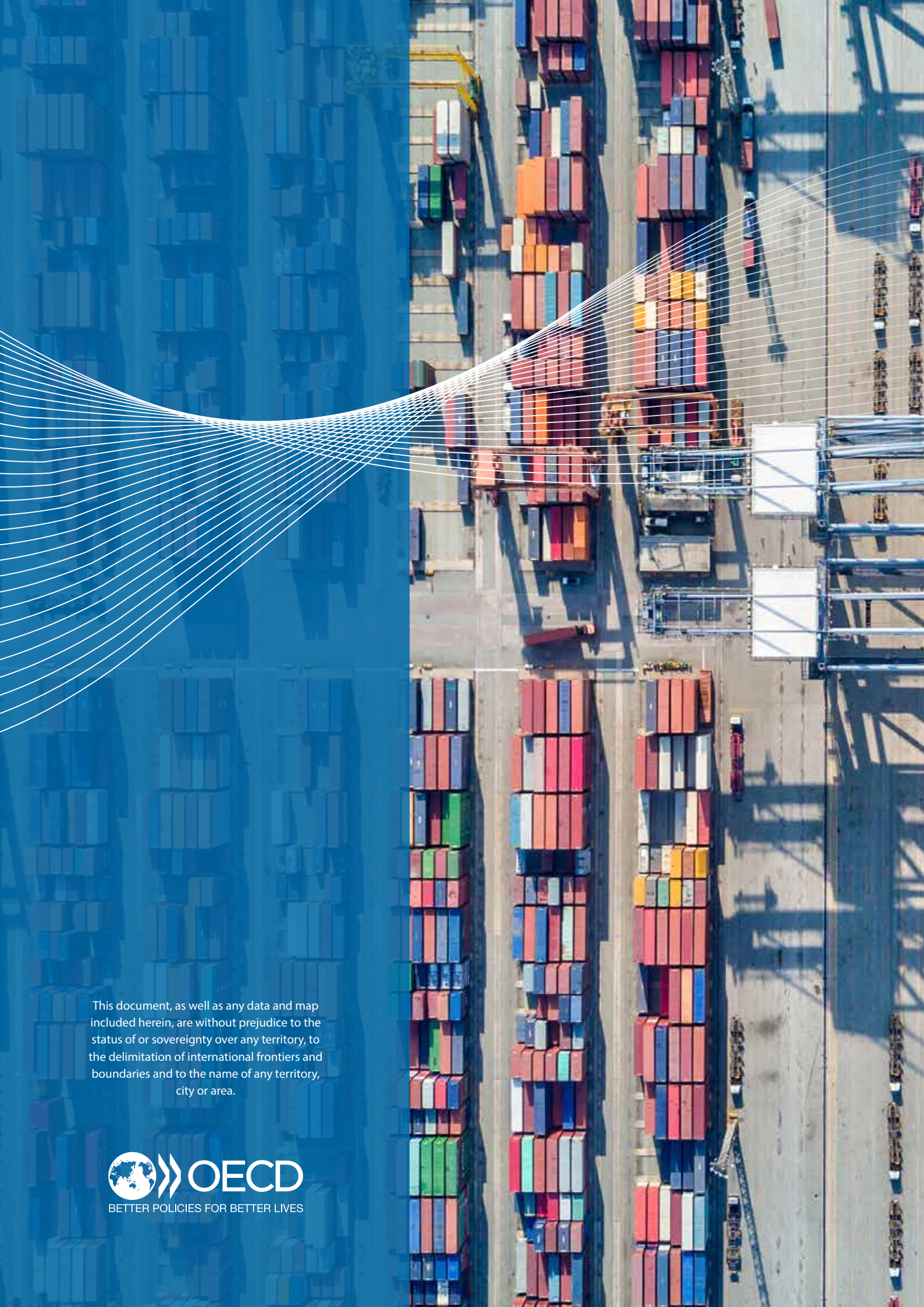




Enhancing economic performance
and well-being in Chile

Policy actions for improving ports' labour conditions and competitiveness





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CONTENTS

1. Key findings and policy actions	4
<hr/>	
2. Introduction and overview	6
<hr/>	
3. Casual port labour	8
3.1 State of play on casual port labour in Chile	8
3.2 Main challenges related to casual port labour	11
3.3 Good practices in OECD countries	14
3.4 Implementation Action Plan – Casual port labour	17
<hr/>	
4. Impact of shipping developments on maritime logistics	21
4.1 Consolidation and vertical integration in liner shipping	21
4.2 Main challenges for maritime logistics	27
4.3 Good practices in OECD countries	33
4.4 Implementation Action Plan – Impact of shipping on maritime logistics	38
<hr/>	
References	42

Figures

Figure 3.1. Chilean ports differ in their share of permanent and casual workers (2018)	9
Figure 4.1. Joint operation among carriers is more common than solely operated service in most regions (November 2018)	24
Figure 4.2. Market shares for the six liner shipping services between Asia and Chile	28
Figure 4.3. Market shares for the three liner shipping services between North Europe and Chile	29
Figure 4.4. High dependence of ports on few carriers in Asia-WCSA services	29
Figure 4.5. Two-fold increase in ship size development (TEU capacity) on COSCO WSA service (2012-2019)	31

Tables

Table 3.1. Share of casual port workers in some European countries (% , 2012)	10
Table 4.1. Intercontinental liner services calling Chilean ports (End 2019)	22
Table 4.2. Container terminals in Chile operated by SAAM and Ultramar	25
Table 4.3. Container terminals in Chile operated by SAAM and Ultramar	26
Table 4.4. Port hierarchies in national port policies	34
Table 4.5. Ports with formalised local institutional representation	36

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1. Key findings and policy actions

MAIN FINDINGS	KEY ACTIONS TO BE CONSIDERED
Casual port labour	
<p>In Chile, only about one third of all port workers are employed under a permanent contract. The remaining casual workers are either covered under casual CPPT contracts (<i>Contrato de Provisión de Puestos de Trabajo, Work Placement Provision Agreements</i>) or engaged in purely casual labour, with the latter accounting for roughly 20% of all port workers.</p> <p>The main challenges related to casual port work are precariousness and labour conflicts. Casual workers have pension gaps, due to the irregular character of their work. This situation of precariousness motivated at least part of the port strikes in recent years. According to business associations, 20 days of port strikes in Chile cause a loss of over USD 500 million. Deployment of casual workers in ports is common throughout the world, but many OECD countries have found ways to combine labour flexibility with decent working conditions. This often takes the form of port labour pools, which guarantee a quasi-permanent contract. This means workers are paid even if they are left idle by a shortage of ships to be worked.</p> <p>In addition, Chile does not have an explicit national Port Labour Strategy. Such Strategy would support the development of the port labour demand scenarios in the short, medium and long term.</p> <p>Lastly, Chilean port workers experience weak social security and work conditions, especially as far as female workers are concerned.</p>	<p>Develop realistic port labour demand scenarios</p> <ul style="list-style-type: none"> ● These scenarios could provide foresight in future demand and supply of port workers. Such information is essential for addressing the challenges of casual port labour. The concessionaires should define the required provisions in advance and sign the instruments for the provision of workers with adequate deadlines in order to guarantee legal security for the workers and give greater guarantees of continuity of the port services. ● Develop a common definition of port labour to facilitate the development of scenarios to identify scarcity or oversupply of port workers. <p>Consider introduction of port labour pools</p> <ul style="list-style-type: none"> ● Chile could determine if port labour pools, as deployed in other OECD countries, provide a potential solution for current challenges with casual port labour. Such labour pools could reduce precariousness of port workers, as workers in labour pools will be able to build up rights for pensions and social security. It could also decrease the risk of port labour conflicts. ● Ports in Chile could be identified for which a labour pool – that can be deployed for peaks occurring in more than one terminal – would make sense. These labour pools could be established per port or port region. An alternative to be considered and discussed is the creation of casual work agencies for semi-permanent port workers. <p>Design and implement a National Port Labour Strategy</p> <ul style="list-style-type: none"> ● The strategy could include policy objectives, implementation plans and aspirations in terms of the share of ports’ permanent workers. <p>Improve port labour conditions for all</p> <ul style="list-style-type: none"> ● Identify priority measures to improve health insurance and maximum hours arrangements for workers and introduce a package of measures, including gender equality conditions in port labour.
<p>Chile has witnessed many port strikes in its recent past, in particular in 2013 and 2014, as well as in 2018 in Valparaiso. Port strikes can result in large economic costs, in particular if well timed. The high level of port labour conflicts is linked to mediocre labour conditions and the lack of institutionalised space for consultation and negotiations between employers and employees. Most negotiations are done on a case-by-case basis, so that there are no standards and no predictability for both workers and employers. This does not stimulate trust among parties and weakens trade unions. Neither at the local level nor at the national level is there a body in which employees and employers could discuss policies.</p>	<p>Develop a structural and permanent dialogue on port labour</p> <ul style="list-style-type: none"> ● A structural and permanent dialogue on port labour should be established, that includes representatives of employers, employees and the government. ● If such a dialogue should develop a rolling agenda of the main issues to discuss and resolve that are of concern to the main stakeholders, for example, related to definition of port work, social protection, trainings, procedures for port conflicts and port workers’ rights and safety.

MAIN FINDINGS	KEY ACTIONS TO BE CONSIDERED
Impact of shipping on maritime logistics	
<p>The main trends in liner shipping – consolidation, cooperation in consortia and vertical integration – are all playing out in Chile. The country has nine direct inter-continental services, jointly offered by consortia of the main global carriers. Hapag Lloyd acquired Chile’s main container carrier, CSAV. There is a strong legacy of vertical integration in Chile, with CSAV and Chile’s terminal operator SAAM Puertos belonging to the same conglomerate Quiñenco.</p> <p>These trends have led to a situation in which shippers have limited choice of carriers (oligopoly or monopoly on certain routes) and in which most ports deal with one or very few carriers (monopsony or oligopsony). Vertical integration can lead to discriminatory behaviour and unfair price competition. At the same time, the rapid upsizing of container vessels makes it difficult to realise decent returns on investment in the ports sector. Various carriers, such as Maersk, COSCO and CMA CGM, have the ambition to become a global integrator of containerised flows. Such strategies get reflected in more control of carriers over the different parts of the maritime logistics chain. For example, the share of carrier-controlled terminal operators has increased from 18% in 2002 to around 38% in 2016, some carriers have their own towage subsidiary and various carriers have invested in logistics capacity and capabilities. Vertical integration in network sectors such as maritime transport poses various risks, related to discriminatory behaviour, unfair price competition and buying power.</p> <p>OECD countries deal with this mix of challenges differently. Some countries deploy substantial scrutiny of cooperation between shipping companies, for example by requiring all consortia agreements to be filed. Countries also define explicit port hierarchies that help to focus public infrastructure investments and prevents shipping companies or large shippers from playing off ports against each other.</p>	<p>Continue applying the current regulation on vertical integration</p> <ul style="list-style-type: none"> Chilean policies can be lauded for their clear stand on regulation of vertical integration of shipping companies and port terminals to maintain competitiveness in the maritime logistic chain. <p>Repeal shipping-specific competition exemptions</p> <ul style="list-style-type: none"> This would be in line with the 2012 recommendation of the Tribunal for the Defence of Free Competition and OECD regulatory principles. In addition, Chilean competition authorities could require filing of consortia agreements and regular updates on their impacts and performance.
<p>National port policies to enhance port specialisation and port cooperation can improve port capacity planning vis-à-vis a mobile shipping sector. In many countries, central governments can apply implicit port specialisation policies via their infrastructure investments. In addition, national logistics strategies often help to define the nodes and corridors needed for logistics, including the associated land and maritime space.</p> <p>Co-operation between ports can also help prevent overcapacity. This facilitation can take different forms, depending on local circumstances and on different port governance models. In countries with centralised port systems, central governments have stimulated port mergers.</p>	<p>Refining the focus of Chile’s national port policies</p> <p>National ports policies can help to set out the main freight transport corridors that will be provided with public funding. In the case of Chile, the national ports policy could be refined by increasing the coherence between the different frameworks for public and private ports that has led to a proliferation of private ports. A first step would be to increase the alignment between strategies for both types of ports, by improving the coordination between the different ministries responsible for these ports, to avoid that both port systems develop independently from each other, as it currently the case (OECD/ITF, 2016). This could take the form of reinforcing CONALOG, the national commission for the development of logistics. A second step could be the creation of a national logistics and ports authority that could define a strategy and development plans for ports and logistics. This strategy would have a national angle, but should also be built on regional visions and master plans per coastal bay. Such an authority and strategy could help create convergence of the frameworks for both categories of ports.</p>
<p>Consolidation and increased ship size generate impacts in ports that spill over to port-cities. The most visible impacts include road congestion and air pollution. Various policies exist to resolve these issues, but the challenge for implementing such policies is coordination between ports and cities, which has been problematic in Chile. Political discussions have focused recently on two additional mechanisms: representation of local governments in ports, and providing local governments with a share of the revenue of the public ports in their jurisdiction.</p>	<p>Develop inclusive port-city governance</p> <p>Initiatives to develop more inclusive port-city governance should be stimulated. The instrument of Port City Committees should be evaluated and strengthened to improve coordination between port and urban planning. As part of an effort to increase harmonious port-city relations, port-city representatives could be included in the boards of port authorities. Considering the negative externalities of port activities and limited local economic spill overs, there is a case for considering a revenue share for port-cities related to the activity of public and private ports. A mechanism would need to be developed that guarantees that these revenues for port-cities would be utilised to address the externalities of port activity, such as road congestion and air pollution.</p>



2. Introduction and overview

Well-performing ports are of strategic importance to Chile, a country that is highly dependent on external trade and has a huge coastline. Chile's exports account for 38% of GDP (above the OECD average of 27%), and about 98% of its external trade is handled through ports, according to the Chilean Customs service. In 2018, 25% of the total tonnage was handled by three state-owned ports – Valparaíso, San Antonio, and San Vicente – located in the central-south part of the country, close to the centre of economic activity around Santiago and some of the country's main agricultural areas.

Chile's rapid economic development is reflected in strong growth of container traffic. According to Directemar's *Boletines Estadísticos*, between 2008 and 2018, port volumes grew considerably from 3.1 to 4.9 million standard containers (TEUs), significantly higher than the volumes handled in 2000, equal to 1.22 million TEUs (Directemar, 2001; Directemar, 2008; Directemar, 2019).

Port growth has been somewhat uneven throughout the country: faster in the North (115% over 2000-2018), much slower in the Austral region (44%) and in line with the national average both in the South region (100%) and in the Centre (95%). In 2018, ports in Chile handled 154 million metric tonnes of goods, 40% of which was handled in the north and 28% in Central Chile.

Overall assessments of the performance of the Chilean port system exist, which provide a basis for policy reforms that could be undertaken by the Chilean government (OECD/ITF, 2016). At the request of Chilean authorities, this policy note focuses on two areas:

1. Casual port labour. Working to reduce the precariousness of casual port labour will be beneficial both for workers and for the port system as a whole, since this will prevent the outbreak of strikes that could hamper the smooth operation of ports and their overall productivity. The challenge is to find mechanisms that contribute to efficient and safe port labour conditions, while decreasing maritime logistics costs.
2. The impact of the shipping industry on maritime logistics, in particular the impact of maritime services, the concentration of shipping companies, service frequency and the average cargo load transferred. These areas provide potential to improve the performance of ports and maritime logistics in Chile.



The impact of the shipping industry on maritime logistics is increasing globally, due to consolidation and vertical integration in liner shipping, with mixed effects for the maritime logistics chain and the wider logistics of the country. The challenge is to find a balance between the different parts of the maritime logistics chain – the port, its maritime foreland and terrestrial hinterland – that promotes competition and the welfare effects related to it. Global industry developments might put pressure on existing institutional arrangements related to ports and logistics in Chile.

To support tackling these issues, this Assessment describes and analyses the current state of play regarding casual port labour and the impact of the shipping industry on maritime logistics. It identifies the main challenges in both areas, followed by a description of good practices in OECD countries and possible actions for reform that Chile could consider. The Assessment includes a detailed action plan for the implementation of the suggested policy actions, with suggested timelines over the short and medium term, responsible authorities and milestones to track progress. These policy actions can be found in detail at the end of each chapter. The policy actions are not intended to be alternative options, but rather, they constitute complementary measures to enhance Chile's port system on various fronts.

The diagnosis and implementation action plan build on earlier work carried out for the government of Chile, in particular the ITF Ports Policy Review of Chile (2016) and on information collected through a questionnaire, as well as meetings and interviews with key government institutions, private sector stakeholders, research institutions and civil society conducted during an OECD expert mission to Chile on 8-10 July 2019.



3. Casual port labour

3.1. STATE OF PLAY ON CASUAL PORT LABOUR IN CHILE

3.1.1 Current practices

According to the Chilean Labour Code, a port worker is defined as: “Anyone who performs the loading and unloading of goods and other tasks related to port activity, both on board ships and naval vessels in the ports of the Republic, as well as port areas”.

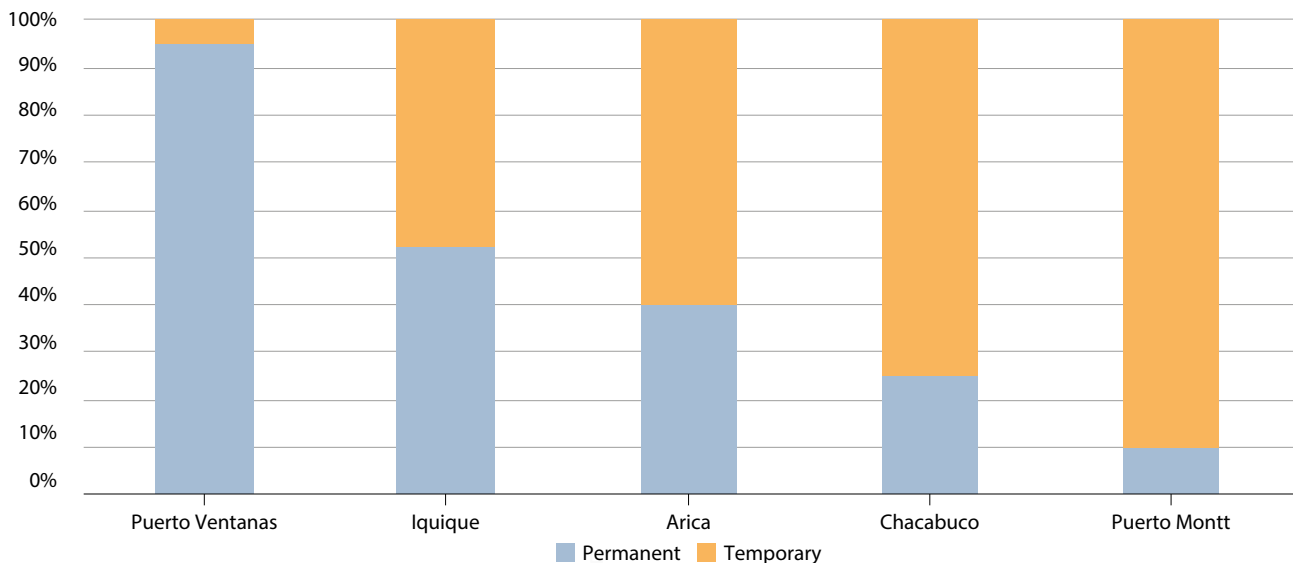
Within these functions, two labour regimes coexist for port workers: permanent workers (with indefinite or fixed-term contracts) and casual workers. The former (permanent workers) are highly unionised and have collective bargaining and agreements in accordance with the procedures established in the Labor Code. The latter (casual workers) are covered by one of two systems: they are either employed under a CPPT (Contrato de Provisión de Puestos de Trabajo, Work Placement Provision Contract) or engaged in purely casual labour. The CPPT, which is defined in article 134 and 142 of the Labour Code, functions under conditions negotiated with workers’ unions or groups of workers, including the payment of a minimum number of guaranteed shifts (regardless of whether they are actually carried out). On the other hand, purely casual workers are employed depending on the seasonality of the landfall of ships.

All port workers (casual and permanent) require an access card to the port area, known as “port card” or “red card”. An indication of the overall number of dockworkers is given precisely by the number of these security permits issued for port workers, which shows the number of people that would be allowed to work in ports, not those who actually work in ports. The number of these security permits issued by the maritime authority (DIRECTEMAR) amounted to 28 559 over 2014-2019 – a high figure explained by the low level of prerequisites needed to obtain the permits.

However, there is some uncertainty on the exact number of port workers in Chile. According to the business association for the maritime sector, CAMPORT, the number of dockworkers in Chile amounted to 10 937 workers in 2018.

The data shared by the Ministry of Labour, indicates that around 20% of workers are purely casual workers, while the rest of the existing casual labour is covered by CPPT (Ministry of Labour, 2019). Other sources, and notably the CAMPORT data, indicates that 32% of the identified port workers had a permanent contract and 48% casual contracts. For the rest of the identified workers, CAMPORT was unable to establish the status of their contract, but it is likely that these are casual workers, so that overall around two thirds of identified port workers in Chile are estimated to be casual workers.

Figure 3.1. Chilean ports differ in their share of permanent and casual workers (2018)



Source: Responses to the 2019 OECD questionnaire circulated to the Ministry of Transports and Telecommunications.

There are considerable differences between ports. The responses from individual port authorities to the OECD questionnaire show a range of almost zero to 90% for the share of casual workers in a port (Figure 3.1). These large differences could reflect the different location and characteristics of the ports. The southern ports of Chacabuco and Puerto Montt have no concessions and have multiple port labour companies that operate the ports. In contrast, the port of Arica is concessioned to one operator (TPA), while in the northern port of Iquique there are two terminals: one operated by a multi-operated and one granted in single-operator mode to ITI. Finally, Puerto Ventanas is a private port for public use, specialised in bulk cargo transfer, which requires fewer handling operations but more specialised personnel.

Based on the data provided to the OECD, it is impossible to draw any conclusions regarding the evolution of the shares of casual versus permanent workers over time. In some ports, the share of casual workers has declined (Puerto Ventanas), whereas it has remained stable (e.g. Iquique) or increased (e.g. Chacabuco) in others. The ability to hire more permanent staff is determined by a variety of factors that include limited exposure to seasonality and a steady stream of cargo. The latter is most likely if a terminal is concessioned to only one private operator – the common model in Chile.

In many OECD countries, the number of workers needed in ports, by nature, fluctuates throughout the year. However, the fact that work is irregular, meaning seasonal or periodical, does not necessarily require the use of casual/precarious contracts. It is possible to design a system by which workers' contracts are not precarious even for those who only work seasonally and the creation of a pool of workers can help with this. In the European Union, for example, there is no unified definition on casual port workers. In most cases casual workers are pool workers that have semi-permanent contracts with the port labour pool. Table 3.1 shows that the share of casual workers in EU countries is typically much lower than that in Chile.

Table 3.1. Share of casual port workers in some European countries (% , 2012)

Country	Share of casual port workers (% , 2012)
Denmark	11%
Estonia	8%
Finland	18%
France	18%
Ireland	11%
Italy	20%
Portugal	27%
Spain	6%
Sweden	38%
United Kingdom	7%

Note: Self-definition by ports and countries is used for the below comparison.

Source: Own elaborations based on Van Hooydonk (2013).

Definition of Port Dock Work

The port dock activity is characterised by its irregularity and the need to prepare resources at very specific times, so that ships in layover do not have to be in a port for longer than strictly necessary. As such, the definition of the dock service revolves around the activities needed for loading/unloading the ships and the physical space in which this service is provided will also be conditioned by the presence of the ships.

In short, the specific conditions that regulate this type of activity rest on the direct and immediate connection with specific ships, precisely due to the fact that the key priority in these cases is enabling ships to navigate in the shortest time possible.

Consequently, in order to define the status of port worker, the definition of port work must take into account that it may not exceed the load, unloading, stowage and unloading of goods that are the object of maritime transport activities that must keep a direct and immediate connection with stowage operation of specific ships. Certainly, the physical space in which these activities are enclosed is the environment around the ships, that is, the port.

The delimitation of the port area is important for several reasons. A specific legal regime is applied to these spaces due to the activities that take place there. The Port Authority's mission is to manage the spaces in order to obtain the maximum use of a necessarily limited infrastructure, and this in a way that harmonises with the wider environment in which it is located. It is a centre of economic activity that must be framed within the territory in which it is based, and which must be seen and interpreted by other authorities, and by citizens, as a catalyst of opportunities. The port area, for the purpose of defining the activity of port stowage, would be constituted by the ship, the dock, the manoeuvring area, the transit area and, where appropriate, the storage area, provided that the unloaded goods were transported horizontally from the ship to this area, or conversely, that collected goods were transported horizontally from this area to the side of the ship for loading and stowage. With regard to the activities that would make up the service thus defined, it would be necessary to consider those that involve the physical management of the tools that move the loads and those that allow or facilitate such management, such as those for signalling or securing, lashing and releasing of goods.

3.1.2 Institutional and legal framework

Port workers in Chile are hired by port labour companies (*empresas de muellaje*). These are the companies that take care of the labour needed to transfer cargo between ships and the port quays. Port labour companies are the only organisations that can hire permanent and casual labour. All the concessionaires of terminals (in the mono-operator model) have their own port labour companies. As employer of port workers, they must have an office in each place where they carry out their activities, be Chilean or have Chilean representatives. In case the employer is a company, it

needs to have its headquarters in Chile and have Chilean management. Moreover, more than 50% of its capital must belong to Chilean natural or juridical persons (Labour Code, article 136).

Port labour companies can offer individual contracts or collective contracts with unions or groups of workers, both of which could be Work Placement Provision Agreements (CPPT) or permanent contracts. Casual workers can work in one or more terminals or ports, to the extent that their schedule allows this – however, this does not happen frequently. The actual working hours per day are 7.5 with a half hour break, giving a total of 8 hours per shift.

There is large involvement of trade unions in the hiring of port workers, although there is no legal obligation for port labour companies to cooperate with unions and there are varying practices in different ports, ranging from voluntary cooperation to situations where trade unions exert a very strong influence on the hiring of workers. This practice builds on a high unionisation rate of port workers: around 90% compared with 20% for all Chilean workers on average. Local unions often define practices on casual work, in addition to the regular Labour Code. In various Chilean ports, trade unions are highly fragmented, which does not constrain the potential for strikes, but makes negotiations more complex. Added to this is a lack of formal social dialogue structures.

Permanent and casual port workers are subject to the same laws and regulations, with different articles within the same Labour Code. Permanent port workers are regulated by the general dispositions of the Labour Code and the specific regulation of the sector, while casual port workers are regulated by Title II of the Labour Code, under the category of Special Contracts, and more specifically within Chapter III (articles 133 to 145). For both type of workers the Decree with the Force of Law (DFL) number 1 consolidates the relevant texts from the Labour Code and its modifications. A recent amendment of the Labour Code states that casual port jobs via the CPPT must consist of enough assignments to ensure at least the equivalent of a monthly minimum wage.

There is no explicit policy on casual port labour. The government has not formulated targets for the shares of permanent or casual port labour and leaves it up to the private sector to determine the right balance. However, the government is currently working to change this, by identifying measures to modernise the port sector and to address the challenges related to casual port labour.

With regard to regulatory standards on health and safety in port work, in Chile this is regulated under Supreme Decree No. 3 of the Ministry of the Labour and Social Security which, in 2015, approved the “Regulation for the application of article 2 of the Law N ° 20,773, on the integration, constitution and operation of the Joint Hygiene and Safety Committees of Port Work”. This encompasses all those preventive actions aimed at reducing risks arising from work that can negatively impact the physical or psychological integrity of the worker, including the prevention of work accidents and diseases and, in a broader sense, improving conditions and the workplace environment. The regulation also includes two types of Joint Hygiene and Safety Committees (CPHS) – i.e. the Comité Paritario de Empresa de Muellaje and the Comité Paritario de Puerto - aimed at ensuring the compliance with these regulatory goals.

Despite the institutional and regulatory set-up, challenges persist with regard to health and safety of port workers, notably with regard to the absence of basic health insurance as well as low security standards. This might be related to low implementation of international norms. For example, while Chile has ratified general conventions such as the Promotional Framework for Occupational Safety and Health Convention 187 (2006), it has not ratified the Convention 152 on security and hygiene for dock workers (OECD/ITF, 2016). These issues are aggravated by the complexity of worker consultations in the port sector, which makes it hard for workers to express their concerns to port and terminal executives.

3.2. MAIN CHALLENGES RELATED TO CASUAL PORT LABOUR

3.2.1 Port labour conflicts and labour dialogue

Although port strikes are not exceptional throughout the world, Chile has witnessed many port strikes in its recent past, with significant strikes in 2013 and 2014 as well as most recently in 2018 in Valparaíso, which led to the creation of the Mesa Laboral Portuaria in 2019. Port strikes can result in large economic costs and, in particular if well timed,

paralyse port operations. With perishable fruits accounting for a significant share of Chilean exports, arranging or threatening strikes during the peak season for fruit exports, provides workers with great leverage. In 2014, the port strikes caused an estimated loss of USD 200 million to fruit exporters. The trade association CAMPORT calculated that 20 days of strikes cause a loss of over USD 500 million, taking into account costs for storage, loss of value of perishables and delayed imports (CAMPORT, 2015).

In general, the high level of port labour conflicts is linked to mediocre labour conditions and the lack of institutionalised space for consultation and negotiations between employers and employees. Most negotiations are done on a case-by-case basis, so that there are no standards and no predictability for both workers and employers. This does not stimulate trust among parties and weakens trade unions by placing them in a defensive and confrontational position. Neither at the local level nor at the national level is there a body that would allow a discussion of policies between employees and employers (OECD/ITF, 2016).

The port strikes in Chile were at least in part motivated by the situation for casual port workers regarding job precariousness, weak social protection and low security measures in the work environment. However, it is also important to note that the mass of workers tends to be inflated in moments of conflict and strike, as even those who just work occasionally join the strikers to increase the radius of action of the strike.

3.2.2 Precarious work conditions and weak social protection

Despite their similar status in law, there are considerable differences between permanent and casual workers. Casual workers are generally better paid (per hour) than permanent workers, but have no access to health insurance (via the Accidents at Work Act) when they are not employed. Most casual workers only have access to the basic minimum pension. This is caused by lack of pension contributions, related to the irregular character of their work (they are paid by the day) and the fact that not all of their working hours were registered by the relevant administrations in the past. Most of them can thus only rely on the minimum state pension, which amounted to 107 304 Chilean pesos per month (around USD 157) at the end of 2019. The lack of adequate pensions leads to a high incidence of old-age poverty in port-cities (OECD/ITF, 2016). Port workers are also concerned by the limited social protection they have, for example a lack of possibilities for parental leave, paid vacations or compensation for years of service.

The fact that these workers are hired for very short periods of time makes it difficult to recognise rights such as maternity or paternity leave. Facing this challenge involves reconsidering the type of contract that is provided to the worker and the protection associated with it. In this sense, further efforts could explore the need to link temporary contracts to an actual reason behind their temporality. In addition to this new feature, permanent or part-time seasonal contract could be introduced. This would allow workers to have certainty and social protection, while also enabling employers to have a specialised workforce at their disposal at times when they most need it.

A principle that could preside over the existence of temporary, permanent and part-time fixed contracts would be that of equal rights of all workers, without prejudice to the peculiarities of each contractual modality and without prejudice to the recognition of such rights being proportional to the nature or duration of the contract.

In addition, because women are disproportionately more likely to occupy part-time, lower-paid and casual contractual roles in the port sector, special attention should be devoted to safeguarding their own labour conditions in ports (International Transport Workers' Federation, 2020). Indeed, the port sector has been historically, and is still to date, representative of a highly male-dominated industry. The International Maritime Organisation reports that women constitute only 2% of the world's 1.2 million seafarers (IMO, 2020). Within the EU, a 2013 questionnaire revealed that the vast majority of port workers are male (97.08 %) and out of 14 Member countries surveyed (42 ports), no country recorded a female percentage over 10%, with a number of ports/terminals including no female port worker at all (Hooydonk, 2014).

In Chile, female port workers remain a minority, with governmental sources estimating their percentage at 12% of all workers (Chile 21, 2016). While female port workers in Chile report no discrimination, they call for greater efforts to achieve equality in the workplace (Carrasco, 2020). Examples of poor labour conditions for women port workers in Chile

include the absence of basic facilities in ports such as women's toilets or locker rooms, in part linked to the fact that Chile has not ratified key conventions of the International Labour Union (ILO) related to port labour (OECD/ITF, 2016).

To date, overall figures remain remarkably low, despite a slight increase in the number of women hired as dock workers, crane drivers and tally clerks around the world. New changes of the nature of port work are opening the sector to new sources of labour supply, which will contribute to raise female representation in equipment and cargo operations, as well as information technology positions.

Accordingly, the EU Sectoral Social Dialogue on Ports has proposed Recommendations on Women's Employment in the Port Sector¹, which Chile could build on to further develop its national ports strategy and close the gender gap in port labour composition. The recommendations highlight the need for employers to:

- adopt recruitment and workplace policies that ensure equal opportunities;
- promote the port sector's attractiveness for female integration;
- improve the working conditions and social protection of female workers;
- provide training.

A good practice in this sense is the port of Antwerp, where the percentage of women working as port workers has significantly increased in recent years, as port unions and management have introduced new initiatives to address issues specifically related to women such as safety clothes/shoes and sanitary facilities.

3.2.3 Recent improvements in port labour conditions

Port strikes in 2014, motivated by frustration with the perceived precariousness of port workers, have resulted in some improvements in the conditions of port workers. These are included in the *Ley Corta Portuaria* (law No 20 773), enacted in September 2014. The Law arranged for breaks of 30 minutes after four hours of work, rest areas for workers and the retroactive payment of unpaid lunch breaks back to 2005. The Law modified the pre-existing legal framework by also introducing the obligation to have Joint Committees for Order, Hygiene and Safety, as well as a Port Labour Compliance Control System (SCCNLP).

In order to improve the labour relations and conditions in the port sector, the Minister of Labour and Social Welfare, and the Minister of Transport and Telecommunications established a Port Labour Board (*Mesa Laboral Portuaria*) in January 2019. This Board, is a body that facilitates dialogue, elaborates, concludes and delivers a set of proposals to tackle key challenges of the port system. Its nature is tripartite, as it engages trade and worker unions and associations (including Sofofa-Asoex), shipping companies, and the government (Ministry of Labour and Social Welfare, Ministry of Transports and Telecommunications, DIRECTEMAR).

The work during the sessions was organised along three axes, each with its own discussion instance or Thematic Table:

1. New Competencies for the Ports of the Future.
2. Safety, Health and Risk Management in the Port Industry.
3. Transformation and Future of the Port Industry – Labour Modernisation.

The work was carried out during 2019 in sessions of each Thematic Table structured in turn in a phase of diagnosis and detection of gaps; one of presentation of proposals emerged in the discussion; and finally a session of presentation of conclusions about the diagnoses and proposals. A report with the diagnosis and proposals has been shared with the authorities in December 2019. The report benefited from this OECD Assessment and exchanges with international OECD experts. The Mesa Laboral has continued to function throughout 2020 and has held virtual meetings in the months of March and June, dedicated to sharing the progress made on the different proposals.

1 https://ec.europa.eu/transport/sites/transport/files/themes/social/doc/recommendations_womens_employment_port_sector.pdf

3.3. GOOD PRACTICES IN OECD COUNTRIES

Port labour is traditionally characterised by its casual character. The fundamental challenge for port labour markets is the irregular demand for workers, determined by the irregular arrival of ships in the port. In addition, port work can be more or less seasonal, depending for example on the time of harvest of agricultural products such as grain, cotton and fruits. The irregularity of shipping has changed over time. Containerisation has facilitated better accuracy of ship sailing schedules, reducing the irregularity and unpredictability of port work. At the same time, though demand for port workers has in many container ports become relatively stable and predictable, it still is largely irregular in bulk ports and small ports (OECD, 2014). Peaks and troughs related to mega-ships and alliances have increased the necessity of labour flexibility in ports (OECD/ITF, 2015). Larger ships tend to concentrate activity on a few moments per week and deconcentrate during other moments. In addition, liner shipping continues to suffer from a lack of schedule reliability, due to a variety of reasons including bad weather, slow speeds, planning and port turnaround. This means that pre-scheduled deployment of gangs of port workers are often disrupted by the reality of late arrivals of ships, requiring on-the-spot flexibility. As a result, even until this day, the use of casual workers is common throughout the world.

Many OECD countries have found ways to combine labour flexibility with decent working conditions. “Decent work is a concept that attempts to express what a good work or a decent work should be like in the globalised world” (Virgilio Levaggi). As such, decent work is intended as relying on four pillars: creation of employment, social protection, labour rights and social dialogue (Virgilio Levaggi, ILO). In other words, without having the precariousness traditionally associated with casual port work. This labour flexibility is generally achieved by one of three measures (or a combination of these): flexibility in permanent contracts of terminal operators, dock labour pools and casual work agencies.

In most OECD countries, terminal operators provide permanent contracts to workers that handle their main equipment, i.e. drivers of quay cranes and yard equipment such as straddle carriers. These contracts provide for the flexibility needed throughout a working week, for example with regard to working at night or weekends. Dock labour pools provide flexibility in labour quantity, for example in case of peaks and troughs. A work force hired by casual work agencies usually provides a third tier of port workers, in addition to the ones employed by terminal operators and labour pools. By developing a strategy for dock labour pools, Chile could address both the precariousness of casual port workers and the requirements of the current shipping industry.

At the same time, in order to ensure decent work in all Chilean ports, strategies for labour flexibility need to be accompanied by appropriate education and training, in line with the ILO’s Decent Work Agenda (ILO, 2012). The Assessment presents related international experiences in section 3.3.4.

3.3.1 Dock labour pools

The general idea of dock labour pools is to share available dock labour among different terminals in the same port so that workers can be deployed from the pool depending on demand. This increases efficiency as it allows terminals to deploy more workers if there is peak demand and fewer workers if there is little demand. Employers and employees generally work together to define the working conditions (e.g. number of workers per operation), which in turn determine the overall labour supply that is needed in the port to meet current and future traffic needs². That way they guarantee flexibility in labour quantity. The dockworkers that are part of the pool need to be officially registered or licensed dock workers. Registered workers are not employed at a particular terminal operator or stevedoring company, but hired through a central pool or hiring hall.

Fifteen out of twenty-two EU member states have some kind of port labour pool system, and in eleven of these systems pool workers have preferential rights, which means that pool workers will get priority for assignments (Van Hooydonk, 2013). There are large differences in the use of labour pools within countries.

² In Spain, the composition of work teams is now subject to negotiation for each port. Previously, this composition had generally been inflated, and this had effects on productivity at scale. Therefore, the RDL 9/2019 has expressly mandated that “among the powers of management ... it is included that of designating the personnel needed to perform each of the port activities”.

The extent to which dock labour pools are used depends on whether such use is mandatory or voluntary. In Germany and the Netherlands, employers can hire permanent company employees directly from the external labour market, but any additional (casual) labour must be hired from a regulated labour pool (Notteboom, 2018).

The advantage of labour pools for workers is that they are no longer employed by the day, but guaranteed a quasi-permanent contract with the pool. This means they get paid even if they are left idle due to a shortage of ship arrivals during a particular day, week or month. They are paid either by the pool that provides them with a minimum monthly salary, or by the pool in combination with unemployment benefits paid by the state. Dock labour pools can be funded by special funds to which port employers contribute. For example, the labour pool in Hamburg, called Gesamt Hafенbetriebs Gesellschaft (GHBG) pays pool workers through a Fund, financed by port operators (based on their turnover) and port customers, via a mark-up on the price of stevedoring services.

Some of the pool workers are often employed on a semi-permanent basis by port employers. In these cases, dock labour pool schemes often include a “continuity rule”, which means that a docker hired on a particular day can be re-hired for the next day or days without having to be rehired every day by the central hiring place; so there often is automatic “repeat hiring” (Notteboom, 2018). Workers in dock labour pools are usually covered by collective bargaining agreements.

In some systems, surplus workers from terminal operators can be offered to the labour pool. This is the case in Hamburg where the dock labour pool functions as a transfer point for surplus dock workers. Terminal operators can offer excess capacity to the pool, but the pool is not obliged to take it (Notteboom, 2018).

Some backlash has emerged against the closed character of certain labour pools. This has led the European Commission to start procedures against the dockworker pool schemes in Spain and Belgium. In 2014, The Court of Justice of the European Union (CJEU) found that the Spanish obligations for terminal operators to register with a port labour pool company and to preferentially employ pool workers contravened article 49 of the Treaty on the Functioning of the European Union (TFEU). In Belgium, terminal operators have to work with a pool of registered port workers. The EU legal procedures have resulted in reforms in Spain and in Belgium and in general, in Europe, the hiring of workers from the pool is now required to be voluntary. The Belgian case is currently under the scrutiny of the CJEU, as two prejudicial issues have questioned whether the reforms have overcome the reproaches of the Commission.

As for the Spanish case, the reforms consisted of two Royal Legislative Decrees (RDL) and one Royal Decree (RD). The former, RDL 8/2017, established the freedom of hiring port workers, while also creating port employment centres (CPE) that could serve as pools facilitating the sharing of workforce among companies, addressing the irregularity of the job offer. In addition, this RDL establishes the validity of the certificate for professional shipping, which involves a legal load, between theory and practice, of about 900 hours (RD). On the other hand, RDL 9/2019 regulates the CPE in more detail, taking into account its nature as casual labour but also the specific sector to which it belongs. Equally, the RDL regulates the management and organisational powers that are attributed to employers and enables them to negotiate the subrogation of the workers in the old pool (SAGEP), limited to certain conditions and only in the transitional period established in RDL 8/2017, that is, until May 12, 2020. Finally, RD 257/2019 establishes a system of low incentives for sector workers who, at the date of entry of the RD, are missing 5 years or less to reach the retirement age.

3.3.2 Casual work agencies

Casual workers can also be made available via temporary work agencies and as such absorb peaks in port demand. An example of such a temporary work agency is Tense Logistics and Labour Services Zeeland that provides casual dockworkers to Zeeland seaports in the Netherlands (Notteboom, 2018). These work agencies sign contracts with casual workers that work according to the conditions contained therein, such as hourly wage, working hours, leave and allowances. These contracts also provide provisions on the start of a shift and the duration of shifts. A slightly different model applies in the United Kingdom, where most stevedoring companies employ their own workforce and run their own recruitment agencies to absorb peaks in labour demand (Notteboom, 2018).

3.3.3 Flexibility in permanent contracts

Container terminal operators seem to be opting increasingly for permanent workers, but deploy various ways to increase the flexibility of their workforce. One way is to make the classification of dock workers more flexible by allowing more flexibility in their tasks, as happened in France. Another way is to shift from job categories to job qualifications, which makes it possible for dockers to be deployed for any dock work for which one has the right qualifications. Other methods include flexible start times and variable shift lengths (Van Hooydonk, 2013; Notteboom, 2018).

3.3.4 Trainings in the port sector

In order to improve the quality of port work and to keep pace with technological changes, effective training policies are essential. Trainings are not only important variables for the physical productivity of ports (Notteboom, 2010). They are also key for safeguarding health and occupational safety in ports, enhancing the skills and welfare of port workers as well as maximising the potential of new technologies for port operations (ILO, 2012). Moreover, investing in human capital produces efficiency gains and service improvement, such that, ultimately, a better trained port workforce performs more productively and is more safety conscious. As a result, port training institutions and individual port operators are increasingly offering targeted training both at the managerial level (e.g. port operations management) and at the frontline level (e.g. operation of new machineries) (Hooydonk, 2014).

In Chile, all port workers must complete a basic safety course on port operations by a technical implementation agency (Organismo Técnico de Ejecución) approved by the National Service for Training and Employment (SENCE) (Morgado-Valenzuela, 2020). The course content and evaluation methods are approved by the SENCE and the General Directorate of Maritime Territory and Merchant Marine (DIRECTEMAR)³. The regulation contained in Supreme Decree No. 49 of 1999, of the Ministry of Labour and Welfare Social, complements this by detailing the contents and duration of the course and establishing rules for the registration of people who have completed the course and the rules that define its updating. However, technology has greatly advanced since the time when the course was initially introduced 20 years ago and therefore, the course would benefit from an update in its contents and extension. Moreover, beyond the requirements for this basic course, investing in port workers' trainings is at a port company's discretion and there are no country-wide sectoral standards (OECD/ITF, 2016). For this reason, Chile could benefit from a better alignment with good practices from other countries.

The main international reference in this regard are the ILO guidelines on training in the port sector established in 2012, which are aimed at strengthening training policies and implementing effective regulations to promote safe, cost-effective and high quality port operations (ILO, 2012)⁴. The Guidelines define the general approach and key processes for competency-based training in the port sector and stress the importance of identifying the competencies required for all functions throughout the transport and logistics chain.

Similarly to the ILO, the EU also advocates for high training standards to enable safe and efficient operations in European ports (Turnbull, 2009). Indeed, in its Communication on a European Ports Policy, the European Commission proposed that “a set of common requirements for training of port workers should be established at Community level.”⁵ Accordingly, in 2013, the European Commission and selected social partners launched a formal social dialogue process to explore issues related to training, certifications, health and safety (Hooydonk, 2014). However, at the EU-wide level, there are currently no specific regulations on training in the port sector, with the exception of the “Bulk Terminals Directive”, requiring safety training for all staff at solid bulk terminals.

3 <https://www.directemar.cl/directemar/seccion/cursos-trabajadores-portuarios/p/1>

4 Before the introduction of these guidelines, ILO produced several instruments that are highly relevant for the training of workers, notably: the Paid Educational Leave Convention, 1974 (ILO Convention No. 140); the Human Resources Development Convention, 1975 (ILO Convention No. 142); the Human Resources Development Recommendation, 2004 (ILO Convention No. 195).

5 COM(2007)616 final.

As a result, while almost all EU States have a regulated port labour market, the training and qualification requirements for EU port workers vary considerably across EU countries. Three groups of countries can be distinguished as for training practices (Hinkka, 2016).

In a first set of countries, constituting the best regulatory practice, all port workers are legally required to complete a specific training. An example of this is Belgium, where, in accordance the Royal Decree of 5 July 2004, training is compulsory for all candidate port workers and port workers are required to complete an intensive theoretical and practical three-week training before they can be recorded in the General Register (Hooydonk, 2014). The system is similar in Italy, where national law (Lex specialis, Act of 1994), mandates training and certification of all workers and labour pools are required to provide training. In a second set of countries (e.g. Denmark, Finland), equipment operators, such as crane drivers or workers handling dangerous goods, are the ones requiring a special training certificate. Finally, a third set of countries has no specific training requirements other than the mandatory occupational health and safety training, as is the case, for example, in Croatia, Estonia and Ireland (Hooydonk, 2014).

3.4. IMPLEMENTATION ACTION PLAN – CASUAL PORT LABOUR

POLICY ACTION 1:

Develop realistic port labour scenarios

Chile could develop realistic port labour scenarios, which should provide insights into future demand and supply of port workers. The number of workers required to meet operational needs could be calculated based on the statistics of the last five years, the traffic forecasts and the fixed capacity of concessionaires. Unless new infrastructures are commissioned or traffic collapses due to unforeseeable causes (as was the COVID-19 pandemic), the volume of workers will not vary significantly from one year to another. The incorporation of technology could progressively reduce the need for workers, but this reduction should ultimately be compensated by the increase in traffic. Based on an agreed definition of port work, such scenarios could help identify scarcity or oversupply of port workers, by type of port and by region. Such information is essential to address the challenge of casual port labour. The concessionaires should define the required provisions in advance and sign the instruments for the provision of workers with adequate deadlines in order to guarantee legal security for the workers and give greater guarantees of continuity of the port services.

In the case of seasonal traffic, such as the case of fruit trade, the start and end of the seasonal trends is predetermined and conditioned by the harvest of the product. The timeframe is, therefore, narrow. In these cases, the problem could be solved through a regulatory instrument, such as Permanent Seasonal Contracts, enabling employers to hire workers in specific periods of the year.

Objective:

- Develop reliable projections of how many port workers will be needed in the future.

Actions:

- Develop a common definition of port labour.
- Prepare scenarios based on projections of cargo flows, the port labour needed to handle this cargo and the seasonality of the cargo.
- As part of this exercise, design and implement a National Strategy with respect to port labour. The strategy could include policy objectives, implementation plans and aspirations in terms of the share of ports' permanent workers. This would support the development of the port labour demand scenarios.

Institutions/stakeholders involved:

- Ministry of Transports and Telecommunications, Ministry of Labour, shippers, ports, terminals, trade unions.

Policy instrument:

- Scenario projections and strategy document.

Milestones, indicators and evaluation:

- The existence of reliable projections and widely shared strategy for port labour.

POLICY ACTION 2:

Consider introduction of port labour pools

Part of the current casual port labour force – in particular, labour related to cargo peaks throughout a week – could be transformed into semi-permanent port workers via the creation of port labour pools. The realistic port labour scenarios could help to determine what labour demand exists in addition to existing permanent port labour contracts. Integrating part of the existing casual port labour into a port labour pool could help to decrease their precariousness, as they will be able to build up rights for pensions and social security benefits. This will arguably decrease the risk of port labour conflicts. It could also help the flexibility of labour between different terminals – in public ports with more than one terminal operator – which is currently limited. These labour pools could be established per port or port region.

Importantly, while it would be crucial to engage all three parties (employers, employees and government) in the discussion, the leadership, coordination and responsibility of managing pools would ultimately have to fall under the responsibility of employers. The government role is to regulate and inspect the market, so it should be kept outside of daily pool management to avoid conflicts of interests. Conversely, the trade unions' role is to protect the interests of the workers and as such, they can have a role in supervising the pool system like in many European ports. Employment companies at port or port region level are the most adequate actors to manage the pool, and should manage the pool as they would manage a business. Of course, this should not minimise the role of trade unions. On the contrary, unions should continue to negotiate the working and employment conditions of the pool, and ensure the pool is a controlled and bounded environment where there is certainty about the weight of the negotiations.

Therefore, the property and management of pools would be run by private entities employment companies dedicated to matching employers with available labour force. This mechanism is not entirely new for Chile. In fact, port labour companies are already providing port workers to concessionaires. Therefore, what Chile needs now is to upscale such a system beyond the terminal level and evolve the existing system into a pooling one, in which, each day, workers would be matched with terminal operators in accordance to their needs. The number of workers in the pool should be calculated based on the average need of the companies offering employment, and casual workers should be used exclusively for peaks of activity.

Objective:

- Determine if port labour pools, as deployed in other OECD countries, provide a potential solution for current challenges with casual port labour.

Actions:

- Identify the ports in Chile for which a labour pool – that can be deployed for peaks occurring in more than one terminal – would make sense.
- Consider which organisation and regulation models would best fit the challenges of these ports. Reflect on whether this could take the form of an expanded role of port labour organisations (*empresas de muellaje*) or whether a new sort of organisation would be needed.

Institutions/stakeholders involved:

- Ministry of Transports and Telecommunications, Ministry of Labour, shippers, ports, terminals, trade unions.

Policy instrument:

- Study and consultation.

Milestones, indicators and evaluation:

- A more or less commonly agreed vision on the potential of port labour pools for the Chilean port system.

POLICY ACTION 3:***Develop a structural dialogue on port labour***

Port strikes can result in large economic costs, in particular if well timed. Recent port strikes in Chile (in 2013, 2014 and 2018) have inflicted severe damage to the country's economy. In particular, the fruit trade is sensitive to alterations in the logistics chain due to its perishable and seasonal nature. A structural and permanent dialogue on port labour should be established, that includes representatives of employers, employees and the government. Such a dialogue should schedule main issues to discuss and resolve that are of concern to the main stakeholders. This could include working conditions, social protection (unemployment insurance, health insurance, pensions, parental leave, health and security of workers), port labour of the future and the productivity of the logistics chain. An issue that has been raised in this respect is the procedures regarding strikes, in particular the impacts on productivity of logistics chains and essential services. Another subject that could be discussed is to create a specific title, in the Chilean qualification system, to better define the profession of port worker. The title could be provided by approved academic centres, and would ensure a certain balance between labour and demand. To further strengthen workers' rights and prevent risks, adapt the existing general regulations on port environment, integrating prevention and safety in the productive process. In addition, it would be necessary to separate the data on incidents from the data of the transport sector.

Objective:

- Improve relations between port employers and port workers, with the view of resolving port labour conflicts and their underlying causes.

Actions:

- Establish a permanent port labour committee in which representatives of employers, employees and government are represented.
- Develop a rolling agenda of issues to discuss and resolve, for example related to definition of port work, procedures for port conflicts, port workers rights and safety, trainings as well as specific issues related to female workers.

Institutions/stakeholders involved:

- Ministry of Transports and Telecommunications, Ministry of Labour, trade unions.

Policy instrument:

- Port Labour Committee.

Milestones, indicators and evaluation:

- Establishment of Port Labour Committee.
- Agreements between main stakeholders on a common agenda to work on.
- Agreements between main stakeholders on main items on that agenda.

POLICY ACTION 4:

Improve port labour conditions for all

Still to date, Chilean port workers experience precarious work conditions and weak social protection. Key issues include the absence of maximum working hours for casual workers, the lack of good hygiene conditions and related facilities, such as women's toilets or locker rooms, as well as the absence of basic health insurance and pensions, with the current system of pension mostly relying on voluntary savings (OECD/ITF, 2016b). Labour conditions are particularly severe for casual workers, as well as for women, who still remain a minority among Chilean port workers and struggle to receive social security, such as comprehensive maternity leave when hired on temporary contracts.

Objective:

- Strengthen labour conditions and social security for both men and women port workers

Actions:

- **Identify priority measures to improve basic worker conditions**, such as health insurance and maximum working hours.
- **Consider ratifying key ILO conventions** related to port labour, such as the Dock Work Convention 137 (1973) on social repercussions of new methods of cargo handling, or the Convention 152 on security and hygiene for dock workers.
- **Adopt a package of policy measures for gender-equality in port labour**, including recruitment and workplace policies that ensure equal opportunities, increase the port sector's attractiveness for female workers and improve their social protection.

Institutions/stakeholders involved:

- Ministry of Transports and Telecommunications, Ministry of Labour, trade unions.

Policy instrument:

- Introduction of targeted port initiatives.

Milestones, indicators and evaluation:

- Improvements in health insurance arrangements for casual workers.
- Increased women representation in port labour force and better conditions for women workers, including introduction of appropriate hygiene facilities and equipment.



4. Impact of shipping developments on maritime logistics

Ports and the logistics activities related to ports are impacted by developments in the shipping sector. The main developments in liner shipping over the last decade have been industry consolidation and vertical integration. These trends have had a significant impact on maritime logistics, as they resulted in limited choice in shipping options (oligopoly) and huge market power for carriers (monopsony). Vertical integration increased the risks related to discriminatory behaviour, unfair price competition and buying power. At the same time, consolidation facilitated ever-larger ships that present challenges for return on investment of port infrastructure. Consolidation and increased ship size also have impacts on the governance of port-cities and port authorities. This section assesses these various challenges in the Chilean context and formulates policy recommendations to deal with them.

4.1. CONSOLIDATION AND VERTICAL INTEGRATION IN LINER SHIPPING

4.1.1 Chile's port system

The configuration of liner shipping services to Chile is strongly determined by geography. Chile is not located along main shipping routes, but can be considered the end of a shipping route, considering the difficult navigability of the Magellan Straits that connect the Pacific Ocean to the Atlantic Ocean. As a result, Chile has a fairly limited number of direct maritime connections. In June 2019, there were 10 direct liner services connecting Chilean ports with other continents: six services with East Asia, three with Northern Europe and one with the Mediterranean (Table 4.1). This situation is not static, but changes over time and throughout the year: for example, the Chile cherry season is prompting carriers to offer faster cherry deliveries from Chile's cherry export gateways, by inserting an additional import call at Hong Kong served directly from Valparaiso, so with shorter transit times than usual (Alphaliner, 2019). These direct services not only touch Chilean ports, but also other ports at the West Coast of Latin America, for example in Peru, Colombia or Panama. All other maritime connections are indirect, which means that they involve at least one instance of transshipment, e.g. at Callao (Peru), Balboa (Panama) or Mexico. Goods to or from other continents are transhipped here before being transported to/from Chile.

The implication of this is that the performance of the maritime logistics chain for Chilean shippers is highly dependent not only on Chilean ports but also on the performance of these transshipment ports. Many containerised transport chains have become highly interconnected, which means that bottlenecks in one place can cause disruptions throughout the chain (Galatayud et al. 2017a). The performance of ports in Peru, Ecuador, Panama and Colombia and their business environments can impact the smooth flow of freight coming from or going to Chile. Moreover, with two third of services operated by just three carriers, firms in Chile are highly exposed to risks related to these carriers (Galatayud et al. 2017b)

Another consequence of the extremely long coastline of Chile is a deconcentrated port network. Chile's port system is characterised by a relatively small amount of large-scale ports. This can be concluded from a comparison of the accumulative market shares of cargo handled in the five largest ports in Chile, Brazil, Argentina and for the different

Table 4.1 Intercontinental liner services calling Chilean ports (End 2019)

Service to/from	Operating carriers	Slot charterers	Av. ship capacity (TEUs)	Ports in Chile
North Europe	Maersk (CLX) Hamburg Süd (SAWC1)	Hapag Lloyd (SW2)	4 500	San Antonio San Vicente
North Europe	MSC	–	10 500	San Antonio Coronel
North Europe	Hapag Lloyd (SWX) CMA CGM (WCC) COSCO (EWX)	Maersk (Eurosál) Hamburg Süd (Eurosál)	10 900	Angamos San Antonio
Mediterranean	Hapag Lloyd (MSW) CMA CGM (Med Americas)	–	3 800	San Antonio
Asia	COSCO (ACSA2)	APL CMA CGM (ACSA2) Evergreen (WSA3) OOCL PIL Wan Hai	8 300	San Antonio Lirquén
Asia	COSCO (WSA) Evergreen (WSA) Yang Ming (SA4)	APL/CMA CGM (ACSA3) PIL Wan Hai	8 000	San Antonio
Asia	Hapag Lloyd (AN1) ONE (AX1) HMM (NW1)	MSC (Inca)	9 700	Iquique Antofagasta Valparaíso Coronel
Asia	MSC (Andes Express) ONE (AX2)	Hapag Lloyd (AN2) HMM	11 900	Angamos San Antonio Lirquén Coronel
Asia	Maersk (AC1)	Hamburg Süd (ASPA1) Safmarine (AC1)	5 000	Valparaíso Puerto Angamos
Asia	Maersk (AC2-AC3 Pendulum)	Hamburg Süd (ASPA2)	9 600	Iquique Antofagasta San Vicente San Antonio

Source: Own elaboration based on data from Sea Intelligence and websites of carriers

Note: Each row in the table represents a distinct service. Carriers cooperate in providing these services, so offer the same service but under a different name. In the column "operating carriers", the name of the carrier is indicated as well as the service name that the carrier uses.

coastlines of the United States (West Coast, Atlantic Coast and Gulf Coast). The market share of the largest five ports in Chile is approximately 40%, which is the lowest share among the benchmark coastlines. The highest concentration is found in Argentina, where the top five ports handle 65% of the country's total cargo. Whereas Chile's concentration rate is relatively low when looking at the top five ports, it is rather high when looking at the top 15 ports. Here, Chile's coastline has high concentration rates; lower than Argentina and the US Atlantic Coast, but higher than Brazil and the US Gulf Coast and West Coast. In contrast to these benchmark cases, Chile has a large amount of medium-sized ports, but its largest ports are not really that large (OECD/ ITF, 2016).

Within the country, the reality of the port sector varies significantly depending on the structure and features of the regions and markets served in the different Macrozones (Chilean Ministry of Labor & Ministry of Transport, 2020). The North Macrozone, between Arica and Parinacota and Atacama, represents 14.40% of GDP, with bulk cargo, mineral and energy constituting the main objects of trade. The South Macrozone, between Ñuble and Los Ríos, accounts for 11.62% of the GDP, with a focus on forest products trade. The Southern Macrozone, from the Los Lagos Region to Magallanes, produces 5% of GDP, mainly linked to fishing, aquaculture and tourism. Finally, the Central Macrozone, which includes Coquimbo, Valparaíso, Metropolitana, O'Higgins and Maule, represents about 60.40% of GDP and concentrates most of the general cargo trade, such as containerised and liquid bulk cargo (fuels).

The type of cargo handled in ports differs according to the region. Chile's north is specialised in mining products, especially copper, iron and coal. Mining products are increasingly exported in containers, and less as break bulk. The ports of the central region, which account for half of the shipping tonnage (of public ports), move agricultural export products and imported consumer goods (in containers). Ports in the south specialise in the export of fruits and forestry products. Their activity tends to increase because of the rising demand for perishable products, especially fruits. Consequently, there is more need for capacity of refrigerated containers (reefer containers). Finally, in the southern-most part of the country and in island zones, maritime transport is the only means of transportation for both cargo and passengers (OECD/ITF, 2016).

Although the ports of San Antonio and Valparaíso – servicing the “central macro-zone” of the Metropolitan, Valparaíso, O'Higgins and Maule regions – are the main container ports of Chile, they only partially function as gateways for the whole of Chile. The network of main container lines includes many different Chilean ports. Some intercontinental services focus on just one or two Chilean ports (usually San Antonio), but most services include port calls with many different ports. Overall, there are eight Chilean ports included in intercontinental services: Iquique, Puerto Angamos, Antofagasta, Valparaíso, San Antonio, Lirquén, San Vicente and Coronel.

4.1.2. Consolidation in liner shipping

The last five years have seen strong consolidation of the liner industry. A variety of mergers and acquisitions have increased the concentration of the sector, both globally (the market share of the world's top 4 companies increased from 25% in 2001 to over 50% in 2018) and on specific trade lanes. The most relevant mergers for Chile were between Hapag Lloyd and the Chilean carrier CSAV, and between Maersk and Hamburg Sud, as these were all carriers with substantial market shares in Latin America trades.

At the same time, the remaining carriers have intensified their cooperation via vessel sharing agreements (cooperation on one specific trade lane, also called consortia) and alliances (cooperation on multiple trade lanes). This is especially the case for trade lanes to and from the West Coast of South America (WCSA), where almost all services are nowadays operated by consortia of carriers and a few sole operators with slot charterers (i.e. shipping companies that want to offer that service to their customers without actually deploying their vessels on that particular route). Such cooperation has become more dominant over the last years. For example, in 2015, only three of the 11 intercontinental services with WCSA were still run by sole operators. This is different from other parts of the world, where carriers tend to operate more on their own (Figure 4.1).

A possible explanation might be the small size of the market (containerised volumes to/from Chile only represent a small part of the Pacific trade), in combination with increased ship sizes. The latter phenomenon is the trickle-down effect from the upsizing of container ships on the Asia-North Europe route. More than half of the ships operating on that trade lane now have a capacity of 18 000 TEUs or above. This has pushed up the average ship size on all trade lanes, including in Chile. Various ports in Chile now handle ships with a capacity of 13 000 TEUs.

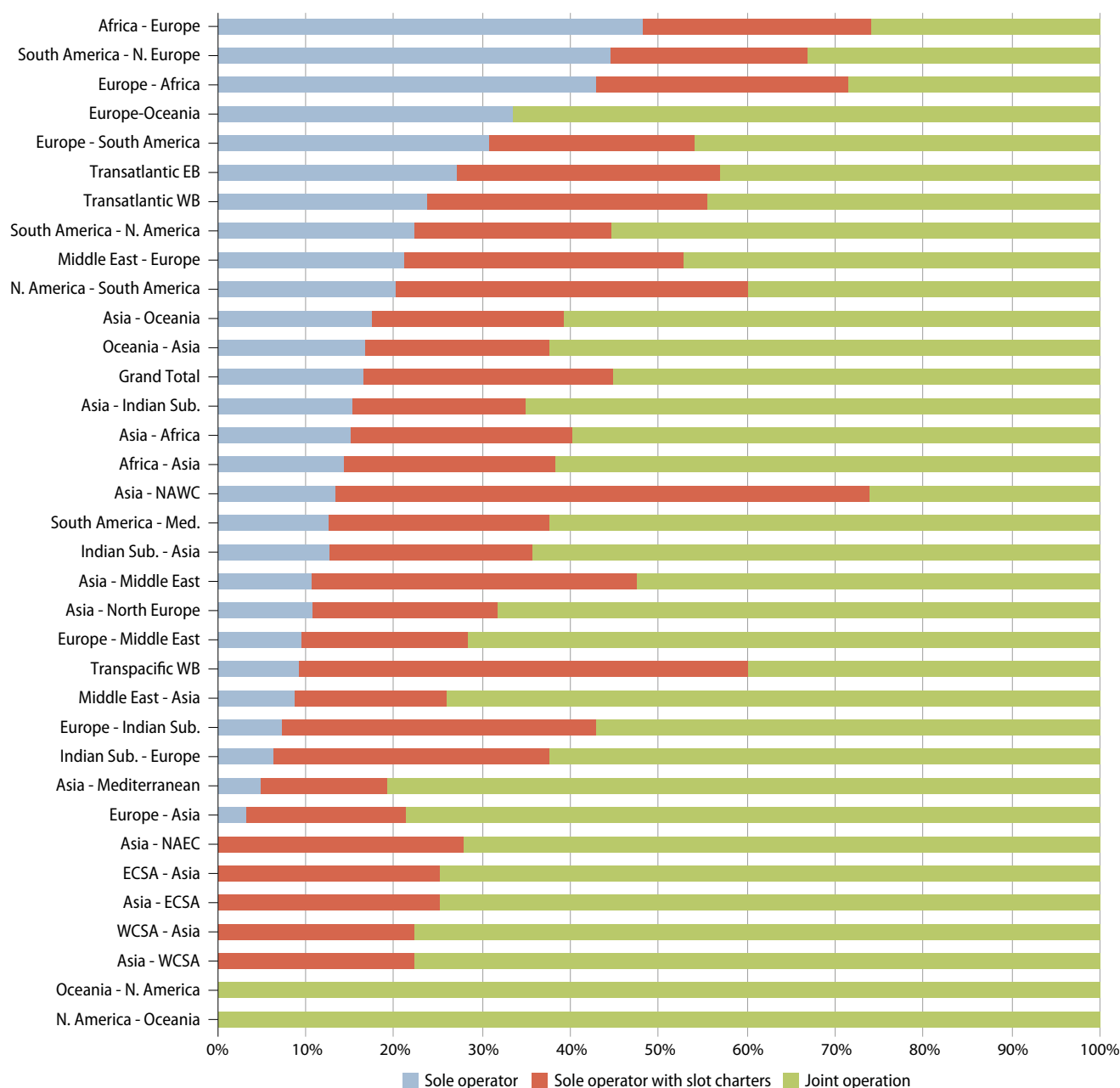
4.1.3. Vertical integration

Vertical integration between carriers and other parts of the maritime logistics chain has also increased. Various carriers, such as Maersk, COSCO and CMA CGM have the ambition to become integrators of container flows at a global scale. Such strategies mean that carriers gain more control over the different parts of the maritime logistics chain. For example, the share of carrier-controlled terminal operators worldwide has increased from 18% in 2002 to around 38% in 2016. Some carriers have their own towage subsidiary and various carriers have invested in logistics capacity and capabilities, for example CMA CGM in the logistics provider CEVA (OECD/ITF, 2018). Despite these global tendencies, there are considerable differences across countries. For example, carrier-controlled terminal operators handle more than half of the cargo in Greece and Spain, whereas the share is around 15% in Germany and zero in the United Kingdom. The world's largest towage company, Svitzer, forms part of the Maersk group and is active in 120 countries worldwide. Carriers are also active in offering hinterland transport services in various countries. For example, COSCO has dry ports in Kazakhstan, Madrid and Zaragoza, carriers like MSC, ONE and HMM own haulage companies, whereas CMA CGM, MSC and Maersk have created subsidiaries to organise inland water transport, for example from the main French ports Le Havre and Marseille

(Frémont et al., 2009). At the same time, there are also vertical integration tendencies driven by other stakeholders in the maritime logistics chain. For example, the terminal operator Hutchison Ports Holdings has invested in dry ports in countries in which it has large terminal interests, such as the Netherlands and Mexico (OECD, 2017).

Vertical integration comes with mixed effects on the maritime logistics chain. On the positive side, it gives carriers the possibility to better coordinate their shipping activities as part of a whole logistics chain. On the negative side, it risks discriminatory treatment – as the carrier can, as terminal, towage or logistics operator, provide worse services to competing carriers, especially in concentrated markets. For example, carriers often use their terminals as leverage to cut rates in independent terminals, and play out ports against each other (OECD/ITF, 2018; OECD/ITF, 2019).

Figure 4.1. Joint operation among carriers is more common than solely operated service in most regions (November 2018)



Source: Own elaborations based on data from Sea Intelligence.

There are various examples of vertical integration in Chile. The vertical integration between carriers and port terminals is mostly related to the links between the terminal operator SAAM Puertos and the Chilean container carrier CSAV that merged with Hapag Lloyd in 2014. SAAM Puertos has concessions for four container terminals in Chile (Table 4.2). However, vertical integration also extends to other parts of the maritime logistics chain. One integrated operator– most relevant to mineral cargoes in the North Macrozone - is Antofagasta-Bolivia Railway S.A. (FCAB). Part of the Antofagasta Minerals Group, one of the conglomerates owned by the Luksic family like the Quiñenco S.A. group, that has majority stakes in the terminal operator SAAM Puertos, the Chilean container carrier CSAV, now part of Hapag Lloyd and towage services (SAAM). Another integrated freight rail company is Ferrocarril del Pacifico S.A. (FEPASA), a company that is part of the Sigdo Koppers group that is a shareholder of Puerto Ventanas S.A., a private port for public use.

An example of an integrated maritime logistics group is the Ultramar group, owned by the Von Appen family that owns shipping companies (Ultranav, Ultragas, Ultratank, Ultrabulk and Transmares), towage services (Ultratug), warehouses and container depots (Sitrans). It also has concessions of five container terminals (Table 4.2). In addition, the Ultramar group of companies is a strategic partner of MSC in Chile, which is reflected in the provision of various services of the group to the shipping company, as well as the fact that they are shareholders of the concessionaire of the “Frente de Atraque No. 1” berth of the port of Valparaíso, *Terminal Pacifico Sur Valparaiso* (Ultramar, through Neltume Ports (60.01%), and MSC via CONTUG Terminals (39.99%), as detailed in Table 4.2. MSC owns the logistics company Medlog that operates feeder services, land transport and storage areas in Santiago and Arica. It also collaborates with other companies that provide storage services such as Sitrans, which is active in San Antonio, Valparaiso and Iquique. Medlog is currently active in eight Latin American countries and invested USD 140 million in Chile alone. The carrier Maersk owns the trucking company Bitsa and has recently invested in a dedicated block train connection in Chile. Maersk also owns Contopsa that operates dry ports and container depots in Arica, Iquique, San Antonio, Talcahuano and Santiago.

Table 4.2. Capacity of container terminals operated by SAAM and Ultramar in Chile

Port	Terminal	Shareholders	Capacity (mn TEU)
San Antonio	San Antonio Terminal Internacional (STI)	SAAM (50%) SSA Marine (50%)	1.4
San Vicente	San Vicente Terminal Internacional (SVTI)	SAAM (50%) SSA Marine (50%)	1.0
Iquique	Iquique Terminal Internacional (ITI)	SAAM (85%) Empresas Navieras (15%)	0.3
Antofagasta	Antofagasta Terminal Internacional (ATI)	SAAM (35%) FCAB (30%) Empresas Navieras (35%)	0.3
Arica	Terminal Puerto Arica (TPA)	Ultramar (50%) Belfi (50%)	0.3
Angamos	Puerto Angamos Terminal	Ultramar (40%) Belfi (40%) CMB (20%)	0.4
Valparaiso	Terminal Pacifico Sur (TPS)	Ultramar (60.01%) Contug (MSC) (39.99%)	1.3
Coronel	Puerto Coronel Terminal	Ultramar (16.7%)	0.8
Coquimbo	Terminal Puerto Coquimbo (TPC)	Ultramar (70%) Belfi (30%)	0.0

Note: Capacities as estimated by Drewry based among others on reporting by the terminal operators.

Source: Drewry 2017.

4.1.4. Legal framework

Vertical integration between shipping companies and terminals in public ports is regulated in Chile. The Chilean ports law (Law No. 19 524) establishes that the Competition Authority needs to be consulted on the extent of vertical integration in port terminal concessions. In its first Opinions in 1998, the Competition Authority – called Tribunal for the Defence of Free Competition (TDLC) – established that “the most relevant users” of port terminals cannot own more than 40% of voting rights or economic shares – or both – in the concessionaire of the terminal. Since 2006, TDLC has increased this percentage to 60% for a variety of terminals and 65% for Antofagasta’s Terminal 2 (Table 4.3), without providing any general justification. TDLC determines the competition conditions on a case-by-case basis, i.e. every time the law mandates a report. This means that rules, including vertical restraints, depend on issues such as the relevant market, the competition conditions in the terminal, the specific business model. Common reasons stated by parties, such as terminal concessionaires, for changing the rules include the fact that there have been neither formal charges of abusive behaviour (favouring integrated entities) nor allegations of discrimination. Moreover, there has not been an incentive to discriminate in favour of an integrated shipping company because the terminal capacity has so far always exceeded the demand of the integrated firm.

The category of “most relevant users” is understood to include shipping companies but also large shippers (exporters or importers). An example of a terminal with a large participation of a shipper is Puerto Panul S.A., concessionaire of terminal 8 of the port of San Antonio, in which the main importer of food bulk in Chile, Graneles de Chile S.A. has 40% ownership.

Exceeding the threshold of 40%-60% does not prevent the award of a concession, but the new terminal operator will have to resolve the issue within 18 months, for example by selling part of its business. Concessionaires have to inform the public port authority every three months about their shareholders and the interlinkages between the shareholders, so that the port authority can monitor if the shares continue to be below the threshold. However, it is not clear whether this requirement is respected and whether port authorities are able to scrutinise concessionaires’ reports.

There is no such threshold on vertical integration in the Decree with Force of Law that regulates private ports (DFL No. 340). Private ports are often owned by mining, oil, chemical or food companies. For example, the mining company CODELCO owns Mejillones Port Complex, located in the Antofagasta region. As these private ports can also offer services to other companies – which makes them private ports of public use – it is clear that large shippers have an

Table 4.3. Degree of integration allowed in container terminals operated by SAAM and Ultramar in Chile

Port	Terminal	Degree of integration allowed	Basis
San Antonio	San Antonio Terminal Internacional (STI), Molo Sur	60%	Dictamen No 1045 CPC, modified by Informe No 5 TDLC
San Antonio	Terminal Costanera Espigon (Puerto Central)	60%	Informe No 6 TDLC
San Antonio	Sitio 8 (Puerto Panul)	40%	Dictamen No 1045 CPC
San Vicente	San Vicente Terminal Internacional (SVTI)	40%	Dictamen No 1045 CPC
San Vicente	Talcahuano Terminal Internacional	No restriction	Dictamen No 1268 CPC
Iquique	Terminal No 1 (not concessioned)	60%	Informe No 10 TDLC
Iquique	Iquique Terminal Internacional (ITI), Terminal No 2	0%	N.a.
Antofagasta	Terminal No 1 (not concessioned)	60%	Informe No 11 TDLC
Antofagasta	Antofagasta Terminal Internacional (ATI), Terminal No 2	65%	Dictamen No 1209 CPC, modified by Informe No 14 TDLC
Arica	Terminal Puerto Arica (TPA) Frente No 1	40%	Dictamen No 1280 CPC
Valparaiso	Terminal Pacifico Sur (TPS), Terminal 1	40%	Dictamen No 1045 CPC
Valparaiso	Terminal Cerros de Valparaiso, Terminal 2	60%	Informe No 5 TDLC
Valparaiso	Terminal Puerto Coquimbo (TPC), Terminal No 1	60%	Informe No 4 TDLC

Source: Information provided by Chilean Ministry of Economy.

incentive to establish a private port instead of a dedicated private terminal in a public port. This not only provides more possibilities for vertical integration but also offers other advantages such as less stringent regulatory requirements and lower taxes (OECD/ITF, 2016).

The allowed share of vertical integration by “the most relevant users” only applies to terminals, but not to other parts of the maritime logistics chain, such as towage, logistics activities, trucking and freight rail operations.

Horizontal integration of terminal operators is also covered by Chilean regulatory practice. Operators are not allowed to have shares in two terminals in the same port – and port region. Chilean regulatory practice – via its communications on terminal concessions - has become stricter in this sense. The previous provision stipulated that if a consortium owns more than 15% of the corporate concessionaire of a port terminal, the group or its branches were not allowed to own directly or indirectly more than 15% of another corporate concessionaire of a terminal in a public port of the same region. Likewise, business groups owning more than 15% of the shares of private ports were not allowed to own directly or indirectly more than 15% of a corporate concessionaire of a terminal in a public port of the same region. Over time, this criterion of 15% has been reduced to 0%, while the permitted vertical integration increased from 40% to 60%. If these conditions are not respected, port authorities have the power to end a concession (OECD/ITF, 2016). In practice, this has never happened.

Chile allows liner shipping conferences, consortia and other cooperation agreements between liner shipping companies. Article 5 of the Merchant Marine Law (DL No 3059, Ley de la Marina Mercante) mentions that Chilean shipping companies “may participate in shipping conferences for freight, pool agreements and consortia governing and rationalising services” and, as such, be exempt from rules of the general competition law, as expressed in Decree Law No. 211 of 1973. This means that Chile allows cooperation between liner shipping companies in terms of prices, capacity management and information exchange.

This exemption from the general competition law affects maritime logistics in various ways. In general, there is no clear justification for an exemption from competition law for the shipping sector. Any exemption provides a “free pass” from the regular procedures and leads to less scrutiny of potentially anti-competitive behaviour. Such anti-competitive behaviour could consist of discriminatory pricing or access policies, abuse of market power, less choice and monopsony buying power of carriers (OECD/ITF, 2018). Anti-competitive behaviour by liner shipping is not a theoretical concept: the Free Competition Tribunal established in 2019 that NYK and CSAV conducted anti-competitive agreements on the Americas and Europe routes, and MOL and NYK on the Europe route (TDLC, 2019). It fined all four companies for this.

4.2. MAIN CHALLENGES FOR MARITIME LOGISTICS

4.2.1. Oligopoly

Consolidation and carrier cooperation have resulted in an oligopoly in liner shipping: there are only a couple of carriers, which has left shippers with more limited choice. Consolidation has taken place via mergers and acquisitions, many of which happened during the last few years. Mergers and acquisitions could be considered the most comprehensive form of cooperation as these lead to full or almost full integration of corporate activities. Several “brands” may continue to exist even if they have been integrated in a larger company.

Cooperation between carriers takes place via a range of other mechanisms:

- Slot charter agreements (SCA) require a fixed percentage of vessel capacity to be exchanged between carriers over a given time period. There is one carrier that operates the vessel, but other carriers use a share of the vessel capacity, so that they can widen their coverage.
- Vessel sharing agreements (VSA) are more cooperative and entail cooperation between companies to fulfil demand on particular trade routes through sharing of vessels owned and/or operated by different carriers, and joint optimisation of ship scheduling and assignment of ships to routes.

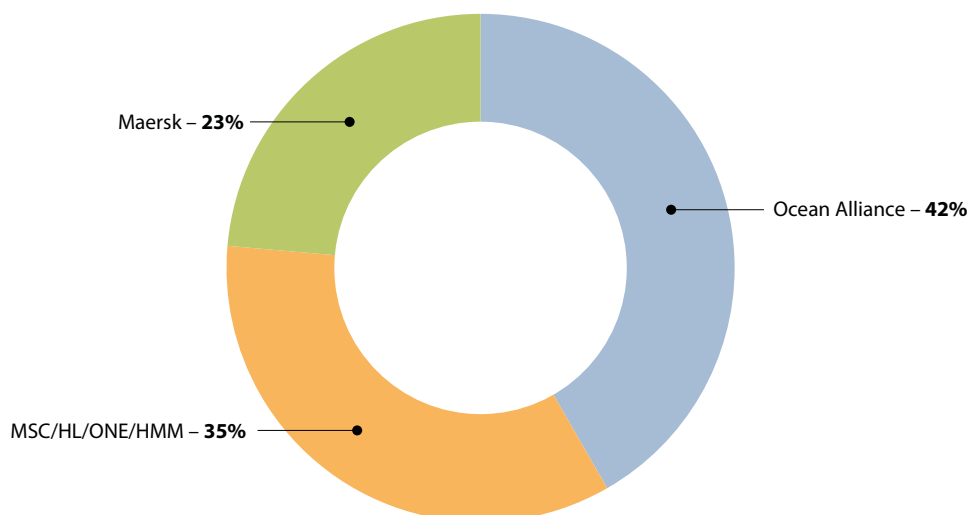
- Global alliances – also called strategic alliances - are cooperation agreements on a global scale between liner shipping companies. Established in the mid-1990s, these agreements involve ocean carriers operating on major global routes, in particular on the main East-West trade lanes that concentrate the largest share of the containerised cargo flows: Asia-Europe, Asia-US and US-Europe. Global alliances could be considered a bundle of vessel sharing agreements between the same carriers on a global scale. Whereas slot charter agreements are basically contractual agreements, strategic alliances are mainly operational agreements (OECD/ITF, 2018).

In practice, ocean carriers use many of these cooperation tools simultaneously. Carriers that are in the same global alliance can have vessel sharing agreements with carriers from different alliances, for example for some of the North-South trade lanes. Carriers have been part of global alliances and at the same time pursued mergers and acquisitions. Each carrier makes strategic choices about the mix of these cooperative tools, which results in different corporate strategies. For example, the strategy of the Italian-Swiss carrier MSC is based on organic growth, that is: acquiring ships rather than shipping firms, and did not engage in alliances until 2015. In contrast, the German carrier Hapag-Lloyd has been part of global alliances since 1989 and acquired various carriers – such as CSAV and UASC – whilst being one of the rare global carriers that never bought mega-ships (OECD/ITF, 2018).

On the Asia-West Coast South America (WCSA) trade lane, there are six distinct weekly services, but this offer is provided in reality by just three groups: 1) Maersk; 2) the carriers that are grouped together in the Ocean Alliance (COSCO, CMA CGM and Evergreen) and 3) a consortium that consists of Hapag Lloyd, ONE (alliance partners in THE Alliance), MSC and HMM. So, while alliances operate the large majority of the East-West trades (between Far East, Europe and North America), the picture is more mixed for Asia-WCSA: although the Ocean Alliance holds 42% of the capacity on this route, the remaining capacity is held by the heterogeneous consortium of MSC/Hapag Lloyd/ONE/HMM group (35%) and by Maersk (23%) (Figure 4.2). In comparison with other WCSA trade lanes this is a fairly competitive trade lane. The WCSA-Mediterranean trade lane only consists of one weekly service provided by Hapag Lloyd and CMA CGM, as indicated in section 4.1.1.

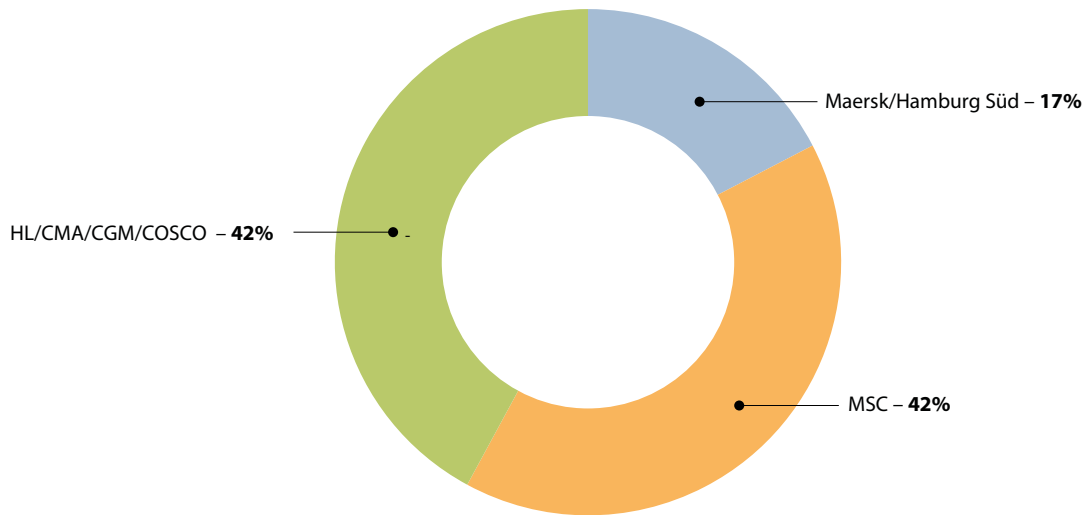
The oligopolistic situation is made worse by the cross-links between carriers and carrier groups that are supposed to compete with each other. For example, Hapag Lloyd's main competitors on Asia-WCSA are Maersk, CMA CGM and COSCO, but it offers joint services with CMA CGM and COSCO on WCSA-Mediterranean and WCSA-North Europe and is slot charterer in Maersk services on WCSA-North Europe. Such cross-links between carriers and the main three carrier alliances are not exceptional to West Coast South America, but they provide considerable risks and possibilities for collusion between carriers. Many of the liner consortia formed on North-South routes bring together

Figure 4.2. Market shares for the six liner shipping services between Asia and Chile



Source: Own elaborations based on data from Sea Intelligence.

Figure 4.3. Market shares for the three liner shipping services between North Europe and Chile



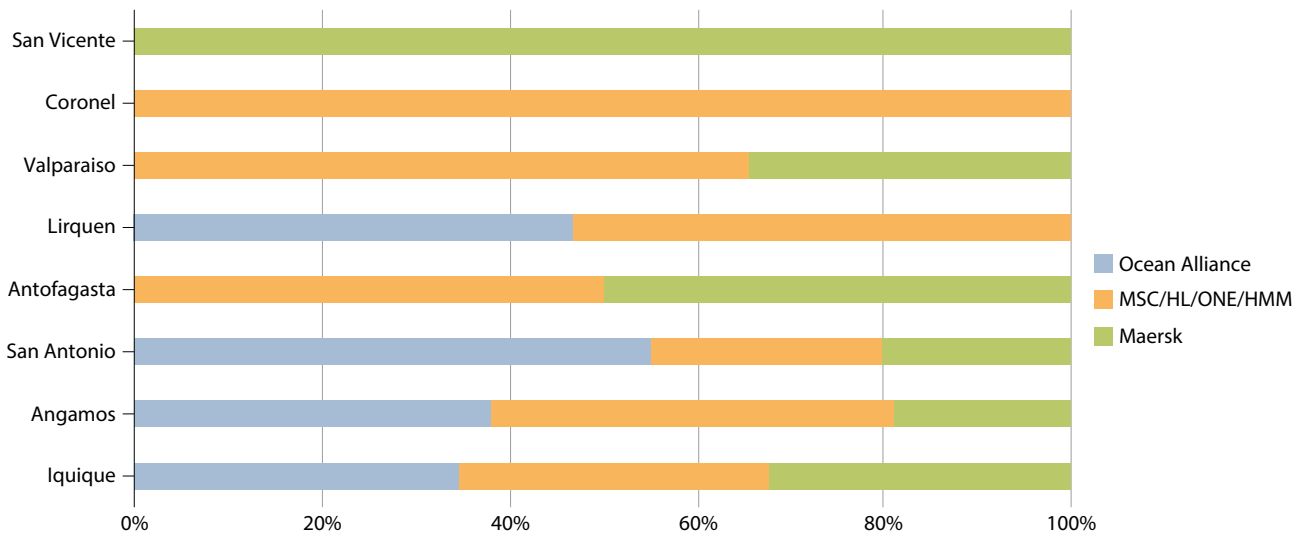
Source: Own elaborations based on data from Sea Intelligence.

carriers from different alliances, for example CMA CGM (active in Ocean Alliance) and Hapag Lloyd (THE Alliance). The need to align North-South connections to the East-West networks may have an impact on intra- and inter-alliance collaboration: interlinked consortia make major carriers well aware of the cost structures and commercial strategies of their competitors and increase the risks of collusion between these carriers (OECD/ITF, 2019).

4.2.2. Monopsony

Carriers have strong buying power vis-à-vis their suppliers, namely ports and port service providers, such as terminal operators. In practice, most terminal operators now have to deal with one to three very large port users and are thus subject to monopsony or oligopsony power. This can be illustrated by the Asia-WCSA services already discussed. Some Chilean ports have calls from all three groups identified earlier; this is the case for Iquique, Angamos and San Antonio. However, this is not the case for the five other Chilean container ports with direct connections to Asia. The container ports of San Vicente and Coronel get calls from only one group (Figure 4.4). This situation makes ports highly dependent on just a few companies, including those ports with calls from all three groups. Since carriers can threaten

Figure 4.4. High dependence of ports on few carriers in Asia-WCSA services



Source: Own elaborations based on data from Sea Intelligence.

to channel cargo through other ports, they have strong leverage to negotiate better conditions (infrastructure, services, and tariffs). As most ports compete – and as national policies have generally promoted port competition – demands of carriers are often satisfied (OECD/ITF, 2018).

4.2.3. Risks of vertical integration

Vertical integration in network sectors such as maritime transport poses various risks, related to discriminatory behaviour, unfair price competition and buying power.

Discrimination takes place when a terminal operator refuses to provide services to certain clients, or provides worse services to certain clients. An integrated firm (carrier and port terminal) could use the port to monopolise the industry. Since seaports represent a bottleneck for maritime transport, they represent a strategic asset for a franchise holder interested in reducing competition in maritime transport (Engel et al. 2000a). Put differently, acquiring exclusivity within a network industry that faces bottlenecks and increasing returns to scale could be a way to deter entry (Cariou, 2008).

Investment in dedicated terminals could also be seen as a form of limit pricing whereby the operating costs of potential entrants are raised to such a level that entry is no longer profitable (Haralambides et al., 2002). Dedicated terminals are offered to some carriers at a price lower than social opportunity costs. This means that other carriers not using the dedicated terminals are placed at a competitive disadvantage, e.g. in the form of longer waiting times and operating costs. Such a situation could be considered as a barrier to entry, due to the exclusivity on an essential facility. The price a carrier will have to pay at a dedicated terminal must also include potential losses born by all other carriers at the port due to an increase in waiting times (OECD/ITF, 2018).

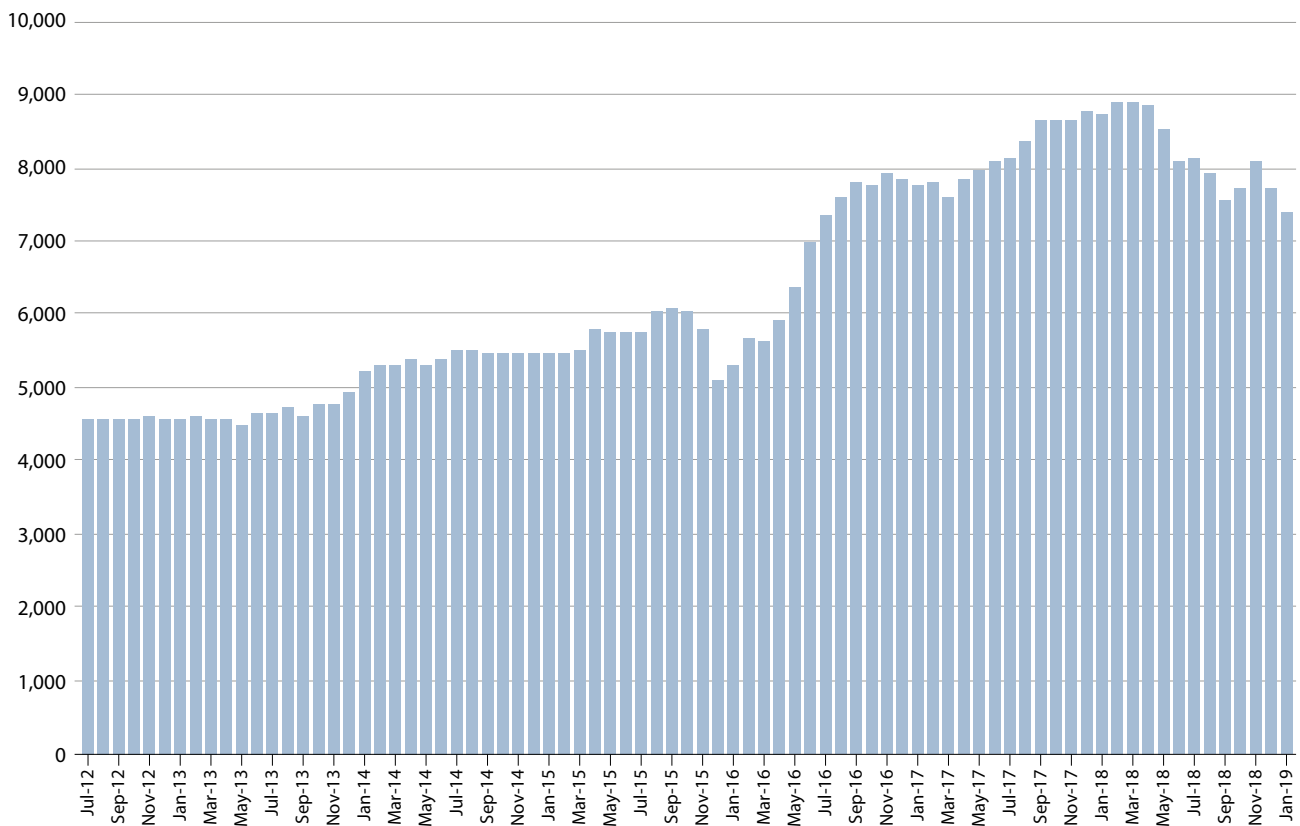
Another risk is that the integrated operator uses its buying power in one part of the supply chain (e.g. shipping) to impose one of its subsidiaries (e.g. in towage) to a port, at the detriment of other service providers. Globalisation and consolidation of the towage sector have resulted in the emergence of a few multi-national players, such as Kotug Smit and Fairplay. Vertical integration is less frequent than in the terminal handling sector, yet the largest towage company, Svitzer, forms part of the Maersk group. In this context, the towage sector in Europe might have witnessed practices of predatory pricing. Predatory pricing as part of the deliberative strategy of dumping, usually involves setting very low prices or selling below the firm's costs in order to drive competitors out of the market or to hurt rivals in order to increase chances for future acquisition. Such practices have been observed in Denmark and Sweden, but a tribunal in Portugal did not find sufficient evidence for predatory pricing in towage in Portugal. Vertical integration means for towage companies that they effectively compete with a large customer owning the strongest competitor in towage. This has effectively impeded competitors not backed by a large carrier and without a certainty to be able to recoup losses at a later time to compete in this market. Although complaints have been filed in Europe in the past, previous legal procedures and investigations have taken up to four years – a time period during which towage companies might not be able to survive (OECD/ITF, 2018). The constellation in Chile is different from most other countries, as the main towage companies (SAAM and Ultratug) are both part of large vertically integrated groups. This might prevent them from predatory pricing strategies, but the constellation of two vertically integrated companies could present a barrier of entry for non-vertically-integrated towage companies.

The risk exists that carriers such as Maersk and MSC may use their buying power and dominant position to stimulate their Chilean trucking subsidiaries at the detriment of local competitors. As such, their trucks may get priority treatment over other trucking firms, e.g. less waiting time and more free storage days in the port than firms that are not part of the shipping groups.

4.2.4. Return on investment

The average size of container ships has doubled over the last decade. There are some variations among trade lanes, but the ship size on WCSA trade lanes has considerably increased as well. Ships with capacity of 13 000 TEUs are no longer an exception. The trend over the last couple of years can be illustrated with the ship size on one of the Asia-WCSA-services, the WSA-service operated by COSCO (Figure 4.5), which increased from around 4 500 TEUs in 2012 to 7 500 TEUs in 2018, one of the smaller ship sizes on this trade lane.

Figure 4.5. Two-fold increase in ship size development (TEU capacity) on COSCO WSA service (2012-2019)



Source: Own elaborations based on data from Sea Intelligence.

Such a large upsizing of ships could be considered problematic, because of the asymmetric relation between carriers and ports, which erodes the return on investment for ports and terminals. Part of this asymmetry comes from the different planning horizons. The planning procedures for new ports or terminals can take years, sometimes decades, whereas the order of a new ship can be done almost instantly. Terminals have long-term engagements with ports and long investment horizons. In Chile, most container terminal concessions have durations of 20 years with the possibility of 10 years renewal. Investments in equipment, such as cranes and yard equipment are supposed to last decades. In contrast, most contracts between carriers and terminal operators last only 2 years. Another element that increases this asymmetric relation is the fact that carriers have mobile assets – so they can move their ships wherever they find it most profitable – whereas terminals have fixed and place-specific assets that have a limited flexibility to be moved.

The introduction of mega-ships – resulting larger ships on all trade lanes – has brought additional costs to ports. These include additional costs for dredging, longer and stronger quays, larger cranes and bigger port yards. The peaks associated with mega-ships put pressure on the infrastructure for transport between port and hinterland. As these costs were not foreseen at the inception of the new container terminals, both the terminal and the port authority are confronted with costs that cannot be recovered. Section 4.3 explores how various OECD countries have dealt with these challenges.

4.2.5. Port-city governance

The developments highlighted above, such as consolidation and increased ship size, generate impacts in ports that spill over to port-cities. The most visible impacts include road congestion and air pollution, which, as recommended by the 2018 OECD Economic Survey of Chile call for further efforts to tackle lagging intermodal transport infrastructure and metropolitan coordination (OECD, 2018). Various policies exist to resolve these challenges, including port gate policies, truck parking areas, urban traffic planning and port environmental policies that are well known and well documented

(OECD, 2014; OECD/ITF, 2018). The challenge for implementing such policies is coordination between ports and cities, which has been problematic in Chile.

One of the instruments to improve port-city relations are the Port City Committees. One of the objectives of the 1997 Port Reform Law was to develop more harmonious port-city relationships, given that the 10 public ports are situated in cities of more than 40 000 inhabitants. It mandates the creation of Port-City Committees (Consejo de Coordinación Ciudad-Puerto, CCCP) for each port authority (Law 19 542, art. 50d). Implementation of the law has been slow. Several port authorities have not held committee meetings yet. The Chilean Maritime and Ports Association stated in 2015 that Port City Committees had an irregular functioning, due to the lack of clarity of their mission, an absence of leadership to guide port city relations, and a general lack of trust (OECD/ITF, 2016).

Political discussions have focused recently on two additional mechanisms: representation of local governments in ports, and providing local governments with a share of the revenue of the public ports in their jurisdiction. In 2018, an agreement (i.e. a formal declaration resulting from a vote) between the Parliament and the central government was reached, requiring that mayors sit on the boards of directors in public ports, and stipulating the right for port-cities to levy some sort of duty on their ports that would partly stay in the city. This takes place in the context of a governance reform that diminishes central government control, when from 2021 regional governors will no longer be appointed by the central government but rather be elected through popular vote. Although challenging in the Chilean political context, such measures might provide opportunities to increase the involvement of local governments in their ports – and improve port-city governance.

4.2.6. Port authority functions

The developments in shipping have also revealed various shortcomings in Chilean maritime logistics. Coordination on regulation and taxation of the logistics sector is lacking. There are many “maritime concessions” that are not actually used but that are blocking space for private interests. This is particularly the case in those bays where there are no public port authorities, e.g. in Quintero-Ventanas, Mejillones and Concepción (Informe Comité Técnico de la Comisión Investigadora de la Ley N°19.542, en la Cámara de Diputados, 2019). Ports in Chile generally have limited responsibilities and instruments related to what happens outside the port area. As a result, many ports have not been able to respond effectively to concerns of citizens of port-cities about the negative impacts of port activities, such as congestion and air pollution. Even with regard to port operations, the focus is mostly inward-looking, e.g. on utilisation of terminal space, rather than the integration of the port into a wider transport system.

The shortcomings could result from the constrained conception of port authorities in Chile. The Law 19 542 (Article 6) mentions that port authorities exercise their functions within the port area, on the land and infrastructure they administer. This implies that they are not responsible for what happens outside the port area, e.g. road connections. In addition, port authorities are limited in their function by the lack of financial means, as a large share of their profits is taxed or retrieved. This has repercussions on the way ports are governed. The official port performance indicators focus on what happens inside the port, i.e. they look at crane performance and space intensity, but do not actually measure time to get cargo in or out of the port, or hinterland connectivity for that matter (OECD/ITF, 2016).

The law gives Port Authorities the mandate to administer, exploit, develop and conserve ports as well as the related activities inherent to the port domain (Law 19 542, Article 4). In addition, the port boards have the mission (among others) to ensure that expansion possibilities are not hampered (Article 31). Despite these provisions, the possibilities in practice are fairly limited. Expansion of ports is only possible in adjacent zones of the existing port; although it is not impossible to expand ports elsewhere, a special decree is necessary to make this possible. Similarly, the development of dry ports and truck waiting areas is only possible in the same municipality, even if extra-port warehouses can be developed within the territory of each customs jurisdiction, which does not strictly coincide with communal boundaries. Considering that most Chilean ports are located in cities, space for dry ports or truck waiting areas is not always easily available (OECD/ITF, 2016).

4.3. GOOD PRACTICES IN OECD COUNTRIES

4.3.1. Competition policies for shipping

Governments generally have limited information on cooperation between shipping companies, despite allowing various forms of cooperation, sometimes in tailor-made block exemptions for the liner-shipping sector, e.g. the European Union allows information exchange, capacity adjustments and joint negotiation by consortia. Regulations are sometimes designed in such a way that stakeholders or competition authorities cannot actually establish if a certain regulation applies to the consortia or not, leading to ambiguity and legal uncertainty (OECD/ITF, 2019).

Canada and the US are exceptions to the rule that governments generally lack of information on cooperation agreements between shipping companies. In the US, all cooperation agreements need to be filed with the Federal Maritime Commission (FMC), including the firms concerned, the type of cooperation and the ways in which the cooperation is organised. These cooperation agreements are publicly available and published on the website of the FMC. At the moment, there are hundreds of such cooperation agreements filed, including three alliance agreements, 32 vessel sharing agreements and 210 space charter agreements. Although the subsequent changes of the agreements (for example on the contributions of carriers to the cooperation agreement) are not taken into account in this information (which could be considered as an additional requirement), the information at least makes it possible for stakeholders and the regulator to know which arrangements exist and what their approximate market share is.

4.3.2. Dealing with vertical integration

Vertical integration is generally subject to merger control rules. In general, the acquisition of controlling stakes in other parts of the transport chain should thus be notified to the competent national competition authority, which will evaluate whether there are any possible antitrust concerns with the transaction. In addition to this *ex ante* control of vertical integration, national competition authorities can also intervene *ex-post* if abusive conduct occurs. For example, in the EU, companies with a dominant position cannot, without justification, refuse access to infrastructure essential for operating in a given market. In such a case, national competition authorities can oblige the company to grant access to the facility (OECD/ITF, 2018). In Uruguay, the legislation requires explicit government approval of vertical mergers (Competition Law No 18 159) and the Ministry of Transport also has to provide no objection.

In some countries, national competition authorities have intervened in port privatisation processes and recommended not to allow vertical integration strategies. This was the case for the ports of Izmir and Mersin, when the Turkish Competition Authority recommended that operating rights should not be transferred to liner transport or ship broker companies, a recommendation that was accepted. The Turkish Competition Authority issued a similar recommendation to the port of Samsun not to transfer operational rights of the port to a firm that was operating in the market for Ro-Ro services, in order to prevent a vertical integration that could be potentially harmful to competition (OECD, 2011). In Uruguay, the government restricted the participation of transport companies in the concession bidding process for the most important container terminal in Montevideo (Goldberg, 2009).

In other countries, concern about vertical integration has found its way into regulation. In Brazil, port regulation (Resolution No 3708-ANTAC of 2014) provides a legal basis for restricting vertical integration related to ports. Article 18 of that regulation states: “In order to stimulate competition and promote reasonable tariffs, the notice may restrict or prevent the participation if companies that are members of economic groups that already operate: I) in the organised port area; II) in the area of influence of the organised port, or III) in other economic activities that represent forms of vertical integration” (ANTAC 2014). Based on these provisions, the Brazilian competition authority includes considerations on vertical integration in its mandatory opinion during concession bidding procedures (Suárez-Alemán et al. 2019).

4.3.3. National ports and logistics policies

Establishing clear strategy in port systems – both nationally and supra-nationally - could help to minimise the development of further overcapacity of container ports for mega-ships. Particularly in light of the frequent taxpayer subsidisation of the costs related to mega-ships, states could define more clearly which ports are expected to service

mega-ships and which ports have different roles. There are different tools that can be deployed in such a ports strategy, ranging from port hierarchies and port specialisation to port cooperation.

Port hierarchies

The combination of alliances, mega-ships and consolidation requires more selective port hierarchies. The higher call sizes – facilitated by alliances and larger ships – can only be accommodated in larger ports that are especially equipped for the largest ships. The substantially larger investment requirements of these ports can necessarily be accommodated at relatively fewer ports (OECD/ITF, 2018).

At the EU level, a ports hierarchy is provided via the classification of ports as either “core ports” or “comprehensive ports”, that are connected to trans-European transport networks, the TEN-T networks. In this way, “core ports” get priority in terms of infrastructure projects to improve their accessibility, as they are the main entry and exit points of cargo to and from Europe. Although laudable in its effort to provide some sort of prioritisation, the port hierarchy provided by the “core ports network” and the “comprehensive ports network” could be strengthened by introducing a more limited and clearly defined group of “gateway ports” that could include the main inevitable European container ports, as evidenced by calls from all three alliances.

Such port hierarchy policies can help to set priorities for public infrastructure investment. As mentioned, port hierarchies need to be sufficiently selective if they are to be effective. The number of ports of national importance is generally associated with population numbers, the concentration or dispersion of population, geography and the length of a coastline. For example, Poland with its fairly limited coastline has only three ports of national importance, whereas the archipelago state of Indonesia counts 25 strategic ports. In addition, there is also a regional political dimension, as ports are often perceived as infrastructure that can help achieve inter-regional equity. However, if the group of “strategic” ports becomes too large, there is a risk of fragmentation of the ports system and inefficient public infrastructure spending (OECD/ITF, 2018).

Despite the political complexity of prioritisation of ports, various countries (see Table 4.4) have established an explicit port hierarchy that translates into a public investment hierarchy and links to a hinterland transport network. Although a strong port hierarchy does not exclude the possibility that alliance carriers will not use the prioritised ports, it should minimise the risk of ports being played off against each other, resulting in low returns on public investment and underutilisation of infrastructure.

A considerable number of countries have defined an explicit national port hierarchy to avoid wasteful public infrastructure spending. Such a hierarchy identifies “ports of national importance” or “ports of strategic interest” and

Table 4.4. Port hierarchies in national port policies

Country	Port hierarchy
Canada	19 Canada Port Authorities (CPAs), 26 remote ports; in addition to regional or local ports
France	7 ports of national importance (GPMs), in addition to regional or local ports
Greece	12 ports of national interest
India	13 major ports, 187 non-major ports
Indonesia	25 strategic ports
Ireland	5 ports of national significance (Tier 1 and 2), 14 ports of regional significance
Italy	23 ports of national importance; in addition to ports of regional relevance, military ports
Korea	28 international trading ports, 23 coastal (local) ports, 9 new ports
Poland	3 ports of national importance
Portugal	5 main seaports, 4 secondary ports
Spain	44 ports of general interest, ports of non-general interest

Source: OECD/ITF (2017).

other categories of ports that are not considered of national or strategic importance. These latter ports could be of regional significance or secondary ports. Such a hierarchy can be useful if these ports of national importance also receive a priority treatment in terms of funding of infrastructure and connections to hinterlands. In many countries, the hierarchy also determines which ports are governed nationally or locally. For instance, India's 13 main ports are under the jurisdiction of the central government, while the 187 non-major ports are under the jurisdiction of their respective provincial/state governments (OECD/ITF, 2017). Such explicit port hierarchies exist in at least eleven countries, including Canada, France, Greece, India, Indonesia, Ireland, Italy, South Korea, Poland, Portugal and Spain (Table 4.4).

Other countries have not translated a port hierarchy into legislation, but still give priority to certain ports. For example, the Dutch "mainport"-policy has favoured the port of Rotterdam and its hinterland connectivity via a range of specific investment projects, including the dedicated freight train connection with Germany, the Betuwe line.

Countries frequently decentralise the management of the ports that are not considered to be of national importance. France enacted a port reform in 2008 in which a number of ports were decentralised to regions that could choose to take on the responsibility as port authority or shared it with other local governments in mixed governance structures. In Canada, a port decentralisation reform that started in the 1990s resulted in the transfer of 65 ports to other federal departments, 40 ports to provincial governments, 123 ports to local interests and 239 de-proclaimed as public harbours or demolished (OECD/ITF, 2017).

Port specialisation

National port policies can also improve port capacity planning vis-à-vis a mobile shipping sector. Some countries (e.g. South Korea) have an explicit port specialisation policy, which limits the possibility of individual ports to attract desired cargo. Central governments can apply implicit port specialisation policies via their infrastructure investments. For example, public investments in infrastructure connecting north Brazil with the grain producing regions in the centre of the country can be considered indirect policies to shift these cargo types to the north, away from the ports that traditionally handled these goods, such as Santos, Rio de Janeiro and Paranagua. Other countries (e.g. South Africa) have policies that attempt to direct cargo to specific ports in their system, sometimes even via decisions on port tariffs.

National logistics strategies often help to define the nodes and corridors needed for logistics, including the associated land and maritime space. In response to trade evolutions and their impact on the country's transportation system, the Government of Canada initiated and released a National Policy Framework for Strategic Gateways and Trade Corridors mid-2007. This framework was developed by Transport Canada to improve the capacity and efficiency of the country's transportation network to support external and internal trade, and secure the competitiveness of the economy. The framework aims at fostering development and optimisation of transportation infrastructure, operations, technology, regulation and policies for all modes (marine, road, rail, and air) that support freight and passenger flows of national significance. In order to strengthen and keep building a strong national transportation network, the Canadian Government identified three Gateways and Trade Corridors based on the most strategic routes within the country. From 2007, Asia-Pacific Gateway and Corridor (APGCI) focuses on creating the best possible link between Asia and North America. The Ontario-Quebec Continental Gateway is mostly dedicated to facilitating domestic and Canada-US trade with a focus on border crossings. The Atlantic Gateway and Trade Corridor initiative connects the country with major East Coast deep-water ports to tie it with the European market and Latin American, Caribbean and Asian markets through the Suez Canal since 2011 (OECD/ITF, 2016).

Port cooperation

Some countries (e.g. France) require some of their ports to co-operate in inter-port committees. Such co-ordination mechanisms can also be more subtle. For example, the national ports secretariat in Brazil organises monthly meetings with all port administrations that serve the goal of policy co-ordination (OECD/ITF, 2017).

Cooperation between ports can also help prevent overcapacity. This facilitation can take different forms, depending on local circumstances and on different port governance models. In countries with centralised port systems, central governments have stimulated port mergers. Examples of such approaches include the creation of Keihin port in Japan, which amalgamated the ports of Yokohama, Tokyo and Kawasaki. Other examples of centrally arranged port mergers include China and Italy. In countries with more decentralised port governance, central government and its bodies have

provided the regulatory space needed for local entities to initiate intensive cooperation, like in Seattle/Tacoma and Savannah/Norfolk.

4.3.4. Port-city governance

In line with the measures proposed in the Chilean context, this section provides an overview of international experience with local government involvement in port boards, and with local revenue shares for ports.

Many ports throughout the world have some form of formalised local institutional representation. This local representation can take place in the main decision-making bodies, such as the board of directors, in the supervisory body, or in other port institutions, such as consultation bodies. In nine out of sixteen ports with local government representation investigated by the ITF (OECD/ITF, 2015), the representation is in the board of directors of the port. Local representation can range from the marginal to majority representation, although the latter case is fairly rare. Explicit power very much depends on decisionmaking rules: e.g. the board might need a majority (> 50%) to make decisions. In that case, the relative share of the municipality in the board is important.

There is no clear link between local ownership and local representation. Some locally owned ports, such as Rotterdam, do not have formalised local representation within their main decision-making bodies. At the same time, various countries with predominantly national port governance have port bodies in which local governments are represented. In the case of Busan, the government of Korea owns the port, but it is the municipality of Busan that nominates all members of the Port Assembly, the supervisory body. In some ports, all government tiers are represented in the institutional framework of the port: in the Board of Directors of the port of Vancouver, the local and provincial governments are represented, alongside the federal government. In Barcelona, the Management Board of the port consists of members from local, regional and central government. In many boards the central or regional government is represented (with or without voting rights), often as a sort of watchdog.

Table 4.5. Ports with formalised local institutional representation

Port	Country	Body with local representation	Status of body	Share of local representation
Antwerp	Belgium	Board of directors	Decision making	At least 10 out of 18
Public ports	Brazil	Port Authority Council	Consultation	1 out of 16 (local) & 1 out of 16 (state)
Vancouver	Canada	Board of directors	Decision making	1 out of 11 (local) & 2 out of 11 (province)
Piraeus	Greece	Board of directors	Supervision	1 out of 10 members
JNPT	India	Board of trustees	Supervision	1 out of 16 (region)
Nagoya	Japan	Port Assembly	Decision making	15 out of 30 (prefecture) & 15 out of 30 (local)
Busan	Korea	Port Committee	Supervision	Nominates all 11 members
Marseille	France	Supervisory Council Development Council	Supervision Consultation	4 out of 17 12 out of 40
Riga	Latvia	Board of directors	Decision making	4 out of 8
Ventspils	Latvia	Board of directors	Decision making	4 out of 8
Liepaja	Latvia	Board of directors	Decision making	3 out of 9
Manzanillo	Mexico	Board	Consultation	1 out of 8
Zeeland	Netherlands	Board of governors	Decision making	3 out of 4 (local) & 1 out of 4 (region)
Gdynia	Poland	Supervisory Board	Supervision	4 out of 9
Algeciras	Spain	Management Board	Decision making	5 out of 18 (region)
Barcelona	Spain	Management Board	Decision making	4 out of 16 (region) & 2 out of 16 (local)

Note: Local representation refers here to representation at the municipal level, unless otherwise stated. Regional representation refers to the relevant regional government levels in the country, such as region, state or province.

Source: ITF, 2017

Local governments are typically involved in the appointment of the port president and board members, the budget of the port and the long-term strategy of the port. In various cases, discussions on these items have to be approved by the mayor, a vice-mayor dedicated to the port and/or the municipal council. For example, the directors of the ports of Los Angeles, Long Beach, Oakland, San Francisco and San Diego are all nominated by their respective mayor and approved by their respective city council. The need for local government approval for these three issues is often linked to local ownership: if the local government owns the port, it usually also has influence on the budget or the long term strategy, even if the port has been corporatised and operating at arm's length from the local government, as in Rotterdam. In most nationally owned ports, such as Marseille (France) or Busan (South Korea), it is the national government that has this influence on budget and strategy: the local influence is considered guaranteed by the local representation in ports institutions, such as the board of directors of the supervisory board.

Ports are often direct revenue sources of local government; as such, the competitiveness of the port can be considered in the direct interest of the local government administration. There are various sorts of direct port revenues that could accrue to local governments: from profits and dividends, to concession income from land use by the port (in case the port land is owned by the local government), to special taxes or fees that the port has to pay to the local government. These revenue sources are in most cases defined in legislation; these stipulations could be in relative terms (e.g. a certain percentage of the profits), in absolute terms (a certain amount of dividend per year), and some ports might have minimum thresholds (a minimum percentage of dividend) (OECD/ITF, 2017). The local influence over a port is generally larger when the local government invests in the port infrastructure or infrastructure that is related, such as hinterland connections, for example in France where now approximately a third of the public investments in ports is done by local government authorities (OECD/ITF, 2017).

4.3.5. Port authority reforms

The last decades have seen a wide array of port reforms throughout the world. Despite considerable variety between countries, many countries have engaged in reforms pointing in similar directions, namely privatisation of operations and corporatisation of port functions. Privatisation of operations has often taken the form of developing public authorities that act as “landlords”, that is: creating the right conditions for private operators granted with concessions or licences to operate part of the port. At the same time, most ports are no longer part of government administrations, but have become entities more independent from government administrations, often corporations. In a number of countries, regional or local governments have taken over the responsibility for a certain number of ports, in particular ports that do not have national or international roles (OECD/ITF, 2017).

The 2016 Italian port reform seems particularly relevant for Chile, considering that it aimed to solve similar challenges. The background of this reform were inefficiencies and fragmentation of the Italian port system, redundancies and function overlap, a lack of overarching strategic planning, neglected land-side development, instability and frequent conflicts of interest in local port governance, and a fierce climate of competition between Italian ports, broadly resulting in a waste of resources (Ferrari et al., 2015). Further, the average size of Italian port authorities – mainly in comparison with other European competitors – did not seem fit to attract major investments or to exploit potential economies of scale.

One of the most revolutionary proposals was to replace the port authorities with regional Logistics Authorities entrusted to control, plan and regulate the transport and logistics infrastructures and freight flows in a specific economic region. In this last proposal, only a few functional logistics authorities would have aggregated all the seaports, inland ports and other infrastructures in a unique public body, having the chance to coordinate all the needed structures in order to optimise the freight flows (Ferrari et al. 2015).

Even if this proposal was not retained in the end, the Italian port reform consolidated the port sector and created more links with inland logistics. The Italian ports decree includes the abolition of port authorities, creating port system authorities based on the Italian “core ports”, grouping together 57 ports of national importance into 15 port system authorities. The reform also increased the focus of ports on their links with the hinterland and dry ports (“interporti”), especially via better railway connections. Each port system authority is also equipped with a national coordination board in order to guarantee that local decisions are consistent with the national ports strategy (OECD/ITF, 2018).

4.4. IMPLEMENTATION ACTION PLAN - IMPACT OF SHIPPING ON MARITIME LOGISTICS

POLICY ACTION 5:

Continue applying the current regulation on vertical integration

Chile could be considered a good practice on the regulation of vertical integration of shippers and shipping companies with the ports sector: Chilean policies can be lauded for their attempts to avoid possible discrimination of shipping companies that compete with the integrated shipping-terminal company. Recently, a discussion has emerged on extending the threshold to 80% for the tender of Terminal Mar - Puerto de Gran Escala. However, it is not very clear how this threshold could be combined with the ambition to avoid risks of abuse of market power.

In addition, implementation of the policy to limit the negative effects of vertical integration also requires monitoring of the service quality of terminal operators, in particular with regards to the service they provide to shipping companies that compete with their mother companies. It would also incorporate the need to monitor the services of the terminal towards the terrestrial interface (road and rail), in order to clarify that there are no anticompetitive behaviour of the terminal towards the truck or rail service providers that were not integrated with the shipping companies associated with the terminal or relevant users thereof.

Objective:

- Avoid abuse of market power via vertical integration in the maritime logistics chain.

Actions:

- Retain the currently applied threshold of 60% for vertical integration of shipper/carrier and terminal.
- Intensify monitoring of service quality of terminal operators, both on the maritime and the landside, to ensure that no discriminatory or anti-competitive behaviour takes place. This means that a set of indicators would need to be developed that can capture this. Examples include waiting times, turn-around times, fees, surcharges etc., differentiated per type of client and service provider. The set of these indicators would require a regular update in line with the technological developments of the industry to avoid obsolescence of the performance indicators in the future.

Institutions/stakeholders involved:

- Vertical integration threshold: Tribunal for the Defence of Free Competition (TDLC).
- Monitoring service quality: terminal operators, ports, *Sistema de Empresas Públicas* (SEP), Ministry of Transport and Telecommunications.

Policy instrument:

- For the vertical integration threshold: the obligation to submit the terminal concession agreement to TDLC.
- For monitoring service quality: instructions in the call for tenders for new terminals, terminal concession agreements between public ports and terminal operators.

Milestones, indicators and evaluation:

- A meaningful service quality monitoring system in place for all terminals in public ports.

POLICY ACTION 6:

Repeal block exemption for liner shipping consortia

Repeal of the block exemption for liner shipping consortia was recommended by the Tribunal for Free Competition in 2012, but not implemented by the Chilean government. A strong case can be made for abolishing all shipping-specific exemptions from competition regulation. Liner shipping does not have unique characteristics that justify exemptions from competition law, neither for conferences nor for alliances. Generic antitrust rules should apply to all agreements between liner shipping companies, as for any other industry, with regard to the cooperation that is allowed. The Chilean competition authority could increase its possibilities for supervision of the sector by requiring filing of consortia agreements and regular updates on changes related to them and their performance. In this way, the authority would be able to scrutinise possible risks of monopsony and market discrimination.

Objective:

- Promote competitive market conditions for shipping in Chile by repealing shipping-specific exemptions from competition law, in particular for conferences and consortia.

Actions:

- Amend art. 5 of the Merchant Marine Law (DL No 3059, Ley de Fomento a la Marina Mercante), in such a way that Chilean shipping companies and shipping companies operating in Chile may no longer participate in shipping conferences. Participation in pool agreements and consortia governing and rationalising services would still be allowed, as long as these would be in line with rules of generic Competition Law, as expressed in Decree law No. 211 of 1973.

Institutions/stakeholders involved:

- Ministry of Transport and Telecommunications, shipping companies and their representative organisations.

Policy instrument:

- Ley de Fomento a la Marina Mercante.

Milestones, indicators and evaluation:

- Actual repeal of the shipping-specific exemptions.

POLICY ACTION 7:

Refining the focus of Chile's national port strategy

National ports policies can help to set out the main freight transport corridors that will be provided with public funding. As highlighted in the 2018 OECD Economic Survey of Chile, the national ports policy could be refined by integrating the regulation of public and private ports and increasing the coherence between the different frameworks for public and private ports, which have led to a proliferation of private ports in recent years (OECD, 2018).

Objective:

- Develop a comprehensive national port system in which public and private ports are either complementary, or able to compete under equal conditions.

Actions:

- Refine the Chilean ports policy in a comprehensive ports strategy that explicitly deals with the articulation between public and private ports. Such a strategy could indicate strategies for better alignment of private and public ports policies, by improving the coordination between the different ministries responsible for these ports, to avoid that both port systems develop independently from each other, as is currently the case (OECD/ITF, 2016). This strategy would have a national angle, but should also be built on regional visions and master plans per coastal bay.
- Reinforce CONALOG, the national commission for development of logistics, by granting it responsibilities for approving – or blocking - port terminal concessions and maritime concessions.
- Create a national logistics and ports authority to define a strategy and implement development plans for ports and logistics as proposed by a technical commission that reported in 2019 (Informe Comité Técnico de la Comisión Investigadora de la Ley No 19 542 Apoyo, 2019). Such an authority and strategy could help create convergence of the frameworks for both categories of ports.
- Amend the legal and regulatory frameworks for public and private ports.

Institutions/stakeholders involved:

- Ministry of Transport and Telecommunications, Ministry of Defense, Directemar, public and private ports.

Policy instrument:

- Ports Law 19 542 (regulating public ports) and DFL 340 (regulating private ports).

Milestones, indicators and evaluation:

- Clear indications of better coordination of both port systems, e.g. in terms of development of port volumes (avoiding capture of third party shipments previously handled by public ports by new private ports), the development of joint and not parallel hinterland connections and complementarity of port services (different specialisations or connections of the public and private ports in the same region).

POLICY ACTION 8:

Develop inclusive port-city governance

Consolidation and increased ship size generate impacts in ports that spill over to port-cities, in the form of increased road congestion and environmental damages (OECD, 2018). Various policies exist to resolve these issues, but the challenge for implementing such policies is coordination between ports and cities, which has been problematic in Chile. Political discussions have focused recently on two additional mechanisms: representation of local governments in ports, and providing local governments with a share of the revenue of the public ports in their jurisdiction. Initiatives to develop more inclusive port-city governance should be stimulated.

Objective:

- Establish a more coordinated approach between port and city on the port-city interface, which includes port-related traffic, pollution and value creation in port-cities. Achieve this better port-city coordination by developing more inclusive port-city governance arrangements.

Actions:

- Evaluate the instrument of Port City Committees and propose ways to strengthen its functioning and implementation. As part of an effort to increase harmonious port-city relations, port-city representatives could be included in the boards of port authorities.
- Develop a policy package of national government and port-cities to deal with the proposed mechanisms of representation of port-city municipalities in ports, and providing local governments with a share of the revenue of the public ports in their jurisdiction. Part of that package would be balancing rights and obligations, and an agreement that guarantees that these port revenue shares for port-cities would be utilised to address the externalities of port activity, such as road congestion and air pollution. Such revenue shares could consist of a share of the net profit of the port, or amounts related to cargo type, cargo volume, cargo type or externalities.

Institutions/stakeholders involved:

- Ministry of Transports and Telecommunications, Ministry of Finance, Municipalities, public and private ports.

Policy instrument:

- Port City Committee.
- Ports Law and tax regulations.

Milestones, indicators and evaluation:

- Well-functioning Port City Committees, making progress on main port-city interfaces: reducing port-related congestion, emissions and noise.
- Inclusion of port-city representatives in port boards.
- Development of port-city plans on resolving port externalities, including port-related road congestion and air pollution.

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Well-performing ports are of strategic importance to Chile, a country that is highly dependent on external trade and has more than 4000 km of coastline. Chile's exports account for 38% of GDP, and about 98% of its external trade is handled through ports. Chile's rapid economic development is reflected in strong growth of container traffic and port volumes, with Chilean ports handling 4.9 million standard containers (TEUs) in 2018.

Ports and the logistics activities related to ports are impacted by developments in the shipping sector. In Chile, the main developments in liner shipping over the last decade have been industry consolidation and vertical integration. These trends have had a significant impact on maritime logistics and on risks related to discriminatory behaviour, unfair price competition and buying power. In order to improve the performance of ports and maritime logistics, Chile will need to find a balance between the different parts of the maritime logistics chain – the port, its maritime foreland and terrestrial hinterland - that promotes competition. In addition, measures to reduce the precariousness of casual port labour conditions will be beneficial both for workers and for the port system as a whole, since this could increase stability and performance of port labour and therefore its productivity.

At the request of the Government of Chile, the OECD conducted a detailed Assessment that lays out a number of suggested policy actions based on international practices to further improve the ongoing efforts to improve the performance of the Chilean port system, while promoting the welfare effects related to it. To help address the cross-sectoral nature of key port issues, the Assessment was prepared by an OECD multidisciplinary team with experts from the Economics Department and the International Transport Forum. The OECD team worked closely with a number of Chilean institutions, including with key government institutions, private sector, research institutions and civil society.

