in incongruous results: Martin Associates attributes about one-third of the growth in jobs in the State of North Carolina over twenty years to the proposed container terminal. (2010: 6)

The question of the geographic scope of the economic impact raises an important issue about the changing nature of the relationship between ports and the city-region-state within which they reside. Among those who have studied carefully this relationship, there tends to be a unanimous conclusion—today one finds that *geographically, costs tend to be concentrated while benefits are widely dispersed* (Gripaios and Gripaios, 1995; Hall, 2007, 2009; McCalla, 1999). This is due to the fact, as noted above, that containerized cargo—the objective of most port expansion projects and for which there is the greatest port competition—is “discretionary” and not tied to any particular geographic location. With containers, and the goods within, destined for immediate transport off the terminal directly to railheads or distribution centers, the economic benefits of the port are felt far into the hinterland (Potter, 2015). This historic trend in the port–city relationship can make it more difficult to garner support for expensive publicly funded infrastructure projects if the “local pain” (McCalla, 1999)—which also includes pollution, road construction, and congestion—is not compensated for by local gain.

A recent study by the Brookings Institute/JP Morgan Chase (2015) titled “The Great Port Mismatch: U.S. Goods Trade and International Transportation” notes that “Many policymakers often emphasize the importance of ports as local economic assets, in particular the ability of ports to create employment opportunities and infrastructure impacts” but their data indicate that “Across the entire country, only 4 percent of international goods passing through ports start or end in the same local market. In other words, ports primarily serve other places” (2015: 10). Under these conditions, economic impact results that can conceal the broad diffusion of benefits with job numbers that appear to accrue to the local economy are preferred.

The second issue pertains to assumptions on the size of the multipliers used to measure economic impacts (see Matheson, 2009). Many of the impacts of an economic activity are contingent on a multiplier effect where a dollar or unit of economic activity, or a particular number of direct jobs, is translated into a secondary economic benefit through this multiplier effect. The problem arises when a multiplier is overstated and, accordingly, so is the secondary economic benefit. This appears to be the case for several Martin Associate calculations based on a review of their studies.

As an example, the CEDR (2012) analysis of the Martin Associates economic impact estimates for the North Carolina International Terminal (NCIT) notes the following:

A greater concern with the Martin Associates analysis is the estimated “user” impacts. *The report does not detail how the user impacts are calculated*, but the description suggests that the 2,057 jobs at the NCIT will support enough industrial activity to generate over 140,000 additional jobs. . . Clearly, there is no substantiation in the report to justify that the user jobs multiplier should approach or exceed 70. This suggests that the total job impact estimate in the Martin Associates study of the NCIT may be overstated by more than 130,000 jobs for 2017. That is, instead of the 145,976 jobs projected by Martin Associates, a more reasonable estimate for the total job impact of NCIT is 15,076; or only about 11% of their projection. (pp.15–17)

The overestimate of “user jobs,” in turn, generates unrealistically high projections for total income as well as tax revenue. Leading the CEDR researchers to conclude that “. . . the Martin Associates analysis of the total economic and fiscal impacts of the North Carolina International Terminal at Southport, North Carolina, grossly overestimates the potential impacts on the State of North Carolina” (2012: 18).

There is a third criticism that is more research methodological, than assumption, or multiplier based. It pertains to the way that Martin Associates established the *quality* of employment as measured by average incomes for port logistics workers. The example here comes from several sources related to the port initiative in Jacksonville Florida and the proposal to use public funds to dredge and deepen 13 miles of the river channel at an estimated cost of \$800 million (see Jaffee, 2015, 2009). Again, in addition to claiming the job generating impact of port activity and expansion, if one can also claim that these will be good high-paying jobs, the case for public investment is further bolstered. In this case, based on Martin Associates impact study (2009), JAXPORT claimed, on their website, that the jobs generated by the port “provide an average salary of \$43,980.” However, the \$43,980 is derived from the summation of all wages and salaries for the 410 firms surveyed by Martin Associates and providing services in the “port’s seaport community” divided by the total number of employees. While these data may be a useful way to gauge the aggregate dollar economic impact of the port, it is a highly crude indicator of the average income (ideally median income would be calculated) for port associated labor. It combines the compensation of all kinds of employees—from CEOs to janitors—with no detailed breakdown of the different kinds of occupations that are more or less common, or that are more or less likely to be expanded with the growth of the port. And it communicates an inaccurate impression about the compensation levels of jobs in the port logistics sector. Again, the casual reader might conclude that \$40,000 is a common salary for people who will find jobs generated by the port’s expansion. This would be false.

There are data available that would permit a more accurate determination of the quality of employment generated from expanding the port economy. These are the Bureau of Labor Statistics’ Occupational Employment Statistics (OES) which include data for employment and wages of individuals in detailed occupational categories for cities, states, and counties. Sixty-one percent of logistics sector employment is accounted for by industrial truck and tractor operators; laborers and freight, stock, and material movers; packers and packagers; shipping, receiving, and traffic clerks; and stock clerks and order fillers. The mean income for workers in this large segment of the logistics labor market is \$25,460. The problem of inflated average income calculation was also identified in the CEDR and TS studies with the TS study emphasizing, for the Gulfport expansion project, that “the largest growth will be with the local trucking industry, followed by the growth with distribution centers,

warehousing and container repair and storage operations, and with members of the International Longshoremen's Association (ILA)" (2011: 5).

Further, even the modest mean income level for the majority of logistics workers may be overstating the actual income. This is because the warehouse/distribution sector relies heavily on temporary workers as a way to manage the significant fluctuations in the flow of cargo. For the truck drivers who move containers off the terminal (also known as drayage) almost all these drivers work as "independent contractors" or "owner operators" compensated by the number of containers hauled rather than hours worked. Together, both labor forces fit squarely into the category of "precarious work" (Jaffee and Bensman, 2016) and thus may not have a reliable annual income stream.

What we can learn from this review is that economic impact studies misrepresent socio-economic benefits of urban development megaprojects and have been used and misused to support port-based urban-regional development strategies. This pattern appears to be an integral part of the neoliberal urbanism dynamic involving large-scale state-financed UDPs. It is consistent with the neoliberal entrepreneurial supply-side narrative that assumes reducing costs and providing benefits to capital through public-private partnership is the best way to ensure economic prosperity for the larger population. And as has been reported elsewhere, making the case for these projects involves the overestimation and inflation of job numbers and job quality—patterns of deception that some have described as the stock in trade of economic impact studies (Crompton, 2006; Flyvbjerg et al., 2002).

## Discussion and conclusion

Neoliberal urban development strategies are increasingly dependent upon entrepreneurial public investment in large-scale infrastructure projects to satisfy the prerogatives of capital. For those city-regions geographically positioned to leverage their maritime ports into logistics gateways for the movement of containerized cargo, the two major requirements are space for container terminals and deep-water channels able to accommodate the largest container vessels. To justify the large-scale investment of public dollars, the public and those deciding on the expenditure must be convinced that the socio-economic gains will outweigh the costs. Economic impact studies are a primary means to establish the legitimacy of the financial requests and economic strategy. They therefore play a political role in shaping the distribution of increasingly scarce public resources even though they do not constitute true cost-benefit analyses as they calculate, often using questionable methods, only the benefits, exclude the costs, and report gross rather than net socio-economic effects of an infrastructure project.

This urban infrastructure investment pattern, and the targeting of port logistics as an urban or regional development strategy, can be understood within the theoretical framework of "actually existing neoliberalism" (Brenner and Theodore, 2002) emphasizing the path-dependent interchange among "inherited institutional and spatial landscapes." In this context, one can comprehend how the destructive and creative elements of neoliberalism combine toward a strategy of "strategic coupling" (Jacobs and Lagendijk, 2014) which highlights the way a city-region links its existing geographic location and potentially expanding physical amenities to global flows and value chains. The success of this effort rests upon having the "structure of provision" (Ball, 1986) as a necessary but insufficient condition for successful coupling of the local economy with global commodity flows. Economic impact studies are used by maritime ports to provide evidence for their general contribution to jobs and revenue that will be generated by publicly financed infrastructure projects such as container terminals and channel/harbor dredging and deepening.

The urgency of infrastructure funding, as illustrated by the example of Jacksonville Florida, is fueled by the recent and particularly intense port competition on the US East coast due to the expanding width and depth of the Panama Canal allowing the largest container vessels to transit directly to the East Coast. In the case of Jacksonville, Florida, for example, there is further South Atlantic regional competition with Savannah and Charleston. Each port seeks to establish and provide conditions that will attract the largest container vessels moving the greatest amount of discretionary cargo. The fact there is a finite quantity and thus a zero-sum game simply intensifies the competition, which is financially costly and environmentally destructive. While the impact studies point to the local gains that will be made because of the public investment, the primary beneficiaries of the competition are shippers, carrier, and retailers.

The situation facing maritime ports as engines of regional development can also be placed in the broader neoliberal context that intensifies competition among national and sub-national units for capital investment and jobs. As noted, geographic mobilities and technologically enhanced flexibilities via containerization and intermodalism place the corporate entities associated with goods movement in the strongest bargaining position in relation to port city-regions and port authorities. This arrangement plays out in several familiar ways. First, as with nations and regions across the globe, city-regions, once the location for goods-production, now compete for the privilege of moving the goods produced elsewhere through their insertion into, or strategic coupling with, global commodity chains. Second, to be successful in this endeavor, city-regions, like less developed nations, must participate in the system of “competitive liberalization” involving the establishment of the least restrictive and lowest cost economic environment to attract the shipper and carriers that decide which ports will move the discretionary cargo. This can generate the now well-known “race to the bottom” phenomenon. Third, again consistent with the global neoliberal model of national development, city-regions become internally “disarticulated” and “extraverted” (see Amin, 1976) with much of the benefit of the value chain in which they participate realized in locations far from the city-region port or accruing to firms having no local presence. Lastly, the developmental promise of city-region port expansion is subject to the same problem facing the less developed nations that have been encouraged to engage and compete in export-oriented manufacturing (Razmi and Blecker, 2008). This is known as the “fallacy of composition”—what may appear individually rational and economically beneficial can be collectively irrational and less beneficial when many other entities are pursuing the same strategy. The net result is destructive competition, overcapacity, and underutilization at significant public expense.

There seems to be a growing awareness among a variety of observers and researchers (Brookings Institute, 2015; International Transport Forum, 2015) regarding the forces driving public investment in maritime port infrastructure and the dubious results of such economic development policies. One recent report (International Transport Forum, 2015: 16) describes the dysfunctional arrangement under which the decision by the shipping lines (also known as carriers) to build larger and larger container vessels imposes costs, or “negative externalities,” on both private and public entities that must incur huge capital investments to accommodate the larger ships. As they put it:

Shipping lines generally do not consult with the other actors in the transport chain on their projects. . . One could say that shipping lines have imposed their standards on the wider transport chains, ordering ships with dimensions that other transport actors now have to deal with.

Further, the report directly addresses the public financing of port infrastructure

...where the public sector picks up the bill of costs imposed by shipping lines. Especially where ports are engaged in fierce competition to attract mega-ships, port authorities might be tempted use public funds to attract these... There is no inherent public interest in stimulating mega-ships, so there is no reason why public funds should be used to favour mega-container ships relative to smaller ships, especially if the external costs of mega-ships are not recovered. (2015: 69)

The two reports (Brookings Institute, 2015; International Transport Forum, 2015) make several valuable recommendations based on their research. First, the costs of decisions made by the shipping lines should be “internalized” meaning that those who make or benefit the most from these decisions—i.e. the carriers, shippers, and retailers—should pay a share of the costs presently incurred by other parties. Second, rather than competing, ports should form regional alliances to strengthen their bargaining position with the carriers. Third, U.S. ports should be part of a national port system and “federal dollars should flow to ports moving the bulk of the country’s international goods...spreading financial resources too thinly ignores the concentration of economic activity” (Brookings Institute, 2015: 16).

These reports, as well as the secondary analyses of economic impact studies, indicate the constructive public role social scientists can play in investigating and critically analyzing neoliberal economic development strategies promoted by growth machine coalitions while at the same time raising public awareness about the true costs and primary beneficiaries of these publicly financed projects. While the intended purpose of economic impact studies is to bolster the legitimacy of the neoliberal development project, they have the unintended consequence of providing a point of entry and opportunity for oppositional counter-movements. If the legitimacy of a project rests on the quantifiable economic impacts claimed by proponents, these figures also represent a clear and visible target against which to mount a focused challenge; an exercise in “political jujitsu” (Evans, 2000). Exposing bias, misrepresentation, inflated numbers, and methodological invalidity constitutes a form of “neoliberal contestation” (Leitner et al., 2007) that can influence both the shape and the success of urban neoliberal development strategies.

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**David Jaffee** is professor of Sociology at the University of North Florida. His research areas include organization theory, socio-economic development, political economy, political sociology, and labor studies. He received his PhD in sociology from the University of Massachusetts-Amherst.