

# FVL Cost Index

Collating Indices across Shipping, Trucking, Rail & Compounds to build a tool for ECG Members

Part 1:

**Shipping & Trucking** 





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- Time Charter Costs
- Asset Costs (New Build)
- Port Costs



#### **Understanding Trucking Costs**

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- Tolls & Taxes
- Asset Costs (New Build)



#### How to use the Index

- Combining Indices
- FVL Cost Index for Shipping
- FVL Cost Index for Trucking

**Special Thanks to...ECG Members** 



Note: Fuel costs are not included in this analysis











# **Understanding Indices**

#### What is an Index?

An index is an information source that can be used by corporate decision makers to observe trends over time. An index is useful in allowing us to compare data against a <u>baseline</u>.

What is a Baseline? A time period chosen to reflect regular and routine conditions.

**Why use an Index?** Primary function of an index is to provide a baseline to measure performance against, this is benchmarking.

Economists & business analysts frequently use index numbers when making comparisons over time. An index starts in a given year, the base year, at an index of 100. In subsequent years, percentage increases push the index number above 100, and percentage decreases push the figure below 100. An index of 102 means a 2% rise from the base year, and an index of 98% means a 2% fall.

#### Values of Indices:

An index value of 100 indicates that the result exactly matches the baseline average.

An index value of 200 indicates that the result is double the baseline, or a 100% increase to base.

An index value of 400 indicates that the result is 300% higher than base.

An index of 50 indicates that the result is half the baseline average.

Therefore, broadly speaking an index less than 90 or over 110 is considered different enough from the baseline average and <u>demands attention</u>.

Step 1: Building an Index using the Simple Aggregative Method



Step 2: Weighting an Index using Laspeyre's Index: where fixed weights of base year are introduced.













# Creating a Cost Index for FVL

Cost of Basket in 2022 (Current Year)

Cost of Basket in 2019 (Base Year)

X100 = Cost Price Index

Shipping Basket:
Labour Costs + Asset
Costs(incl. Maintenance) +
Port Costs + Charter Costs

Trucking Basket:
Labour Costs + Asset
Costs (New Build) +
Tolls & Taxes



- Index Based Pricing is a tool for contract negotiations to enable buyers and sellers to enter longer-term contracts with less volatility & hassle
- Cost Index for FVL will help protect margins by offering a transparent pricing mechanism















# Labour Costs

Crew Costs & Stevedoring Costs





### International Bargaining Forum

The International Bargaining Forum (IBF) is the forum that brings together the ITF and the international maritime employers that make up the Joint Negotiating Group (JNG)



#### How does the IBF operate?

Negotiations take place every two years for the IBF framework agreement. Once the framework agreement has been negotiated, ITF affiliated unions begin local negotiations with companies in their country. These local negotiations result in national and sometimes company level IBF agreements. While the entitlements may vary slightly, all IBF agreements must be within the IBF framework agreed for the period.

IBF agreements are only available to shipping companies that are members of the JNG and can only be signed by ITF affiliate unions.

#### **Entitlements**

The IBF framework agreement incorporates three main elements: social, professional and financial.

- Social elements deal with seafarers' quality of life, including leave, access to telephone and email, duration of employment and medical cover for families.
- Professional elements include sickness and injury pay, compensation, savings or provident funds, provisions for service in war zones, re-engagement after pregnancy, protection for abandoned seafarers, training, security and safe manning scales.
- Financial elements include pay, employment stability, union development and access for ITF representatives to vessels.



seafarers

### ILO body adopts new minimum monthly wage for seafarers

Shipowners and unions agree new three-year minimum wage deal for Splash The meeting agreed to raise the ILO minimum basic wage for an able seafarer to US\$658 as of 1 January 2023. The rate will be increased to US\$666 as of 1 January 2024 and to US\$673 as of 1 January 2025.

#### Deal agreed to increase minimum monthly wage for seafarers

Three-year deal after talks involving ICS and ITF will see minimum monthly wage rise incrementally to \$673 by 2025

ITF Seafarers disappointed with new circular on AB basic



for the minimum basic wage of an AB will go up to \$641 a month

Seafarers awarded pay increase of 4.5% in

2022-2023



# Salary Increase for Seafarers Over the Next Two Years



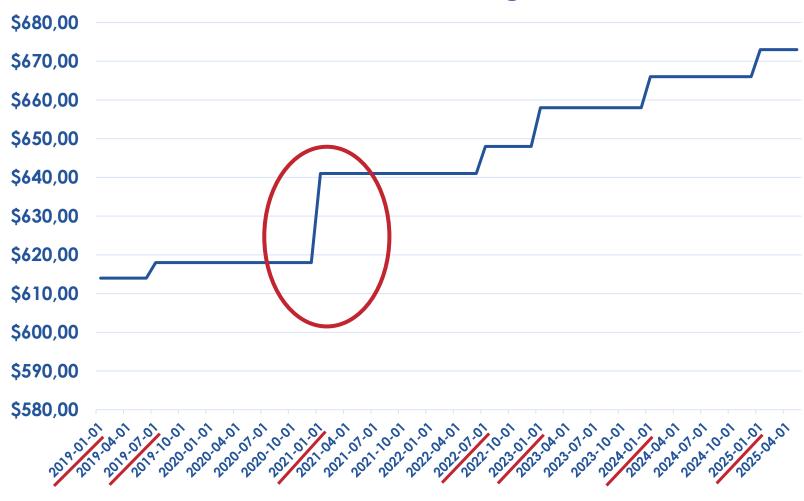
19 Aug 2022 | PRESS RELEASE

ITF inspectors recover USD\$37.6m in unpaid wages for seafarers, despite Covid restrictions

Last year, union ship inspectors recovered more than USD \$37 million in unpaid wages owed to seafarers, the International Transport Workers' Federation (ITF) has... After observing the sacrifices many seafarers have endured during the Covid-19 pandemic in addition to the current contracts expiring, employers and unions met for negotiations between Sept 1-3rd, to set a new agreement which will give seafarers a wage and compensation increase of 3% which will begin on January 1, 2022 and an additional 1.5% increase that will come into effect on January 1, 2023.



### Seafarers Minimum Wage Hikes, USD



Source: ECG Business Intelligence,	ITF,	ILO

Date	Base Minimum Monthly Wage (Cadet)
2019-01-01	\$614.00
2019-07-01	\$618.00
2020-01-01	\$618.00
2021-01-01	\$641.00
2022-07-01	\$648.00
2023-01-01	\$658.00
2024-01-01	\$666.00
2025-01-01	\$673.00

Seafarers are offered base crew wage plus premium perks such as standby wage top ups, airfares, crew food costs, pension provisions, medical coverage, clothing etc.





## Crew Cost Index (CCI)

Crew Cost Index 105.54







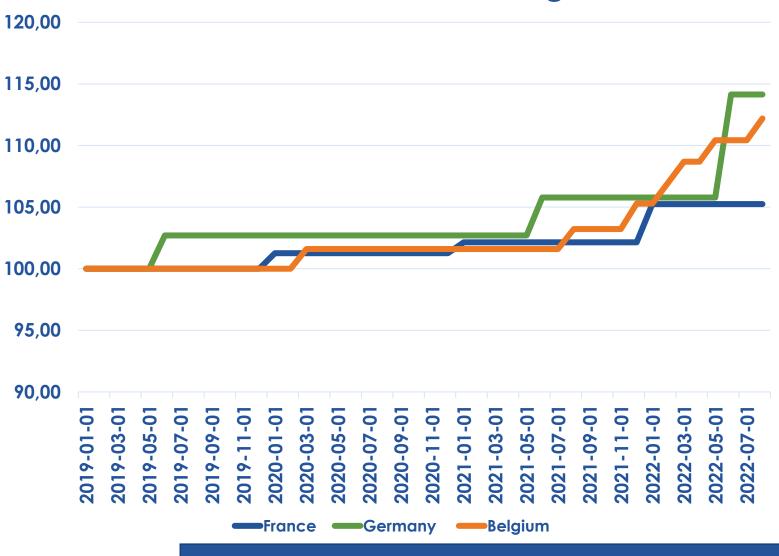








### **Evolution Stevedore Wages**



Base rates set regionally by associations, then approved by unions.

Country	Data Source	Link
France	Légifrance	https://www.legif rance.gouv.fr
Belgium	Groupe S	https://www.grou ps.be/fr/legislati on- sociale/chiffres/ adaptations- salariales
Germany	Ver.di	https://www.verd i.de/presse/press emitteilungen

Index: 2019 Wages set to 100



ECG Business Intelligence has collated the base stevedore rates, indexed 01.01.2019 as base set to 100.



## **Stevedoring Cost Index (SCI)**

Stevedoring Cost Index 110.38







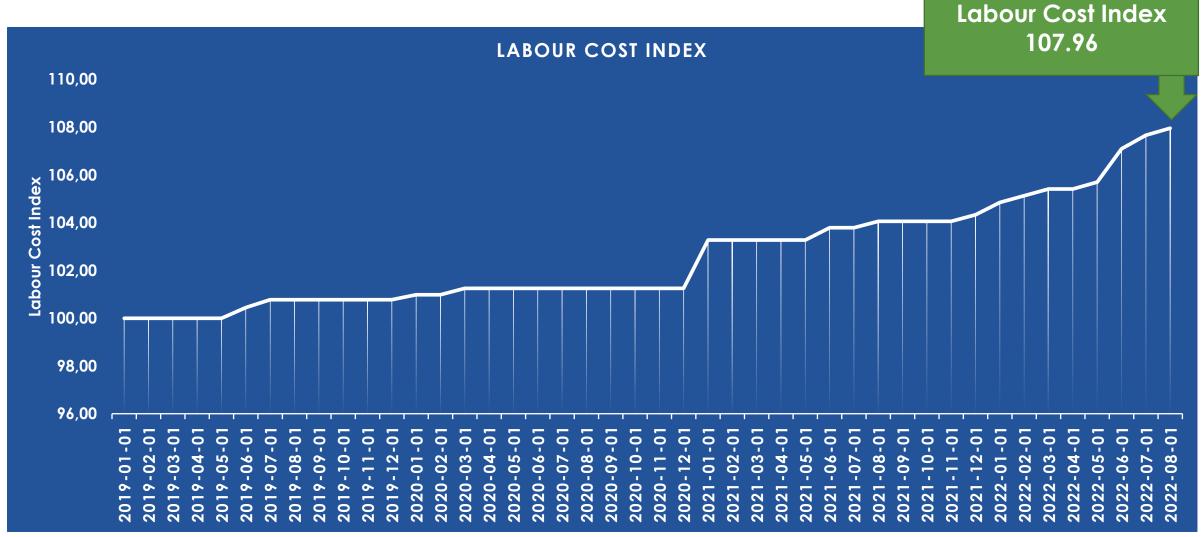








## Labour Cost Index (CCI + SCI)















# Charter Costs\*

PCTC Rates\*\*







BARGE



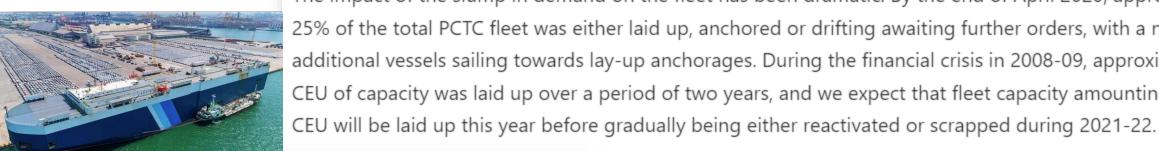




## **Covid hits PCTC Rates:** vessels sit idle

# Covid-19 pushes PCTC demand to

the curb



The impact of the slump in demand on the fleet has been dramatic. By the end of April 2020, approximately 25% of the total PCTC fleet was either laid up, anchored or drifting awaiting further orders, with a number of additional vessels sailing towards lay-up anchorages. During the financial crisis in 2008-09, approximately 145k CEU of capacity was laid up over a period of two years, and we expect that fleet capacity amounting to 150k

### Idle tonnage in deepsea auto trades soars as demand slumps

THE DEEPSEA VEHICLE trades are being ravaged by one of the worst slumps the sector has ever experienced, with up to 200 pure car and truck carriers thought to be idle as operators struggle to cope with falling cargo volumes.

May 27, 2020

Monday May 25, 2020



LENIUS WILHELMSE

Time Charter Rates for PCTC's dropped to record lows in Q2 2020, but by year end rates were rising. By Q3 2021 rates began jumping faster, and Q2 2022 now marks a peak in PCTC time charter rates. Charters are now setting these rates for at least 1 year period with newer vessels stating rates are fixed for 5 year periods from May 2022. But smaller, older vessels are reducing rates on an annual basis after the first year at todays rates as new builds expect to enter the market in 2024.





# **PCTC Rates Rocketing**

Wallenius Wilhelmsen Sees Strong Demand for Ro-Ro Shipping

August 16, 2022

TradeWinds

'Capacity is expensive': Hoegh Autoliners wary of chartering in more ships

But Norwegian owner admits it needs extra car carriers to meet expanding demand

11 February 2022



**Gram Car Carriers seals charter deals at improved** rates 21 Jul 2022 Lloyd's List

Two vehicle carriers extended by current operators, while new charter party arranged for a third

## **Car Carrier Prices Are Hot and Getting Hotter**



September 8, 2021



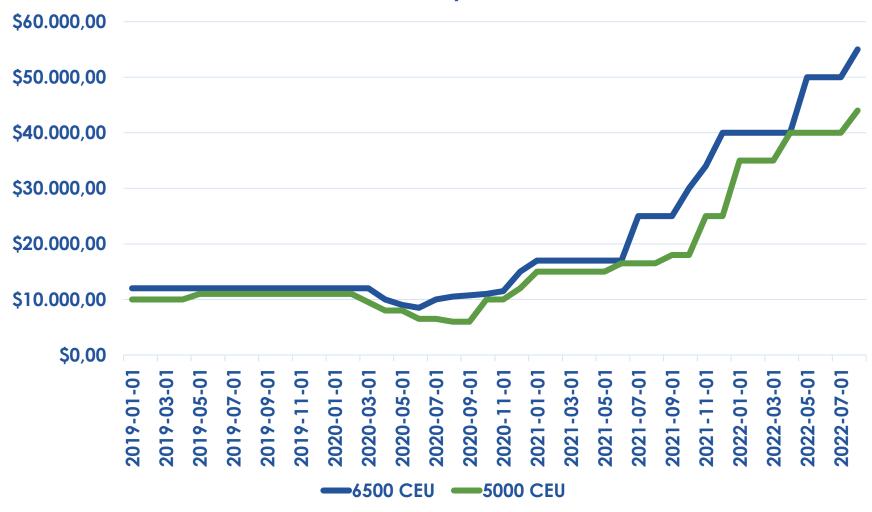
Vehicle carriers: Positivity despite auto parts anxiety







#### Time Charter Day Rates, PCTC



Current PCTC
Rates are rising,
but our forecasts
estimate that rates
will fall from 2024
when capacity
enters the market.

CEU: Car Equivalent Unit

Source: ECG Business Intelligence





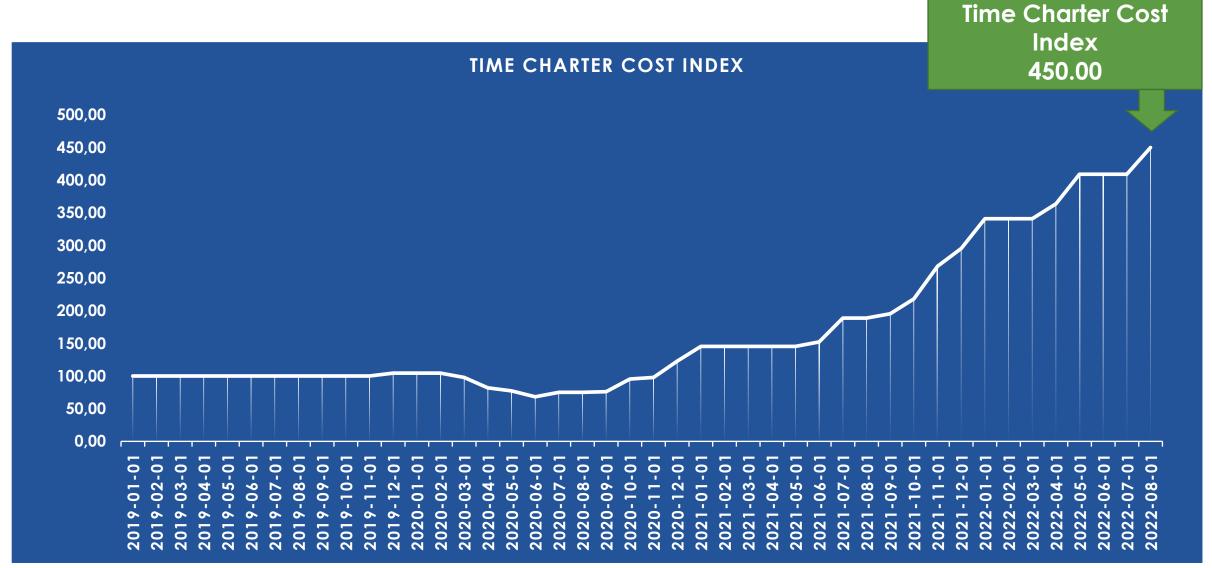








### Time Charter Cost Index















# **Asset Costs**

New Build Rates

### TRUCK



#### SHIP



#### COMPOUND



#### RAIL



#### BARGE





## PCTCs move to dual fuel & LNG



Japanese yards aim to take prices to new highs as steel prices surge again

#### **Car Carrier Asset Prices Move Into The Fast** Lane International Shipping News 0 08/09/2021

Car Carrier orders and values September 8, 2021 hit new highs

ShipInsight Where maritime regulation and technology meet

Japanese shipyards have raised tariffs to \$100 million for dual fuel LNG 7000CEUs, up by \$10 million compared to last year. Chinese yards have followed but maintain a healthy discount quoting \$88 million for an equivalent spec. Rapid steel price inflation combined with a post Covid supply vacuum, have skyrocketed newbuild prices following a barren period of low orders stretching back to 2016. All 40 Vehicle Carriers confirmed this year (56 including options) are dual-fuel LNG powered, forming a premier PCTC/LCTC asset class for an electrified car market.



SAIC Anji adds three LNG-fuelled car carrier newbuildings to its growing fleet



### **China's BYD mulls order for PCTC** newbuildings worth close to \$700m

Automaker looks at building up its own car carrier tonnage to meet growing export volumes









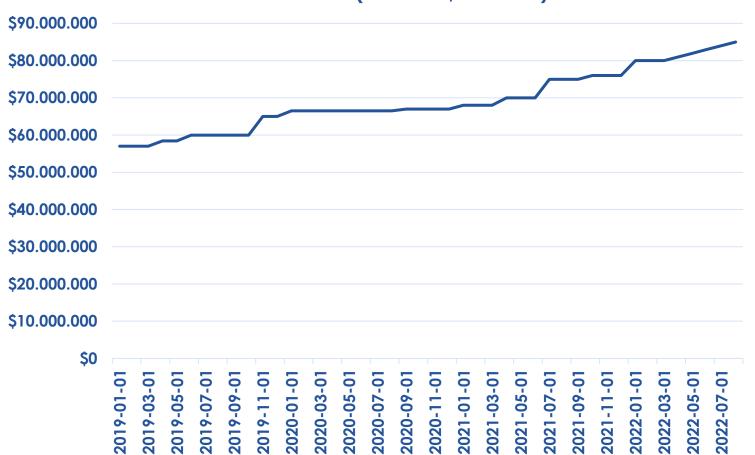






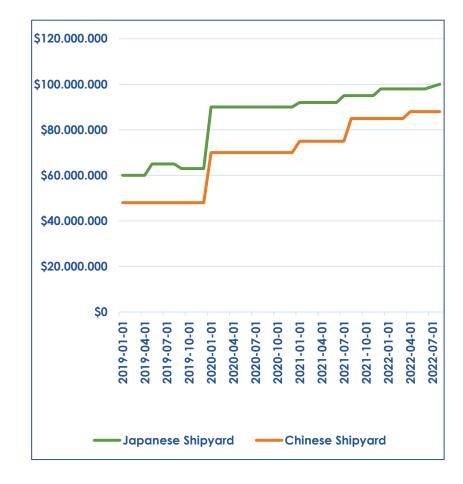
### **Asset Costs: New PCTC Cost**





# Japanese Shipyards hit USD 100 million for 7000 ceu new builds in 2021/2022

#### Japanese & Chinese Shipyard new PCTC Rates









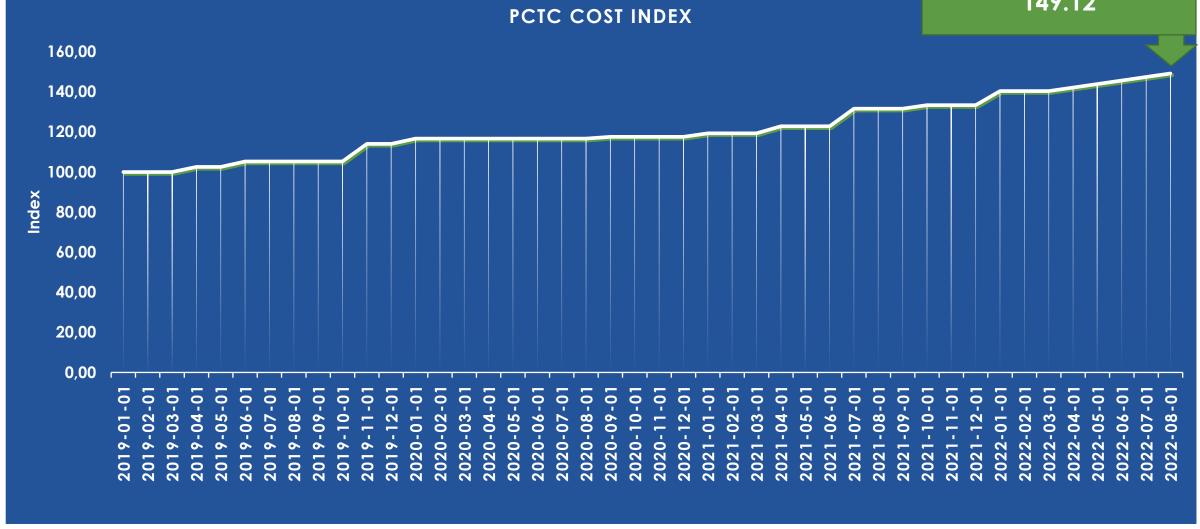






### **PCTC New Build Cost Index**

PCTC NB Cost Index 149.12















# Port Costs

Port Dues\*, Technical Services \*\*



RAIL

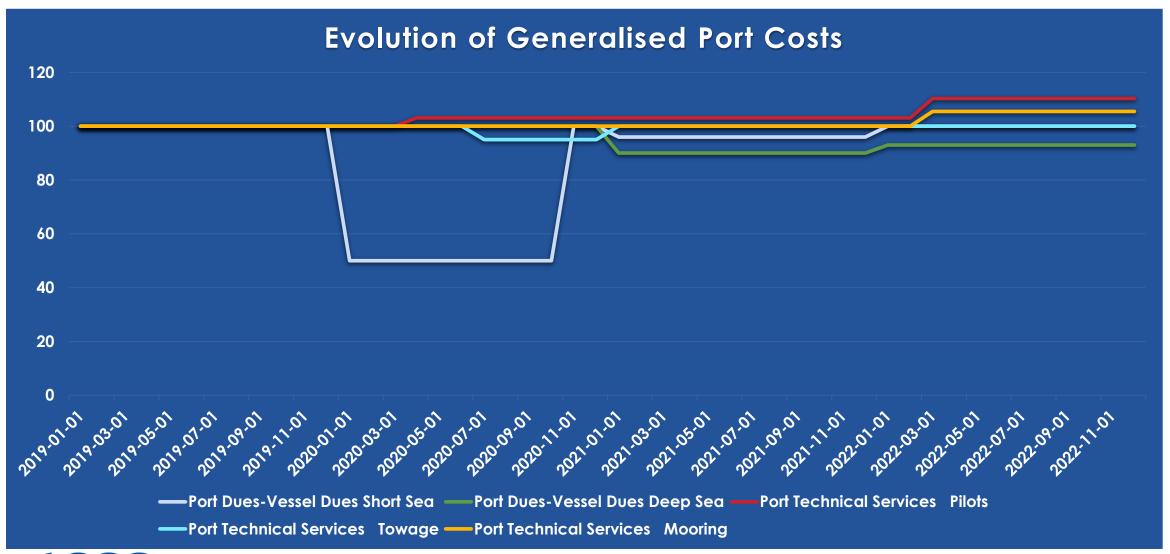


BARGE





## Example















### Port Cost Index \_ Europe

Port Cost Index 109.07



General Port Costs = Port Dues(Vessel Dues)<sub>Short Sea, Long Sea</sub> + Technical Services (Pilotage + Towage + Mooring)<sub>Short Sea, Long Sea</sub> + Others



























# **Understanding Costs: GTC Trucking**



GTCij is defined as itinerary Iij, distance in km (da) and travel time in minutes (ta)

ightharpoonupTaxes (Taxi) cost of vignettes

 $GTCij = MinIij \in Iij(DistCij + TimeCij) + Taxi + Vignettesij$ 

 $DistCij = \sum (\sum eak \ d \ a \in I \ k ) ij \ da =$  $\sum$  (fuela + tolla )  $a \in Iij$  da + (tireCS) + maintCS)(fuela da),

- ea d (in EUR per km)
- fuel costs (fuela),
- toll costs (tolla)
- tire costs (tireCS)
- maintenance (maintCS)

 $\sqrt{TimeCij} = \sum (\sum eak \ t \ k) ta =$  $\sum a \in I$  (1 + amortFinCS + insCS + indCS) (talabij)  $a \in ij Iij$ 

Main Cost

- labour cost of the driver (talabij)
- amortization and financing costs (amortFinCS)
- insurance (insCS)
- indirect costs (indCS)



Costs related to maintenance and tyres represent a

relatively small share of the total transport costs. Fuel Costs not covered in this ECG analysis











# Labour Costs

**Driver Costs\*** 



SHIP



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09.08.2021

France raises minimum hourly wage for truck drivers

22.04.2021 trans **NFO** 

Austrian HGV drivers' wages to increase by 5% from January

trans **NFO** 

Truckers in Belgium offered company shares and other benefits

04.11.2021

amid driver shortage

trans. **NFO** 

Minimum wage for HGV drivers in Denmark has increased again trons NEO

EU report reveals pay-gap between Western and Eastern 05.03.2021 **European truckers** 

NEWS 10.01.2022

Mobility package: How should drivers' wages be set for international transports?



A recent report published by the Commission of the European Union shows that lorry drivers employed by Western European Hauliers typically cost 179% more than their Eastern European counterparts.

Drivers must be guaranteed a specific national minimum wage when posted. The EU Mobility Package lists specific modes of transport that will always be considered as posting of workers, e.g., cabotage and third-country driving. In some cases, Member



# Estimating road transport costs between EU regions

#### Table 2. EU average GTC cost components

Component	Percentage
Driver wage costs	42.1%
Fuel costs	21.1%
Ownership Taxes	0.6%
Vignettes and Tolls	5.9%
Other (time)	17.1%
Other (distance)	13.3%

Source: Own elaboration.

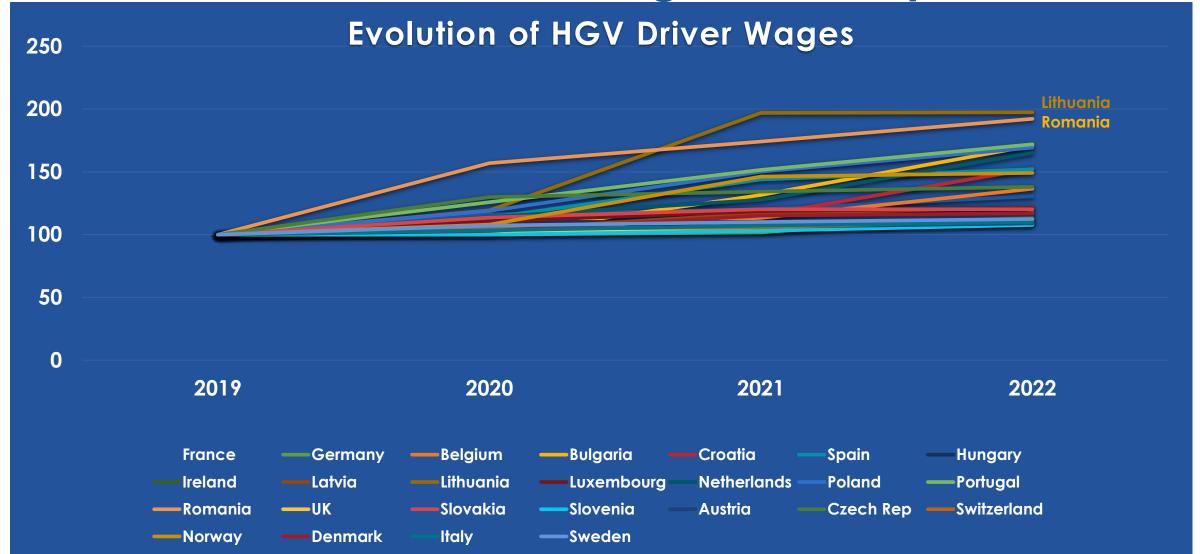
### Focus on Labour Cost Index

GTC = 42.1%(HGV Driver Cost) + Others

-	2019	2020	2021	2022
France	100	116.189	120.0728	130.5649
Germany	100	100	101.7632	117.3342
Belgium	100	103.8502	113.3694	136.4647
Bulgaria	100	100	131.5558	170.9663
Croatia	100	101.821	115.5093	152.608
Spain	100	113.2711	143.9482	152.0529
Hungary	100	110.1732	110.1732	115.556
Ireland	100	102.9787	105.9145	113.283
Latvia	100	103.5563	116.9014	121.6667
Lithuania	100	119.3558	196.9006	197.4932
Luxembourg	100	110.5344	118.7243	121.1666
Netherlands	100	113.9115	127.7643	165.0573
Poland	100	118.9723	150.1658	169.3038
Portugal	100	125.8099	151.5182	171.8991
Romania	100	156.9217	174.153	192.2582
UK	100	102.3192	103.1723	108.9379
Slovakia	100	113.5507	120.154	120.154
Slovenia	100	100	103.0498	107.6976
Austria	100	104.4796	106.0129	108.9922
Czech Rep	100	129.9553	134.2769	138.073
Switzerland	100	104.7831	105.7461	111.2546
Norway	100	108.0292	146.1575	149.1183
Denmark	100	102.9043	115.1239	117.0627
Italy	100	103.4179	107.1886	110.0652
Sweden	100	107.2626	110.049	112.3752



## **Evolution of HGV Driver Wages in Europe**















## Driver Wages Cost Index in Europe





Driver Costs = 80% Driver Wage + 20% Premium Perks











# Tolls & Tax Costs

Eurovignette, Road Tolls, Vehicle Taxes



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# Eurovignette Rate Increases took place 1 July 2019 & 1 January 2020

# The prices of Eurovignettes will increase in two stages. The first increases concern mainly older vehicles. trans.info

In Denmark, Luxembourg, the Netherlands and Sweden, domestic and foreign trucks of 12 tonnes or less travelling on the local motorways are subject to a toll in the form of the so-called Eurovignette. According to the German Forwarding and Logistics Association (DSLV), the Eurovignette tariffs will be raised in two stages – **on 1 July 2019 and on 1 January 2020.** 

### **July increases**

The increases from 1 July 2019 mainly concern older vehicles meeting the Euro 4 and lower emission standards. For example, the annual toll for Euro 4 vehicles with four or more axles will increase from the current €1,250 to €1,404. For Euro 3 vehicles with four axles or more, the rate will increase from €1,250 to €1,543, while the price of the daily vignette will increase from €8 to €12 for all categories.

### The second stage of price increases

On 1 January 2020, tariffs will increase for all Euro 5 vehicles. The annual toll for vehicles in this category with at least four axles will increase from €1,250 to €1,327.









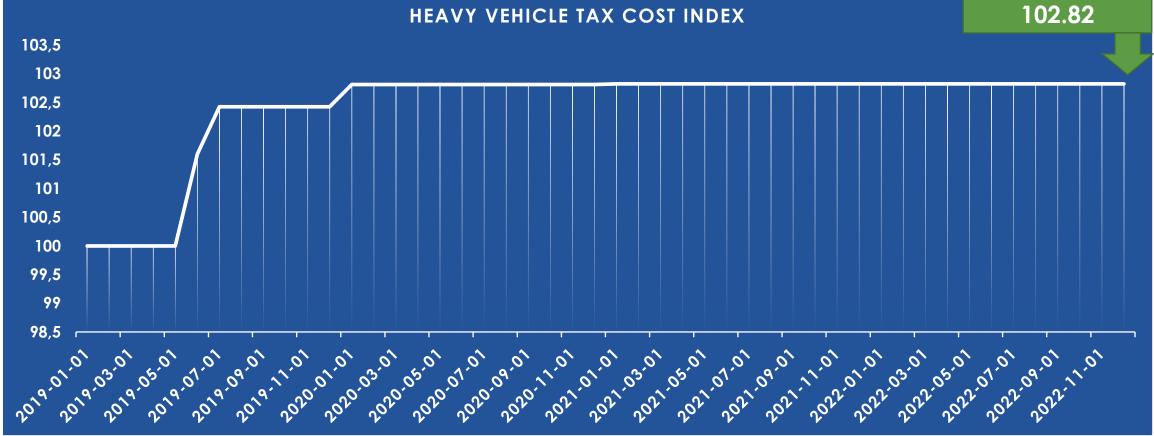




Note: Annual rates via Eurovignette cheaper than monthly rates etc.

# Toll Cost Index 1 (Eurovignette)

Eurovignette Cost Index 102.82



Heavy goods vehicles with a gross vehicle weight of minimum 12 tons have to buy the Eurovignette to use motorways and toll highways in the Eurovignette countries (Denmark, Luxemburg, the Netherlands and Sweden).













## **Understanding Toll Costs**

No

No

Only 8 toll free



Country	Free	Toll Link for vehicles over 3.5t
<b>₽</b> Latvia	No	lvvignette.eu
Lithuania	No	pirkti.keliumokestis.lt
Austria	No	asfinag.at
Austria Czech Rep	No	edalnice.cz
Hungary Slovakia	No	ematrica.nemzetiutdij.hu
Slovakia	No	eznamka.sk
Slovenia	No	evinjeta.dars.si
<b>≥</b> Switzerland	No	bazg.admin.ch
Belarus	No	ev.beltoll.by
Bulgaria	No	bgtoll.bg
Moldova	No	evinieta.gov.md
Romania	No	roviniete.ro

Toll

Free

Yes

Yes

Yes

Yes

Yes

Yes

Yes

Yes

Country

Cyprus

Finland

Kosovo

Malta

Monaco

**I**kraine

San Marino

Liechenstein

tolls.eu

https://www.tolls.eu/european-countries

https://hasmusteri.ptt.gov.tr/has.jsf

https://www.autopistas.com/tarifas-y-descuentos/tarifas/



Spain

Turkey

Tolls











## Belgium Tolls Rates up from 1 Jan. 2021

### Road toll changes in Europe in 2021 trans **NFO** Belgium

From 1st January 2021, new, higher toll rates apply in Wallonia. The reason for the rises is to adapt prices to the situation on the market, i.e. inflation and rising costs.

Flanders and Brussels raised charges in July this year, despite protests from the industry affected by the coronavirus pandemic. According to the Belgian transport organisation Febetra, raising prices during the coronavirus pandemic may prove 'deadly' to the industry, but the Belgian Government has not withdrawn from increasing the toll either in the middle of this year nor early next year.

### **TOLL IN BELGIUM**

Valid from 01.01.2022

The Wallonia region indexed its tariffs for the truck toll as of January 1st, 2022. In Flanders and Brussels these were already adjusted to the index on July 1st, 2021. For this reason, new toll rates are now in force throughout Belgium (as per January 1, 2022).

Since the introduction of road tolls in Belgium in April 2016, the Belgian regional governments have held two rounds of increases (July 2017 and July 2019). Since then, toll rates in Wallonia have risen by around 4.5%. In Flanders and the center of Brussels, toll rates even rose by approx. 9% and 8% respectively, with increases for Euro V/EEV in some cases well above 12%.

### Czech Rep. & Hungary Tolls rates up from 1.Jan. 2021

## **TOLL IN CZECH REPUBLIC**



Valid from 01.01.2021

With Decree 479/2020 from November 16, 2020, the Czech government has decided to change its toll system for vehicles over 3.5 tons to a three-part system, including also noise and pollution costs - additionally to the existing charge of the use of infrastructure. Starting from January 1 2021 the toll fee for motorways and certain first-class roads will therefore increase.

#### trans...**NFO**

### Changes to Czech toll system to include higher rates for trucks

The noise charge will be recalculated based on the axle number and the vehicle weight, while the air pollution charge – on the emission standard, the vehicle weight and the axle number. As the standard increases, the charge decreases.

Hungary Road tolls also increased in Hungary.
Therefore, from January 1, 2021,



Pursuant to Decree No. 45/2020. (XI. 28.) of the Minister for Innovation and Technology, from this point onwards, if the consumer price index for August in the year preceding the subject year as published by the Hungarian Central Statistical Office increases relative to August of the year two years preceding the subject year, the price of e-vignettes will be adjusted at a rate corresponding to such increase, calculated with a HUF 10 rounding accuracy. In respect of 2021, this represents a price change/price increase of 3.9%.













## France: Tolls Rates up in 2021 and again in 2022

## French toll road prices to rise at lowest rate in 20 years - sources



PARIS (Reuters) - Average toll road prices are set to rise 0.37% in 2021, two sources familiar with the matter said, the lowest hike in 20 years as inflation remains weak, and providing a boost to drivers next year if COVID-19 restrictions on movement ease.

French autoroutes are to increase toll fees from February 1st following a series of government decrees. Those driving heavier vehicles will feel the cost most. THE LOCAL @

The cost of using French motorways is set to increase from February 1st 2022.

31 January 2022

For longer journeys, costs will still rise by the planned 2% on average across the network. This average rise will apply across France on all motorway networks.







Motorway toll rates are revised every February 1. In 2021, the increase was only around 0.44% in most cases but is 2% on average this year, with some slight variations.

# Toll Cost Index 2 -Belgium, Czech Rep., France, Hungary Tolls Cost Index







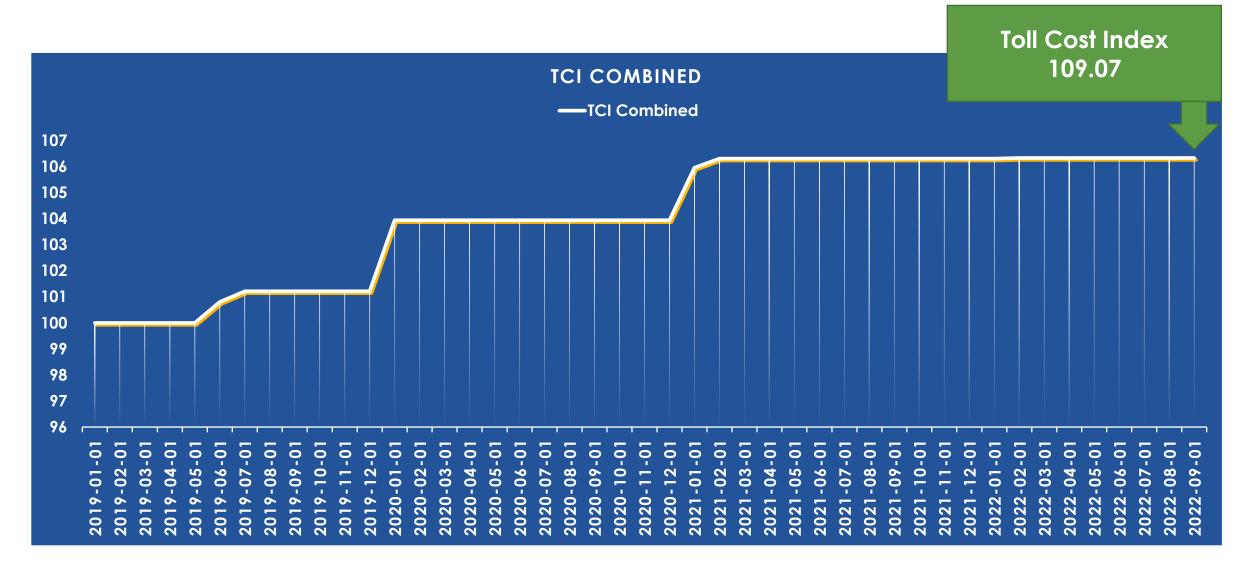








### Combined Toll Cost Index 1 + Tolls Cost Index 2

















## Transport taxes and charges in Europe

## **Understanding Costs\_ Taxes**

Tax/charge	Description
Taxes	
Fuel taxes	Consumption tax on transport fuel (including carbon/CO <sub>2</sub> taxes where relevant).
Electricity tax	Consumption tax on electricity charged for vehicles (including carbon/CO <sub>2</sub> taxes where relevant).
Vehicle purchase or registration tax <sup>1</sup>	One-off tax on the purchase or registration tax of a new vehicle.
Vehicle ownership or circulation tax	Periodic (e.g. annual) tax on the ownership of a vehicle.
Insurance tax	Indirect tax levied on general insurance premiums. For this study the tax on motor third party liability (MTPL) premiums and vehicle damage premiums is considered.
VAT on transport taxes/charges	Indirect tax levied on taxes/charges levied on road transport (e.g. fuel tax). This tax is only relevant for private passenger transport, as VAT can be reclaimed by companies.
Charges	
Distance-based road charges (tolls)	Charge for the passage along the road network.
Time-based road charges (vignettes)	Charge for access to road network for a specific period.
Tolls on specific parts of the network (e.g. tunnels, bridges)	Charge for passing a specific part of the road network.
Urban road pricing schemes	Charge for using urban roads.
ETS	CO <sub>2</sub> emissions of electricity production (used by electric vehicles) are covered by the EU Emission Trading schemes.

TILECG

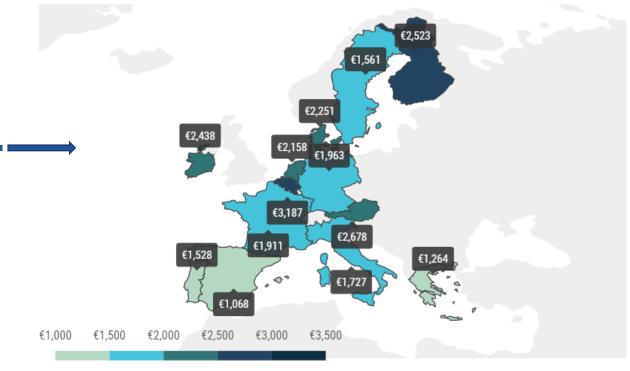
Business Intelligence

https://cedelft.eu/wpcontent/uploads/sites/2/2021/03/CE\_Delft\_4K 83\_Transport\_taxes\_and\_charges\_in\_Europe\_ Final.pdf

#### Average annual tax per vehicle in major EU markets

Per country estimates based on total number of vehicles in the fleet





https://www.acea.auto/figure/tax-per-motor-vehicle-major-eu-markets/

Includes ALL vehicles in fleet. To avoid



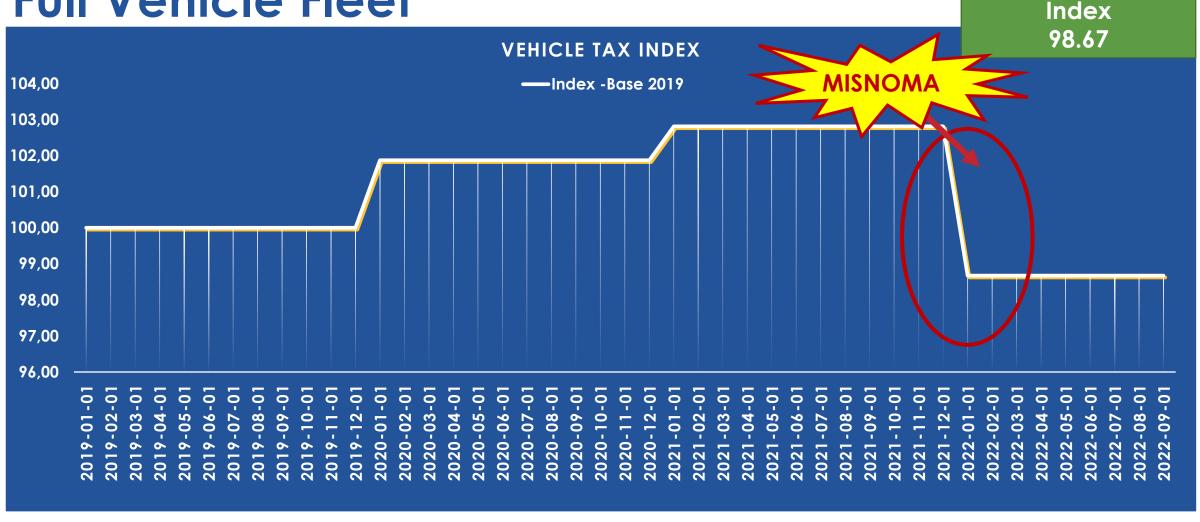








## Vehicle Tax Revenue Index – Full Vehicle Fleet



Overall Vehicle Fleet Composition has changed. More EVs + PHEVs in PV sector. MISNOMA for Heavy Vehicle Sector.













Tax Revenue

## Tax Cost Index (Trucking)\*















## **Asset Costs**

**New Build Costs\*** 



SHIP



COMPOUND



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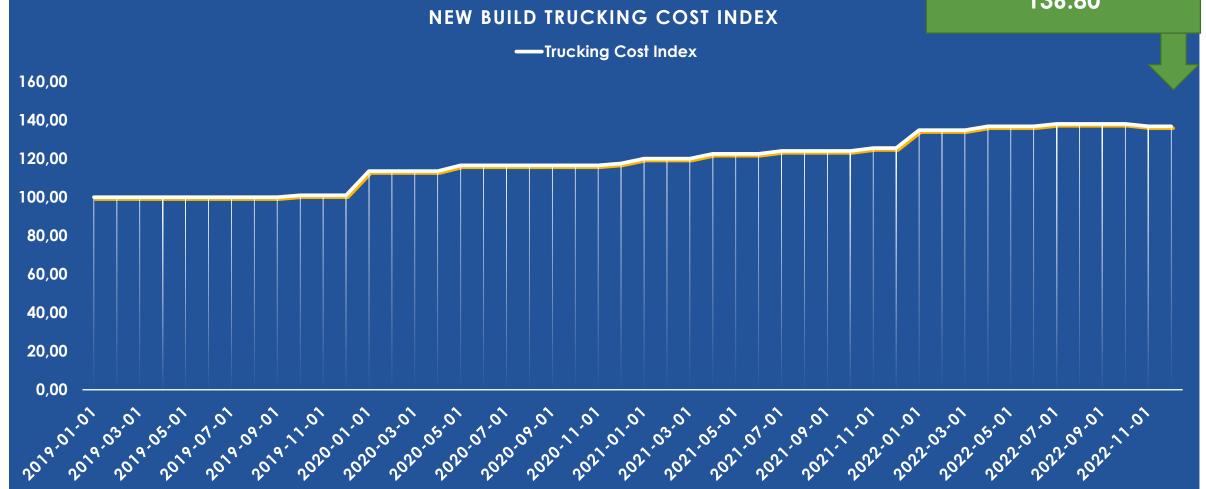






### **New Build Asset Costs**

New Build Index 136.80















## How to use the Index

Combining the indices







FVL Shipping Cost Index of 188.48 indicates overall costs involved



40,00

20,00

0,00

in shipping vehicles has risen 88.48% compared to base timeframe of 1.1. 2019.







COMPOUND



RAIL



BARGE



## Trụcking

Trucking Basket:

Labour Costs (Driver Wages) + Toll Costs (Eurovignette & Tolls)+ New Build Asset Costs + Others













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FVL Trucking Cost Index of 126.92 indicates overall costs involved in trucking vehicles has risen **26.92%** compared to base timeframe of 1.1.2019.

## Special Thanks to:























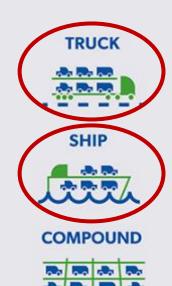








and many more...





BARGE



## Thank You

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