



International Dock Work Conventions in the Era of Post-Globalization

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Abstract

The part of the port industry that serves international trade flows, competes and satisfies demand with global characteristics. Port services production and supply, within an open market, can only be governed by global regulations, and should be taken into account by those who wish to implement them. International organizations influence both safety aspects and the protection of professional life from new working methods in ports. Assessing the importance of labor factor in ports, it is argued that it constitutes a key factor in port production. Several factors have facilitated the gradual substitution of port manual labor, leading to changes in both requirement in skilled labor quantity, but also labor skill and quality requirements. Studying the three I.L.O. conventions pertaining to dock work (C032, C137 and C152) we argue that they can form a positive model for the integration of work rules on a global scale. Main aim of these conventions is the mutual development for all port stakeholders and prevention of unfair competition. We assess the current state of acceptance and degree of implementation of the Conventions by national governments, and argue for the mutual benefits for port stakeholders arising from their implementation, from the perspective of globalization governance, in the era of post – globalization.

JEL Classification: R41; J28; M54.

Keywords: ILO Conventions; Port labor; dock work; global regulations.

1. Introduction

The importance and role of the labor factor in the port industry, has changed significantly over the years. Port employees are expected to have suitable abilities, in order to cope with contemporary port issues, control and leverage trade-offs in port

production and contribute to port planning.

The labor factor is becoming more flexible, following port production and supply processes (Chlomoudis and Pallis, 1999). Therefore a new model for port labor is being developed, triggered also by the technological explosion, that lowers unskilled labor requirements, but increases demand for skilled / specialized labor. National legislative frameworks, such as in the case of Greece, were instituted with a labor intensive operating framework (Pallis et al., 2013).

Ports that have not adapted their administrative and institutional framework to these conditions will not be able to cope with an unbiased competition environment. This adjustment can be realized by introducing regulatory and economic framework conditions, promoting port competitiveness. In this new organizational model, each port service division is operating under an integrated and coherent scheme, which they manage and implement, and therefore acting with a higher degree of autonomy and entrepreneurial mindset, compared to the past, while at the same time treating with greater responsibility expected benefits from improved resources utilization, employee safety and environment protection.

Requirements for new investments in the port industry were also triggered by amendments in sea transport standards (Chlomoudis and Pallis, 1997), influencing also the skill set requirements pertaining to cargo handling technologies. As a result, re-training and re-educating of port employees is now a necessity.

The above mentioned developments were influenced by ship cargo capacity gigantism trends, requiring utilization of portside equipment, mechanization and automation of cargo handling, as well as reductions in transport costs and ship waiting time. In general, these changes have a significant impact both on port employment, and work conditions.

The responsibility for dock worker safety was divided in a large number of constituents. But, contemporary port labor trends require, identified responsibilities and central company control, and highly specialized and trained employees (Chlomoudis, 2006). Studying the three I.L.O. conventions pertaining to dock work, we argue that they can form a positive model for the integration of work rules on a global scale for eligible ports.

In this work, we review quantitative data regarding the importance of the factor labor in ports, assess the current state of acceptance and degree of implementation for the three ILO conventions by national governments, and argue for the mutual benefits for port stakeholders arising from their implementation, strengthening our qualitative analysis by providing also operational details of a virtual port, that belongs to a country that ratified the aforementioned conventions.

2. Importance of the Labor Factor in Ports and Terminals: A brief survey of quantitative data

A brief study of the contemporary literature showed the relative importance of the factor labor in ports and terminals: Cullinane et al, (2002) argued that the labor and capital cost comprise most of the ports' total cost; also Sachish (1996) measured that labor amounted for 53% of the total port / terminal expenditure structure.

Labor related port data, such as the number of operations employees and dockworkers are scarce and with questionable consistency, due to unknown parameters such as the level of outsourcing and the unit of measure (i.e average FTE vs. end-of-year). In many parametric models for port efficiency assessment, such as Cullinane et al, (2005), Cullinane and Wang (2010) and Notteboom et al (2000), due to the lack of data availability of the factor labor, is substituted by superstructure data,

such as the number of cranes and straddle carriers, since it has been found that they are a suitable proxy for the former.

The majority of port labor related quantitative data is derived from port efficiency measurement studies, a comprehensive literature review of which can be found in Gonzalez and Trujillo (2009). Parametric and non-parametric methods (such as DEA, FDH) are used to almost the same extent for port efficiency measurement, nevertheless in the current survey, mostly parametric data was covered, since a) non-parametric studies focus and provide insight mostly in the efficiency scores and not in intrinsic variables, such as labor and b) parametric studies having similar production functions are more comparable

The importance of the factor labor is present not only in efficiency measures, but also in effectiveness ones, albeit indirectly: From Brooks et al (2011) data, it can be easily concluded that that the factor “overall quality of cargo handling” received the highest average ranking by all port constituent groups, i.e. supply chain partners, liners and agents. A similar result is concluded in Yuen et al. (2012).

Another notable example, where the labor factor is approached, is Sanchez et al (2003), where the waterborne transport cost, treated as a model depended variable, is assumed to be the marginal cost of the service multiplied by a markup by shipping companies. Linking port labor productivity with efficiency and transport costs, it was concluded that one of the determinants of transport costs is indeed port productivity (-0,062 coefficient, t-test -3,02), which is in accordance with port efficiency studies. Table 1 summarizes this brief review in parametric port efficiency literature.

Table 1. Labor Variables in port efficiency literature

Study	Production / Cost Function Type	Labor Related Variable	Value	Statistics test
Tongzon (1995)	Exponential	BrlWT	-0,250(*)	-2,200
Coto-Millan et al (2000)	Translog	LogWL	0,430	11,263
Estache et al (2002)	Cobb-Douglas	Ln_L	0,406	7,078
Estache and Gonzales (2002)	Translog	Ln_L	0,375	5,800
Cullinane et al. (2002)	Cobb Douglas	X3	0,431 to 0,440	5,378 to 6,210
Trujillo and Tovar (2007)	Cobb Douglas	#ofewbl	-0,4476(**)	-3,338
Gonzalez and Trujillo (2008)	Translog	L(labor)	-0,7728 (**)	-6,4832

From Table 1 it can be seen that the absolute prices (minus sign coefficients are derived from distance functions) are fairly consistent, with the exception of Gonzalez and Trujillo (2008); probably since the latter is focusing utilizing an aggregated approach over multi purpose ports with a variety of terminals (container, liquid bulk, other cargo and passenger). The Cullinane at al (2002) result is provided as reference for similar parametric efficiency studies that substitute labor with superstructure data, such as number of cranes, a trend introduced in Notteboom et al (2000). The Tongzon (1995) result has limited comparability with the rest of the results, since labor is approached indirectly, as average delays in commencing stevedoring represented by the difference between berth time and gross working time.

3. Post-Globalization and the need for global regulations in port labor safety

The global economic system, operating under a non-regulating environment, created many problems, both on local and international level: Issues such as environment, employee, entrepreneur and public safety involved each segment of the transportation process, cannot be solved autonomously by market forces.

It is the time that global players (government agencies national and transnational, unions and international organizations, representatives of large business interests, non-governmental organizations, companies, etc.) should develop policies for governance – through regulation - of globalization, through regulations, in order to respond to the challenges and opportunities of the latter.

We propose a support mechanism for the globalized economy through parallel evolution and configuration of governance rules, by strengthening international organizations in order to affect the flows of globalization, for the benefit of common development with employee and environment protection,

We define this phase as a “Post-Globalization” era for the economy. It is defined as governance driven phase in agreed, by port industry stakeholders, regulatory rules.

The self-constitution of maritime transport, led to a supra-national operational environment, a fact that in turn leads to increased requirements for data and information, but also a need for convergence of cultures (Pigenet, 2012), beliefs and working conditions for all stakeholders. National regulations proved to be only partially effective addressing these issues, hence the need for global regulations.

The part of the port industry that serves international trade flows, competes and satisfies demand with global characteristics, addressing mostly international market fulfills the requirements of a transport system that bears features and requirements that span outside national limits. Port services production and supply, within an open competitive market, can only be governed by global regulations, and should be taken into account by those who wish to implement them, in order to become harmonized. Post-globalization, production and supply of port services in an open competitive market, can only be governed by global regulations.

4. Dock Work Regulations their acceptance level by the international community

4.1 The case of ILO Conventions

International organizations influence the demand and supply of dock work on a global scale. A core example is the issue of employee protection and safety, by the introduction of new working methods in ports. The International Labor Organization (ILO) provides an added-value template for the global unification of port regulation through three conventions: C137, C152 and C032; the latter has been revised by the former two.

C032, was set into effect in 1934, and referred to measures for employee safety, as well as requirements for amendments to national legislations regarding necessary precautions, given the existing conditions, to ensure protection by hazardous materials; it has been revised by C152. The convention has been ratified by 46 countries.

C137 deals with repercussions introduced by the new port-side cargo handling methods, and the effects that will result in the new work methods in the employment and organization of the profession. The convention was set into force in 1975 and has been ratified by 25 countries up to the present day. The purpose of this convention was to cater for dock workers occupational safety, through measures related to

performance and work access. Moreover, through appropriate measures, to regulate fluctuations of labor force requirements, according to operational needs. C137 also provides for the establishment of a dock workers registry per category. The registry should be updated, in order to cover the needs of the port. Registered port workers would have priority for employment. In case of a required reduction in the necessary registered workforce, measures ought to be taken in order to minimize the effect on employees.

C152, set into force in 1979, as an update of C032, provides for measures related to equipment and infrastructure maintenance, in order to increase safety levels and reduce injuries, including measures for the safe access to work places. Also C152 refers to the provision safety related information to employees, safety garments and rescue equipment, first aid services and incident response and management processes. Ratifying countries should adjust their national legislation to cater for provision of medical exams, including scope and frequency, and specialized medical / health related tests for occupational hazards. Also health and safety committees should be formed in ports with large number of employees, represented both by employers and employees. No employee should proceed to load or unload in a port, unless they were given appropriate instructions for potential hazards. Additionally, for the prevention of accidents and diseases related to working conditions, these should be reported immediately to the Authorities, and should be investigated when necessary. Finally, all ports should be equipped with suitable sanitary and hygiene facilities. The convention has been ratified by 26 countries.

The main objectives of ILO, as pointed out by these conventions is to promote labor rights, to encourage decent employment opportunities, and to enhance social protection and dialogue on labor issues in the port industry. They refer to port employment conditions, and form a global port regulatory framework. The ILO member states that ratify these conventions are also obliged to implement them. The conventions have been ratified by several governments, acquiring therefore a covenant status.

However, regardless of their ratification status, ILO conventions are considered international labor standards. Ratification of a convention creates a legal obligation to for the country to implement its provisions.

Each year, the ILO Committee responsible for the implementation of standards, examines a series of alleged violations of international labor standards: When a country has ratified the Convention of the ILO, is obliged to regularly report on measures taken for its implementation. Every at least two years the governments have to submit detailed reports regarding measures implementation, applicable laws and practices that have been followed. ILO may also receive assessments regarding convention implementation by national trade unions or employer organizations.

The three dock work conventions, examine the rules for health and safety, the need for dock workers protection from occupational hazards, and also the effects, brought by technological advance and the continuing development of international trade, on employment and organization of port operations (Kostagiolas and Chlomoudis, 2011).

Conventions with mandatory implementation, following their ratification, include the aforementioned C137, C152 and C032. Many countries have not ratified C032, while at the same time, there is an on-going dialogue, regarding the ratification and implementation of conventions C137 and C 152. Table 2 present the countries that have not ratified the conventions.

Table 2. Countries that have not ratified ILO dock work Conventions

C032	C137	C152
AFG, ALB, AGO, ATG, ARM, AUS, AUT, BHS, BHR, BRB, BLZ, BEN, BOL, BWA, BRA, BRN, BFA, BDI, KHM, CMR, CPV, CAF, TCD, COL, COM, COD, CRI, CYP, CZE, CIV, DJI, DMA, DOM, ECU, EGY, SLV, GNQ, ERI, EST, ETH, FJI, GAB, GMB, GEO, DEU, GHA, GRC, GRD, GTM, GIN, GNB, GUY, HTI, HUN, ISL, IDN, IRN, IRQ, ISL, JAM, JPN, JOR, KAZ, KIR, PRK, KWT, LAO, LVA, LBN, LSO, LBR, LBY, LTU, LUX, MDG, MWI, MYS, MDV, MLI, MHL, MRT, MDA, MNG, MAR, MOZ, MMR, NAM, NRU, NIC, NER, OMN, PLW, PNG, PRY, PHL, POL, PRT, QAT, ROU, RWA, KNA, LCA, Saint VCT, WSM, SMR, STP, SAU, SEN, SYC, SVC, SLB, ZAF.SSD.LKA,SDN, SURSWZ, CHE, SYR, TZA, THA, TLS, TGO, TTO, TUN, TUR, TKM, TUV, UGA, ARE, USA, UZB, VUT, VEN, VNM, YEM, ZMB, ZWE	ALB, DZA, AGO, ATG, ARG, ARM, AUT, AZE, BHS, BHR, BGD, BRB, BLR, BEL, BLZ, BEN, BOL, BIH, BWA, BRN, BGR, BFA, BDI, KHM, CMR, CAN, CPV, CAF, TCD, CHL, CHN, COL, COM, COG, HRV, CYP, CZE, CIV, DNK, DJI, DMA, DOM, ECU, SLV, GNQ, ERI, EST, ETH, FJI, GAB, GMB, GEO, DEU, GHA, GRC, GRD, GTM, GIN, GNB, HTI, HND, HUN, ISL, IND, IDN, IRN, IRL, ISR, JAM, JPN, JOR, KAZ, KIR, PRK, KWT, KGZ, LAO, LVA, LBN, LSO, LBR, LBY, LTU, LUX, MDG, MWI, MYS, MDV, MLI, MLT, MHL, MRT, MEX, MDA, MNG, MNE, MAR, MOZ, MMR, NAM, NPL, NZL, NER, OMN, PAK, PLW, PAN, PNG, PRY, PER, PHL, QAT, RWA, KNA, LCA, VCT, WSM, SMR, STP, SAU, SEN, SRB, SYC, SLE, SGP, SVC, SVN, SLB, SOM, ZAF, SSD, LKA, SDN, SUR, SWZ, CHE, SYR, TJK, THA, TLS, TGO, TTO, TUN, TUR, TKM, TUV, UGA, ARE, GBR, USA, UZB, VUT, VEN, VNM, YEM, ZMB, ZWE	AFG, ALB, DZA, AGO, ATG, ARG, ARM, AUS, AUT, AZE, BHS, BHR, BGD, BRB, BLR, BEL, BLZ, BEN, BOL, BIH, BWA, BRN, BGR, BFA, BDI, KHM, CMR, CAN, CPV, CAF, TCD, CHL, CHN, COL, COM, CRI, HRV, CZE, CIV, DJI, DMA, DOM, SLV, GNQ, ERI, EST, ETH, FJI, GAB, GMB, GEO, GHA, GRC, GRD, GTM, GNB, GUY, HTI, HND, HUN, ISL, IND, IDN, IRN, IRL, ISL, JPN, JOR, KAZ, KEN, KIR, PRK, KWT, KGZ, LAO, LVA, LSO, LBR, LBY, LTU, LUX, MDG, MWI, MYS, MDV, MLI, MLT, MHL, MRT, MUS, MNG, MNE, MAR, MOZ, MMR, NAM, NPL, NZL, NIC, NER, NGA, OMN, PAK, PLW, PAN, PNG, PRY, PHL, POL, PRT, QAT, ROU, RWA, KNA, LCA, VCT, WSM, SMR, STP, SAU, SEN, SRB, SLE, SGP, SVK, SVN, SLB, SOM, ZAF, SSD, LKA, SDN, SUR, SWZ, CHE, SYR, TJK, THA, TLS, TGO, TTO, TUN, TKM, TUV, UGA, UKR, ARE, GBR, USA, URY, UZB, VUT, VEN, VNM, YEM, ZMB, ZWE

Table 3 lists the countries that ratified, or renounced each of the above mentioned convention.

In total, nine countries have ratified all three ILO conventions w.r.t international labor standards. These countries are Finland, France, Italy, Norway, Russia, Spain, Sweden, Tanzania and Cuba. In addition, Iraq, Brazil and Egypt, which had not ratified C032, after the revision of the former, ratified both C152 and C137, signaling that port labor was thereof consistent with international labor standards. Only two countries, Denmark and Mexico, that ratified C032, also ratified its revision C152, in order for dock work to be in line with contemporary hazard protection.

Table 3: Ratification / Denouncement Status of C032, C137 and C152

C032 (1934)	C137 (1973)	C152 (1979)
Protection against Accidents (Dockers) Convention	The repercussions of new methods of cargo handling in docks	Occupational Safety and Health in dock work
Ratified by:		
DZA, ARG, AZE, BGD, BLR, BEL, BIH, BGR, CAN, CHL, CHN, HRV, HND, IND, IRL, KEN, KGZ, MLT, MUS, MNE, NZL, NER, PAK, PAN, SRB, SLE, SGP, SVN, TJK, URK, GBR, URY	AFG, AUS, BRA, CRI, CUB, EGY, FIN, FRA, GUY, IRQ, ITA, KEN, MUS, NIC, NGA, NOR, POL, PRT, ROU, RUS, ESP, SWE, TZA, URY	BRA, COG, CUB, CYP, DNK, ECU, EGY, FIN, FRA, DEU, GIN, IRQ, ITA, JAM, LBN, MEX, MDA, NLD, NOR, PER, RUS, SYC, ESP, SWE, TZA, TUR
Denounced by:		
CUB, DNK, FIN, FRA, ITA, MEX, NLD, NOR, PER, RUS, ESP, SWE, TZA	NLD	

On the other hand, Nigeria, Kenya, Mauritius and Uruguay that had ratified C032, did not adopt its revision, C152. Instead, they ratified only C137. It is evident that these countries emphasized more on enhancing labor protection from new dock work methods. Also, eight countries have ratified only C137: Afghanistan, Costa Rica, Guyana, Nicaragua, Poland, Portugal, Romania and Australia. In addition, ten countries have ratified only C152: Congo, Cyprus, Ecuador, Germany, Jamaica, Lebanon, Peru, Seychelles and Turkey. In these countries, dock work is only partially compatible with international labor standards.

Even after the revision of C032 by C152 and the integration of C137 to international labor standards, as a result of the developments in the methods of dock work, twenty-eight countries that had ratified C032, did not proceed in adopting both these new conventions. These countries are Algeria, Argentina, Azerbaijan, Bangladesh, Belarus, Belgium, Bosnia and Herzegovina, Bulgaria, Canada, Chile, China, Croatia, Honduras, India, Ireland, Kyrgyzstan, Malta, New Zealand, Pakistan, Panama, Serbia, Sierra Leone, Singapore, Slovenia, Tajikistan, FYROM, Ukraine and the United Kingdom.

Lastly, the Netherlands is the only country that denounced C137, not having reached in agreement with trade union syndicates. The latter have commented that the reasoning behind the denouncement is ‘dangerous’.

In conclusion, it appears that several countries, many of which European have ratified all three conventions, two, or one of the two. This demonstrates the importance that is given internationally both to dock labor health and safety, and in the new cargo handling methods in ports, reflecting the status of dock labor in the country.

4.2 The Effects of Global regulations in the port industry

The effects of implementation of conventions C137 on social repercussions of new methods of cargo handling in ports and the C152 on the health and safety of port operations, is evident in all port industry stakeholders (Notteboom, 2010). The effects to dock workers are the efficiency increase, reduction of accidents, income stability and a feeling of security that increases productivity. Dock side working conditions in

general are improved. Pallis et al. (2013), arguing for the ratification of the three ILO conventions by Greece, state that it is hard to see how a potential ratification of a convention would harm port adaptability and flexibility.

To employers, the conventions brought both positive and negative effects. Positive, with the reduction of unexpected costs (accidents), and negative with the introduction of the obligation for the provision of a fixed monthly income or unemployment benefits to dock workers. In addition, employee liability is emphasized in case of accidents, since as defined by the conventions, the Port Authority has the right to investigate the accident's circumstances and the measures that were taken to prevent it.

It can be argued that ILO conventions have enhanced the competitiveness of the ports / terminals, since they minimize unexpected costs. Also, lack of dock workers, during a period with unexpected increase of demand, or weekends, may lead to delays in ship loading / unloading (Chlomoudis and Pallis, 1998).

From the shipping liners point of view, conventions are an asset for port's reputation and its services. Cargo damage during loading / unloading is a major criterion for liners (Brooks et al, 2011). A portion of the damage may be attributed to poor port employee training.

Finally the improvement of working conditions reduces strike frequencies, which occur as a result of disagreement between labor unions and employers regarding working conditions. Strikes may incur costs to ship owners, due to ship delays, loss of revenue for the logistics companies, and also cargo owners and factory owners associated with the production chain.

4.3 Model Port Management: The case of “idealtipus” virtual port.

The “idealtipus” port is a model port, belonging to a hypothetical Mediterranean country that has ratified C137 and C152 ILO dock work conventions. It is provided as an example and as point of reference for operating requirements and *modus operandi* of a port that implemented and adapted to ILO conventions.

This virtual port is an export center, acting as a country hub comprised of three terminals: Container, passenger and car terminals. It utilizes state-of-the-art equipment for cargo handling and processing and has highly educated and trained workforce. The port in total employs about 800 workers: one of the largest employers in the Mediterranean. Services provided include, cargo loading / unloading, cargo handling and storage, ship services such as mooring, water supply, passenger services and car terminal services.

The ratification of the conventions by the country that the port is based took place in 1983. Following the ratification, port employee hiring and training is carried out based on ILO conventions and E.U. standards. ILO recommendations and provisions are implemented regardless of port ownership, private or public.

Table 4 summarizes characteristics and operational / organizational details resulting from ILO conventions implementation.

Table 4. Idealtypus Virtual Port: Operational Details

Ratification of C137, C152	Yes
Port Governance under statutory regulatory interventions	Yes
Recruitment	Every four years, using a bonus point system
Employee required qualifications	Graduates of all levels of education, knowledge of English; also various social factors are taken into account
Employee Training	Mandatory six-month training at the School of Dockers; also continuous training through seminars
Dockers Registry and Supervision	Dockers record in registry. Three dock-worker pools (e.g. one for each terminal, container, car and cruise) Provisions for shift of personnel from one pool to the other, for the cases of increased demand.
Shift Scheme	Three shifts. Two hours before shift start, confirmation of attendance
Salary System	Fixed income plus 20 daily wages per month, bonus depending on terminal, no productivity bonus
Staffing Requirements	Crane staffing: 6 dock workers plus an additional, if required, Supervisors: 1 foreman plus an additional, if required, Car terminal: One dock worker per 30 cars
Health and Safety	Health and Safety Committee, consisting of representatives of workers and employers and specialized health and safety engineer, who provides documentation of occupational risks. Existence of emergency plans and preparedness exercise
Social Security	Social security, enhanced benefits due to unhealthy and hazardous conditions
Working Hours	7.30 hours, with maximum two days per month, only if priory stated by employee
Contracts	Collective agreement, in accordance with national legislation

Port labor in Idealtypus port is organized and carried out, based on ILO conventions C137 and C152. The recommendations are implemented immediately after the conventions ratification.

5. Conclusions

Studying the three I.L.O. conventions pertaining to dock work, we argued that they can form a positive model for the integration of work rules on a global scale for eligible ports. The goal of the three conventions is to regulate the effects of globalization on several issues. Thus, through these conventions, mutual benefits for all port stakeholders and constituent groups is achieved and unfair competition is prevented, since production and supply of port services should be carried in an open and competitive market. Several countries, many of which European, have ratified all or some of these conventions, demonstrating the dock labor health and safety importance that is given internationally, reflecting also the status of dock labor on a national level. The ultimate goal of these regulations is the development and improvement of the port industry from the perspective of globalization governance, in the era of post – globalization.

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