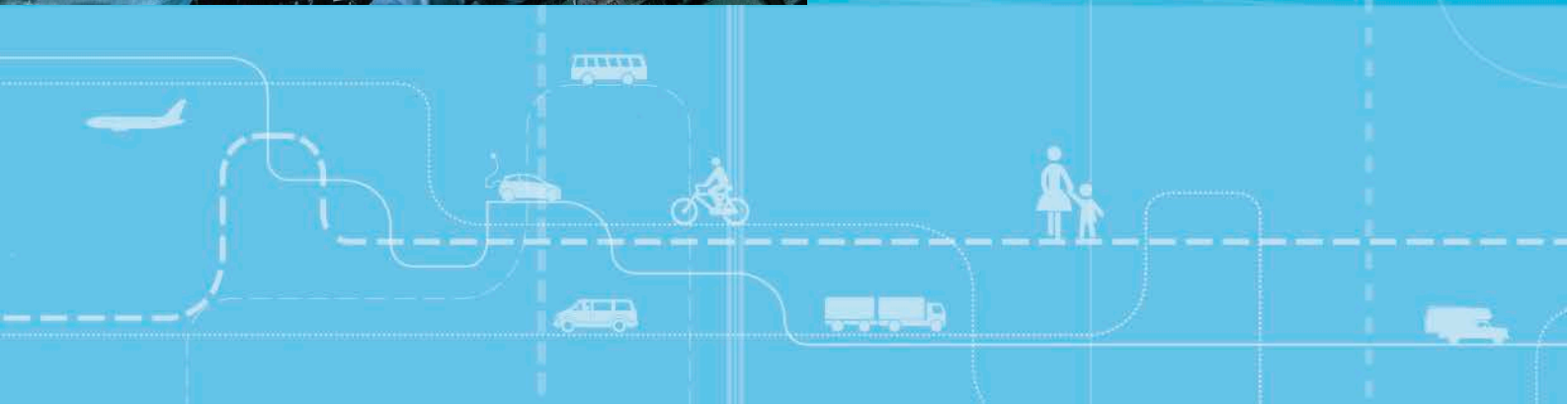


The organisation of the Norwegian aviation sector in a European context



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Inga Margrete Ydersbond

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Tittel: Organiseringsen av luftfarten i en europeisk virkelighet

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Sammendrag:

I denne rapporten analyserer vi hvordan norsk luftfart er organisert i dag og drøfter hvordan sektoren kan organiseres annerledes innenfor EØS-regelverket. Den finner at atypiske ansettelsesformer blant piloter og kabinansatte, som er blitt muliggjort etter innføringen av et felles luftfartsmarked innenfor EØS, virker å være et økende problem i Europa. Dette legger videre press på lønns- og arbeidsforhold i bransjen, og virker også å påvirke sikkerheten. Derfor trenger bransjen bedre reguleringer og bedre kontroll på nasjonalt, nordisk og EU-nivå. I rapporten foreslår vi en rekke tiltak. Disse inkluderer å: a) endre krav til offentlige anskaffelser, b) implementere referanseindeks eller allmenngjøring av tariffen, c) samarbeide med nordiske land om å forbedre arbeidsforholdene både i Norden og i Europa, d) stille sterkere krav i anbudene til FOT-rutene, e) styrke tilsynsmyndigheten og kunnskapen, f) forbedre det norske lovverket for de ansatte i luftfarten, og g) arbeide for ulike tiltak på EU-nivå.

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Summary:

This report analyses how Norwegian aviation is organised today and discusses how the sector could be organised differently within the framework of EEA regulations. The report finds that atypical employment among pilots and cabin crew, enabled by the introduction of a common EEA aviation market, seems to be an increasing problem in Europe. This puts pressure on pay and working conditions within the industry and appears to affect safety. Thus, the industry needs better regulation and better control at the national, Nordic and EU-level. The report suggests several actions. a) changing requirements in public procurement, b) implementing a reference index or ensuring general application of collective wage agreements, c) collaborating with other Nordic countries to improve conditions for both employees and companies in the aviation sector, d) introducing stricter procurement criteria for suppliers of PSO-routes, e) strengthening the supervisory authority and expertise of the Civil Aviation Authority, f) improving Norwegian legislation for employees in aviation, and g) working towards the implementation of various measures at EU-level.

Language of report: English

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Preface

Autumn 2021, the Institute of Transport Economics (TØI) was commissioned by the Norwegian Confederation of Trade Unions (LO) to study different models for the organisation of the aviation sector in Norway to find out: a) how fair employment practices and a productive working life can be ensured within a European regulatory context, b) compare the system in Norway with the systems in other relevant countries, as well as c) compare aviation with cases in other sectors, such as shipping and road transport. Spring 2022, LO commissioned TØI to make a translation to English of the report. The present report is thus a translation and update of the original Norwegian report.

- Thank you to all informants that have made themselves available for discussions and commented on the report, as well as shared relevant sources.
- Thank you to Katrine Hellum-Lilleengen, Tor Olav Nævestad, Askill Harkjerr Halse and Trond Arild Ydersbond for commenting the report.
- Thank you to the Norwegian Confederation of Trade Unions (represented by Stein Reegård), which has contributed with input and different source material, not least to subchapter 3.2 on employers' and employees' organisations.

The report is written by senior researcher Inga Margrete Ydersbond. Managing Director Bjarne Grimsrud acted as quality assurer, while Trude Kvalsvik was responsible for the layout and publication of the report. Anna Herzog has contributed with translation of the report for this English language version of the material.

Oslo, January/September 2022
Institute of Transport Economics

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Managing Director

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Summary

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This report analyses how Norwegian aviation is organised today and discusses how the sector could be organised differently within the framework of EEA regulations. The report finds that atypical employment among pilots and cabin crew, enabled by the introduction of a common EEA aviation market, seems to be an increasing problem in Europe. This puts pressure on pay and working conditions within the industry and also appears to affect safety. Thus, the industry needs better regulation and better control at the national, Nordic and EU-level. The report suggests several actions. These include: a) changing requirements in public procurement, b) implementing a reference index or ensuring general application of collective wage agreements, c) collaborating with other Nordic countries to improve conditions for both employees and companies in the aviation sector, d) introducing stricter procurement criteria for suppliers of PSO-routes, e) strengthening the supervisory authority and expertise of the Civil Aviation Authority, f) improving Norwegian legislation for employees in aviation, and g) working towards the implementation of various measures at EU-level.

The aviation sector in Europe has been liberalized as a result of the implementation of the EU's three aviation market packages in 1986, 1990 and 1992. Within the European Economic Area (EEA), market regulation of aviation is mostly harmonised, and the area functions as one common aviation market. The rules stipulate that there must be equal market access for different players based in the area, regardless of country background. Through the EEA-agreement, Norway is part of this common market. Since the liberalisation/market opening three decades ago, there has been strong growth in the aviation sector in Europe and also globally. More routes are offered, more cargo is transported, and, at least until the Covid-19 pandemic struck, more people were flying than ever before. There is much more intense competition now between various service providers within the sector. Flight tickets have become significantly cheaper, partly due to the increased competition and the establishment of a number of low-cost carriers.

However, this competition is not only positive. The organisation of the companies and value chains in the sector impacts the pay and working conditions of the affected employees. The establishment of a common European aviation area with joint market regulation has opened for new ways of organising the businesses in the sector. The intense competition for low prices in aviation has put pressure on the pay and working conditions of employees in European aviation. It now appears that there is a "race to the bottom" within Europe, where the working conditions of employees are put under ever increasing pressure, workers' rights are challenged, airlines are reorganised and split up in new and creative ways, and to an increasing extent, employees are no longer directly employed by the companies they work for.

This also applies to airlines that are regarded as Norwegian and to their employees, partly because the right to establish routes between and within EEA countries enables low-cost airlines to capture market shares. The establishment of low cost carriers may be inevitable, but there are signs that airlines within the EEA are conducting "regulatory shopping" across Europe to reduce their costs and thereby put pressure on others to do the same so that they will not lose out in the competition for customers.

Therefore, it is relevant to examine the pay and working conditions of employees in Norwegian aviation today, and what kind of measures could be implemented to close gaps in the legislation in Norway should the analysis show that pay and working conditions are under undue pressure here as well. This report examines the following issues:

- 1) How was aviation in Norway organised in 2021?
- 2) What do pay and working conditions for the employees in the aviation sector in Norway look like?
- 3) What are the desired and possibly also undesired/controversial consequences of various interpretations of today's regulations for the employees and the businesses?
- 4) How is aviation organised in other countries, for example France?
- 5) How is aviation organised compared to road and maritime transport?
- 6) What possibilities do the Norwegian authorities have to reduce these potential undesirable consequences within the framework of the EEA-agreement?

The report documents how aviation in Norway is organised and regulated. The analyses are based on both existing research and assessments, and new data gathered through for example interviews. The occupational groups that are studied are first and foremost pilots and cabin crew, and the report focuses on commercial passenger transport with fixed wing aircraft. It may become necessary to conduct additional in-depth analyses and new studies of a number of the issues that are addressed in this report.

The majority of the workforce in the sector, estimated to around 80%, are directly employed by the airlines both in Norway and in Europe. However, there seems to be a negative trend where fewer and fewer people have direct employment, particularly employees from Eastern Europe. Atypical employment has a negative influence on safety and puts pressure on just culture. At the same time, it also makes it hard for the employees to know their rights, which national law applies to them, etcetera. Moreover, atypical employment helps to create an unlevel playing field between the European airlines.

The data also show that pilots in Norway, although they have fallen behind in terms of wage growth compared to the average industrial worker, on average still have very solid wages and are one of the occupational groups that earn the most. Cabin crew, on the other hand, have gone from being a relatively well-paid occupational group to being low paid. The fact that many cabin crew work part-time does not make their situation easier. Both pilots and cabin crew experience demanding work schedules and seem to have many health issues compared to other occupational groups. The positions in aviation can negatively affect family life. In various Norwegian surveys, many employees have answered that they have a bad relationship with their employer.

To conclude, we propose various regulations of company structures in the aviation industry to improve the conditions for employees and companies and create a healthier competition:

- 1) **Change requirements in public procurements, for example by disallowing cooperation between various service providers to win public tenders. Moreover, the introduction of an Oslo/Norway model for public procurements should be considered.**
- 2) **Implement a reference index or ensure general application of collective wage agreements in aviation, potentially get in place a nationwide collective**

agreement between the central organisations for pilots and cabin crew and the Federation of Norwegian Aviation Industries.

3) Collaborate with other Nordic countries to improve working conditions both in the Nordics and within Europe. Suggestions:

- a) The civil aviation authorities in the Nordic countries share data and all use the same methods to reveal and deal with breaches of the labour market codes in aviation.
- b) The Nordic countries share data on aviation to a larger extent than before.
- c) The Nordic countries work together to establish a common understanding and application of the legal framework that protects the Scandinavian/Nordic labour market model.
- d) The Nordic countries implement the Oslo/Norway model for public procurement to ensure decent working conditions.
- e) Get more countries to ensure the universal application of collective wage agreements. At present, there is no general application of collective wage agreements in Sweden and Denmark (Bergsli, 2015).
- f) Introduction of collective redress in all Nordic countries so the unions can institute legal proceedings in cases of unlawful use of hired labour (Birkelund, 2021; Regjeringen, 2021).
- g) Certification with the Nordic Swan Ecolabel for airlines, based on the extent to which the airlines comply with certain environmental and social requirements.

4) Implement stricter criteria in public tenders for public service obligation (PSO) routes. This does not only apply to environmental requirements, but also includes:

- a) Pay and working conditions in accordance with either a reference index or a generally applicable collective wage agreement.
- b) Requirement that the winning supplier of a PSO-route must establish a local base.
- c) Requirement that at least one employee on each flight must speak Norwegian.
- d) Maximum working hours per day: 10 hours.

5) Strengthen the supervisory authority and expertise of the Civil Aviation Authority (CAA) in Norway.

The CAA needs more resources to properly follow up pay and working conditions in the aviation sector and to ensure that all workers on “Norwegian” domestic routes receive labour and HSE inspections. The aviation authorities within the EEA should collaborate to a greater extent. Another possible option is to establish a Norwegian national centre for aviation research to fill any knowledge gaps.

6) Improve Norwegian legislation for the employees in the aviation industry.

The terms home base and operating base should be defined in Norwegian law. Norwegian law should probably demand that airlines that regularly offer transport within Norway and to and from Norway establish bases in Norway. Employees who regularly work for companies which are in Norway for more than one year should have access to Norwegian rights, wages and obligations and be subject to Norwegian law. The Norwegian state should work to prevent atypical employment. One strategy would be to establish clear national rules to prohibit bogus self-employment and also to create a definition of “self-employed” within Norwegian

law. The recommendations from the Fougner expert committee are relevant in this regard. The group for example recommends that employees' right to re-employment in their previous positions is strengthened. The Fougner committee also recommends the introduction of a rule where employees in downsizing processes will be given priority when vacancies are announced in the same group of companies.

7) Various actions at the European level

- a) Work to reduce the maximum number of working hours per day allowed by the EEA regulations, i.e., the flight time limitations (FTL), so that they are reduced from 14 to 10 hours per day as in the United States.
- b) Continue to work against social dumping in aviation.
- c) Systematically follow up new developments in aviation, as the companies in the sector frequently find new ways of organising themselves.

Sammendrag

Organiseringen av luftfarten i en europeisk virkelighet

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Forfatter: Inga Margrete Ydersbond
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I denne rapporten analyserer vi hvordan norsk luftfart er organisert i dag og drøfter hvordan sektoren kan organiseres annerledes innenfor EØS-regelverket. Den finner at atypiske ansettelsesformer blant piloter og kabinansatte, som er blitt muliggjort etter innføringen av et felles luftfartsmarked innenfor EØS, virker å være et økende problem i Europa. Dette legger videre press på lønns- og arbeidsforhold i bransjen, og virker også å påvirke sikkerheten. Derfor trenger bransjen bedre reguleringer og bedre kontroll på nasjonalt, nordisk og EU-nivå. I rapporten foreslår vi en rekke tiltak. Disse inkluderer å: a) endre krav til offentlige anskaffelser, b) implementere referanseindeks eller allmenngjøring av tariffen, c) samarbeide med andre nordiske land om å forbedre forholdene for de ansatte og bedriftene i luftfarten, d) stille sterkere krav i anbudene til FOT-rutene, e) styrke tilsynsmyndigheten og kunnskapen, f) forbedre det norske lovverket for de ansatte i luftfarten, og g) arbeide for ulike tiltak på EU-nivå.

Luftfarten i Europa er blitt liberalisert/åpnet for konkurranse som følge av implementeringen av EUs tre luftfartspakker i 1986, 1990 og 1992. EØS-området er et felles luftfartsområde der mye av reguleringen er harmonisert. Det skal være lik markedsadgang for ulike aktører basert i området uavhengig av landbakgrunn. Norge er gjennom EØS-avtalen tilknyttet dette luftfartsmarkedet. Siden liberaliseringen/markedsåpningen har det vært sterk vekst i luftfarten i Europa og også globalt. Flere ruter tilbys, mer gods fraktes og flere personer har inntil Covid-19 pandemien flydd enn noen gang tidligere. Det er mye større konkurranse mellom tilbyderne av ulike tjenester knyttet til luftfarten. Flybillettene er blitt billigere blant annet som følge av den økte konkurransen og at det er blitt etablert en rekke lavprisflyselskaper.

Vi ser imidlertid at denne konkurransen ikke bare er sunn. Organiseringen av virksomhetene og verdikjedene påvirker de berørte ansattes lønns- og arbeidsvilkår. Etableringen av et felles luftfartsmarked mellom EØS-landene har åpnet for nye måter å organisere virksomhetene på. Den harde priskonkurransen i luftfarten bidrar til å sette de ansatte i europeisk luftfarts lønns- og arbeidsvilkår under press. Det ser nå ut til at det foregår et kappløp mot bunnen («race to the bottom») i Europa, der arbeidstakerne i luftfarten utsettes for stadig sterkere press på sine lønns- og arbeidsvilkår, seriøsiteten utfordres, selskaper splittes opp på nye måter, og arbeidstakerne er i gradvis mindre grad direkte ansatte i selskapene de arbeider for.

Dette gjelder også flyselskapene som regnes som norske og deres ansatte, blant annet fordi retten til å etablere ruter mellom land og innen land innenfor EØS-området kan gjøre at lavprisselskaper kan komme og ta markedsandeler. At de gjør det, er en av hensiktene ved et felles marked. Det er imidlertid også flere tegn som tyder på at flyselskaper i EØS-området gjennom «regelverksshopping» på tvers av landegrensener legger press på andre selskaper for å gjøre det samme, slik at de ikke skal tape i konkurransen om kundene.

Derfor er det relevant å undersøke hvilke lønns- og arbeidsvilkår ansatte i norsk luftfart har i dag, og hva slags tiltak som kan iverksettes for å sikre at de har anstendige lønns- og arbeidsvilkår for å «tette hull» i lovgivningen i Norge, dersom det skulle vise seg at lønns- og arbeidsvilkår også her skulle være under et utilbørlig press. Denne rapporten undersøker følgende spørsmål:

- 1) Hvordan ble luftfarten i Norge per 2021 organisert?
- 2) Hvordan ser luftfarten i Norge ut med tanke på de ansattes lønns- og arbeidsvilkår?
- 3) Hva er ønskede og eventuelle uønskede resultater av dagens reguleringer av bedriftene i luftfarten for de ansatte og bedriftene i norsk luftfart? Hvilke eventuelle uønskede konsekvenser har ulike tolkninger av dagens regelverk?
- 4) Hvordan er luftfarten i andre land, for eksempel Frankrike organisert?
- 5) Hvordan er luftfarten organisert sammenliknet med vei- og sjøtransporten?
- 6) Hvilke muligheter har myndighetene for å redusere disse eventuelle uønskede konsekvensene innenfor rammen av EØS-avtalen?

Rapporten dokumenterer hvordan luftfarten i Norge organiseres og reguleres. Analysene er basert på både foreliggende forskning og utredninger og egne data samlet inn gjennom blant annet intervjuer. Yrkesgruppene som først og fremst blir studert er pilotene og de kabinansatte. Rapporten setter søkelys på kommersiell passasjertransport med passasjerfly. Det er aktuelt å gjøre grundige analyser og nye studier av en rekke spørsmål som tas opp i denne rapporten.

De aller fleste arbeidstakerne i luftfarten, rundt 80 %, har direkte ansettelse både i Norge og i Europa. Imidlertid virker det å være en negativ trend i luftfarten der stadig flere er uten direkte ansettelse, spesielt ansatte fra Øst-Europa. Atypiske ansettelser påvirker sikkerheten i lufta negativt og setter sikkerhetskulturen i lufta under press. Samtidig gir det også de ansatte i luftfarten utfordrende vilkår juridisk. Videre bidrar atypiske ansettelser til å skape konkurranse mellom flyselskapene på ulike vilkår.

Dataene viser også at pilotene, selv om de har tapt i lønnsvekst i forhold til en gjennomsnittlig industriarbeider de siste to tiårene, fortsatt i gjennomsnitt har svært solid lønn og er en av de stillingskategoriene som tjener aller mest. De kabinansatte har derimot gått fra å være en forholdsvis godt lønnet yrkesgruppe til å bli lavt lønnet. At mange kabinansatte arbeider deltid gjør ikke situasjonen deres enklere. Både piloter og kabinansatte opplever krevende turnuser og virker å ha mye helseplager sammenliknet med andre yrkesgrupper. Stillingene i luften kan gå utover familielivet. Mange i lufta har i spørreundersøkelser svart at de har dårlig forhold til sin arbeidsgiver.

Til sist foreslår vi ulike reguleringer av selskapsstrukturene i luftfarten som kan bedre forholdene for dem som arbeider der, for bedriftene og skape en sunnere konkurranse:

1) Endre krav generelt til offentlige anskaffelser, blant annet ikke å tillate samarbeid mellom ulike selskaper om å vinne offentlige anbud. Videre er det aktuelt å innføre en Oslomodell/Norgesmodell for offentlige anbud.

2) Implementere enten referanseindeks eller allmenngjøring av tariffer i luftfarten, eventuelt få på plass en landsomfattende tariffavtale mellom hovedorganisasjonene for pilotene og de kabinansatte og NHO Luftfart.

3) Samarbeide med nordiske land om å forbedre arbeidsforholdene både i Norden og i Europa. Her er forslagene:

- a. Luftfartstilsynene benytter felles metoder for å avdekke og gjøre noe med usosiale forhold i luftfarten.
- b. At de nordiske landene deler data i større grad enn før.
- c. At de nordiske landene arbeider sammen for en felles lovforståelse og -anvendelse som beskytter den skandinaviske/nordiske modellen i arbeidslivet.
- d. At alle nordiske land implementerer Oslo/Norges-modellen for å sikre seriøsitet i arbeidslivet i offentlige anskaffelser.
- e. At flere land allmenngjør tariffen. Det er ikke allmenngjorte tariffen i luftfarten i Sverige og i Danmark i dag (Bergsli, 2015).
- f. At det blir kollektiv søksmålsrett i alle nordiske land slik at fagforeningene kan reise sak ved ulovlig innleie (Birkelund, 2021; Regjeringen, 2021).
- g. Svanemerking av flyselskaper basert på hvorvidt flyselskapene etterlever en rekke miljømessige og sosiale krav.

4) Stille sterkere krav i anbudene til FOT-rutene. Dette gjelder ikke bare miljø, men også:

- a. Lønns- og arbeidsvilkår i henhold til en allmenngjort tariffavtale eller en referanseindeks.
- b. Krav om at anbudsvinnere av FOT-ruter etablerer en lokal base.
- c. Krav om at minst én ansatt på hver flygning snakker norsk.
- d. Maksimal arbeidstid på 10 timer i døgnet.

5) Styrke tilsynsmyndigheten og kunnskapen til Luftfartstilsynet

Luftfartstilsynet kan trenge mer ressurser for å sikre oppfølgingen av lønns- og arbeidsvilkår i luftfarten og sikre at alle arbeidstakere på «norske» innenriksruter får arbeids- og HMS-tilsyn. Luftfartstilsynene i EØS-området kan samarbeide mer. Å etablere et norsk nasjonalt senter for luftfartsforskning for å bidra til å «tette kunnskapshullene» er en mulighet.

6) Forbedre det norske lovverket for de ansatte i luftfarten

Begrepene hjemmebase og operasjonell base bør defineres i norsk lovverk. Det norske lovverket bør sannsynligvis kreve at flyselskap som tilbyr transport stabilt/regelmessig innad i Norge og mellom Norge og utlandet etablerer baser i Norge. De som arbeider stabilt i Norge for selskaper som er her over ett år bør ha tilgang til norske rettigheter, lønn og plikter, og være underlagt norsk lov. Staten bør forebygge atypiske ansettelsessituasjoner. En strategi er å etablere klare nasjonale regler for å forby uriktig/falsk bruk av selvstendig næringsdrivende og lage definisjon av selvstendig næringsdrivende i norsk lovverk. Fougner-utvalgets anbefalinger er relevante i denne sammenhengen. De anbefaler blant annet at ansattes rett på å få tilbake sine egne stillinger styrkes. Fougnerutvalget anbefaler blant annet at det innføres en regel der ansatte under nedbemanning vil få fortrinnsrett når det utlyses ledige stillinger i det samme konsernet.

7) Ulike tiltak på europeisk nivå

- a. Arbeide for en skjerping av arbeidstidsbegrensningene i EØS-regelverket, slik at maksimal tillat daglig arbeidstid reduseres fra 14 til for eksempel 10 timer, i likhet med i USA.
- b. Fortsette å arbeide mot sosial dumping i luftfarten.
- c. På EU-nivå er det også relevant å arbeide med å følge systematisk med på nye problemstillinger og utviklingstrekk i en bransje der selskapene stadig finner nye måter å organisere seg på.

1 Introduction

The ongoing reorganisation of companies and value chains in the aviation sector impacts the pay and working conditions of the affected employees. The purpose of the project *Reorganisation of the aviation sector in a European context* has been to look at the effects of these changes in the industry and at the scope of regulatory action available to the authorities within the framework of the EEA Agreement to avoid any potential undesirable effects. In this assignment from the Norwegian Confederation of Trade Unions (LO), the Institute of Transport Economics (TØI) was asked to analyse how the industry can be regulated in compliance with the EEA-regulations with a view to ensuring that Norwegian labour rules will apply to the industry in Norway. The report first describes how the aviation sector in Norway is organised at present, including the possibilities to circumvent the existing legislation, and what research, available studies and other data show about the labour conditions for the employees in the Norwegian aviation sector. Within the framework of this limited project, we then present some examples of how aviation is organised in France, and of the organisation of other transport industries. To conclude, we discuss how the sector can be regulated in compliance with current EEA-regulations in different ways to ensure that Norwegian labour rules continue to be applicable or will become applicable to aviation in Norway.

This report analyses the following issues:

- 1) How was the aviation sector in Norway organised in 2021?
- 2) What does the sector look like with regards to the employees' pay and working conditions?
- 3) What potential undesirable/controversial consequences arise from differing interpretations of the current regulatory framework?
- 4) How is aviation organised in France?
- 5) How is aviation organised compared to sea and road transport?
- 6) What possibilities do the authorities have to reduce these potential undesirable consequences within the framework of the EEA Agreement?

1.1 Background

The *fundamental principles* in the EEA Agreement are a prohibition of discrimination on the grounds of nationality, the four freedoms and the competition rules. The prohibition of discrimination applies to unequal treatment of both natural and legal persons. The four freedoms mean that goods, persons, services and capital must be able to move unhindered and duty-free across national borders. This also means freedom of establishment for businesses. The exchange of goods and services between countries within the European Economic Area is meant to promote the same economic rationality as the exchange of goods within one and the same country and requires special, international institutional solutions. This rationality includes that various suppliers of many types of goods and services are to compete on equal terms.

Against this background, especially after the war, EU institutions and agreements have developed that started with goods and currency, then more open financial markets for banks and capital, then expansion in terms of number of member states in several rounds (especially the EU), followed by internal markets with a freer flow of services and labour within the EEA. In aviation, there is full harmonization of the regulations within the EEA regarding market conditions, in contrast to most aspects of pay and working conditions, which are still national matters.

The four freedoms are a basic principle within the EU: free flow of goods, services, persons and capital. The implementation of the EU's first, second and third aviation packages in 1986, 1990 and 1992 respectively has contributed to the full liberalisation/market opening of the aviation sector in the EEA, including Norway. Within the EEA, the nine freedoms of the air apply,¹ which from 1997 have turned the area into a common aviation area from a market point of view, termed the Single European Aviation Market (SEAM). Norway is fully aligned with the EU's aviation policy through the EEA Agreement. There has also been a liberalisation/opening of aviation markets in other countries/regions in the world, such as the US, which opened up much earlier than Europe, and a large number of bilateral and multilateral aviation agreements, including open skies agreements, have been concluded in the last two decades (International Transport Forum, 2019, p. 11).

The liberalisation²/market opening in the EEA, and also in the rest of the world, entails, among other aspects, much more intense competition between the different service providers within different parts of the aviation industry in Norway, Europe and the rest of the world. This competition does not only take place between airlines, but also ground services and other services related to aviation. In addition, the different airports compete with each other in terms of attractiveness (Golden & Underthun, 2016; International Transport Forum, 2019; Ministry of Transport, 2019).

Aviation in Europe helps and has helped to bind Europe together much more closely, and also connects Europe and the rest of the world, both in an economic and cultural sense, as well as being as a catalyst for the development of other industries.³ The EU considers aviation in Europe a success story (European Commission, 2019, p. 1; International Transport Forum, 2019, p. 17; Ministry of Transport, 2019, p. 33).⁴ In addition, aviation is an important contributor to the economies of both Norway and the EU. In 2016, the sector contributed an estimated €110 billion directly and €300 billion indirectly to the EU's

¹ These include: 1) Flying over another country without landing, 2) fueling or having maintenance work done in another country without having to transport freight or passengers, 3) flying from the home country and landing in another country, 4) flying from another country and landing in the home country, 5) flying from the home country to another country, and landing in a third country on the way, 6) flying from another country to a third country and landing in the home country on the way, 7) flying from another country to a third country without landing in the home country, 8) flying from another country to a third country and then to another destination within the same third country, and 9) flying domestically within another country.

² Liberalisation is here used as an economic term meaning that the sector has gone from being subject to very strict national regulation to being opened up to international competition. For the countries within the EEA, liberalisation does not mean the *absence* of regulation, but rather that many aspects of aviation are now regulated and fully harmonized at EEA-level. For a definition, see: [liberalization | political science | Britannica](#).

³ For example in the tourism industry and other parts of the economy.

⁴ In addition to liberalising legislation, the EU has also contributed to a massive investment into the sector through the CESAR research program and by supporting navigation services via EUROCONTROL.

gross national product (GNP),⁵ provided direct employment for approximately 1.9 million people, and indirectly supported at least 9 million jobs in total in the EEA (European Parliament, 2016). According to the Federation of Norwegian Aviation Industries, one employee in the aviation sector generates 4.5 jobs in total, and one Norwegian krone created by the aviation industry contributes with as much as NOK 5.6 in increased GNP (Federation of Norwegian Aviation Industries, 2015). In Norway, the sector provided direct employment to an estimated 28,000 persons at the airports in 2013/2014, and total employment in connection with aviation was approximately 60,000, or about 2.3 percent of all persons employed in Norway (Avinor, 2014/2015, p. 5 and p. 17).

1.2 An industry in enormous growth (so far) until the Covid-19 pandemic hit the world

Large parts of the population in Norway, Europe and the rest of the world have experienced general growth in their income since 1992, increasing their purchasing power. The number of air routes in Norway, Europe and the rest of the world has increased considerably. The number of air routes in Europe for example has risen from around 2,700 in 1992 to around 8,400 in 2017 (European Commission, 2019, p. 1; Thune-Larsen, 2019). In the wake of liberalisation, low-cost airlines in Norway and Europe have been established, and have contributed to a significant decrease in the price of airline tickets, partly because the existing airlines were forced to reduce costs and ticket prices due to competition from the low-cost companies. The same applies to the situation in Norway, where low-cost airlines have contributed to much lower ticket prices today than for example in the 1980s (Ministry of Transport, 2019; Thune-Larsen, 2019). This of course is a benefit for consumers. However, it has also contributed to a constant increase in greenhouse gas emissions from aviation despite the fact that new passenger aircraft are increasingly more energy efficient than earlier aircraft models.

Several European low-cost airlines have grown into major companies, and since 2019, the largest airline in Europe in terms of passenger numbers has been Ryanair (Wikipedia, 2021b). Ryanair was also the world's largest airline in 2018, as well as the airline with the highest growth (in percentage terms) of the 20 largest airlines in Europe from 2004 to 2018 (Ministry of Transport, 2019, p. 26, 27). Before the Covid-19 pandemic hit the world at the end of 2019/the beginning of 2020, the Norwegian low-cost airline Norwegian could also point to enormous growth. At the same time, European airlines also compete with companies headquartered outside the EEA, for example in the Gulf states and in Turkey (European Parliament, 2016). These airlines operate with different pay and working conditions than the Norwegian and European companies (Hagesæther, 2014; Interviews, 2021).⁶

⁵ Official Norwegian Report (NOU) 2019: 22 however points out that these figures must be interpreted with caution, as the net effect depends on the productivity of the resources compared with if they had been used in other sectors (Ministry of Transport (2019). *Fra statussymbol til allemannseie - norsk luftfart i forandring*. Oslo: Ministry of Transport. (<https://www.regjeringen.no/no/dokumenter/nou-2019-22/id2680751/>).

⁶ Here, pay and working conditions are *very* different from Norway indeed. Extensive human rights violations have been documented, for example, for some airlines based in the Middle East, such as Qatar Airways (Hagesæther, P. V. R. (2014). *Fritt fall: på jobb i lufta til lavpris*. Pax., ITF. (2021b, October 14). Qatar Airways - the voice. (<https://www.itfglobal.org/en/videos/qatar-airways-voice>). International Transport Workers' Federation.

One consequence of liberalization, the increased supply of flights, higher incomes, technological development and lower prices for airline tickets is a large increase in the number of flights taken by passengers within, to and from the EU.⁷ In 2017, an estimated number of more than 1 billion such trips took place. Forecasts show that air transport in the world, Europe and Norway is expected to keep increasing in the coming decades, even though the Covid-19 pandemic has caused a significant temporary fall (European Commission, 2019, p. 1; ICAO, 2020; Ministry of Transport, 2019; SSB, 2021a).

All in all: Increased supply, lower ticket prices and higher income in the population have contributed to an enormous growth in aviation in Norway, Europe and the rest of the world in recent decades (Boeing, 2019; Brannigan et al., 2018; Ministry of Transport, 2019, p. 7), as illustrated in figure 1.1 below:

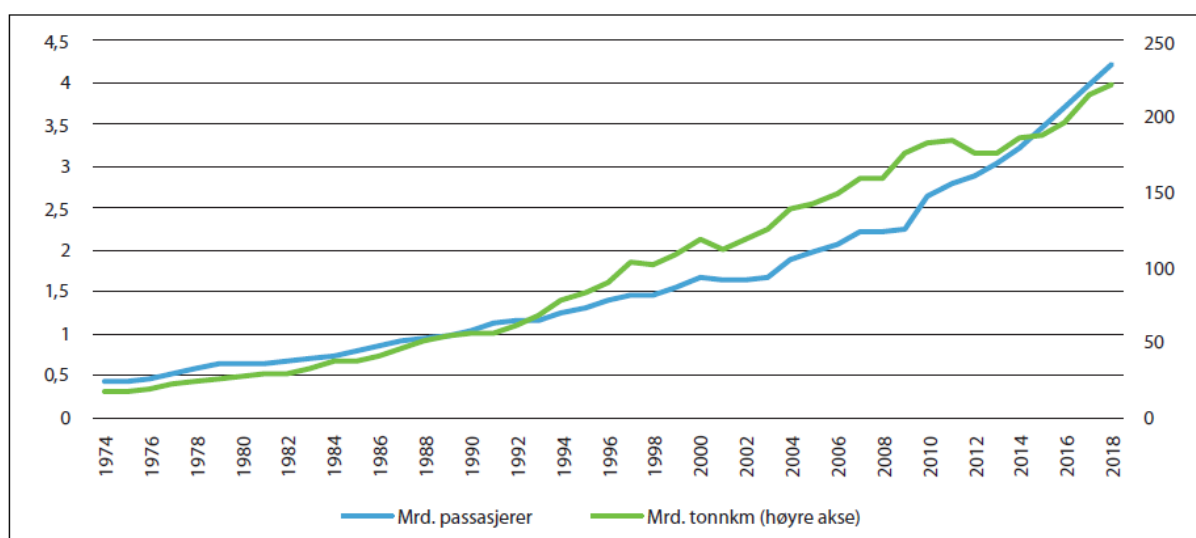


Figure 1.1: Growth in number of passengers (billion, blue line) and billion tonne-kilometers (green line), from 1974 to 2018. Source: Norwegian Ministry of Transport and Communications (2019, p. 21), based on data from the World Bank.

In Norway, passenger numbers in the aviation sector have increased from slightly over 5 million passengers in 1981 to a total of almost 35 million passengers in 2018 (Ministry of Transport, 2019). In other words, flying has gone from being a status symbol to becoming something “all” Norwegians and others in economically developed countries do (Ministry of Transport, 2019; Thune-Larsen, 2019).

⁷ Many of the changes that are happening are also referred to as “globalization in aviation” (Ministry of Transport, 2019). *Fra statussymbol til allemannseie - norsk luftfart i forandring*. Ministry of Transport. <https://www.regjeringen.no/no/dokumenter/nou-2019-22/id2680751/>.

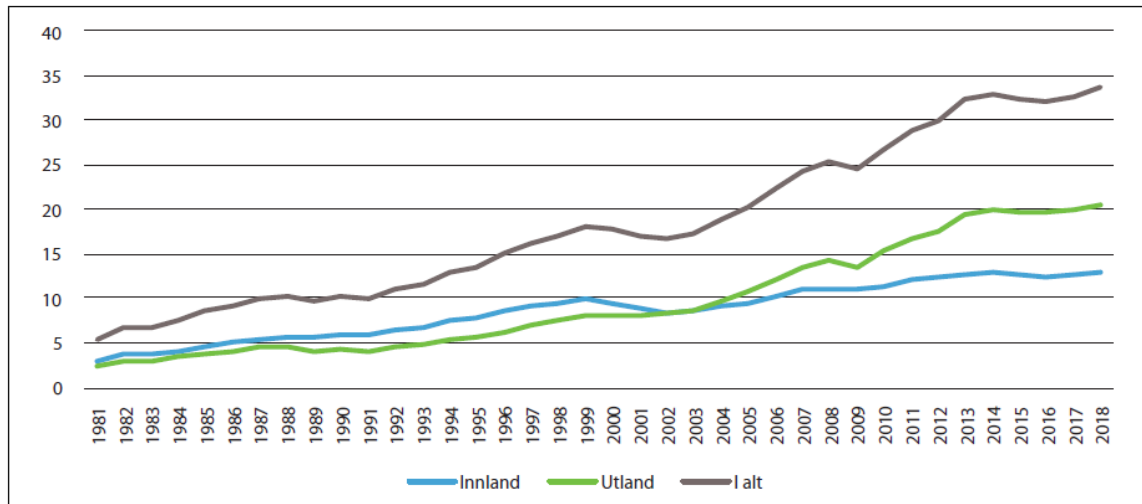


Figure 1.2: Number of passengers (million) that fly domestically, internationally and in total (Ministry of Transport, 2019, p. 39, based on data from Avinor). The blue line is for domestic flights, the green for international flights and the black line for total number of passengers in million departing from Norwegian airports.

1.3 Negative social effects of liberalisation/market opening

The liberalisation/market opening in the aviation sector in Europe has, however, not only led to more efficiency, an increase in air travel, lower ticket prices and a larger supply of routes, but also resulted in negative social effects: According to the European Parliament and International Transport Forum (ITF) (European Parliament, 2016; International Transport Forum, 2019, p. 18, 19), it has also contributed to lower wage growth for employees in different airlines compared to other occupational groups, and working conditions for many employees in aviation have worsened. This pressure on pay and working conditions has also been a contributing factor to the large number of strikes in European aviation (European Parliament, 2016; Hagesæther, 2014; Interviews, 2021; Nilsen, 2019; Strangler, 2018). ITF has in a report from 2019 pointed out that liberalisation of the aviation sector has resulted in a new and atypical way of organising the workforce, which gives rise to considerable concern about how legal, how desirable and socially sustainable this development is, and not least about what constitutes competition on equal terms under these circumstances. Differences in social and labour legislation, as well as different wage standards in the EEA, have made it possible for airlines, especially low-cost airlines, to exploit these differences in order to gain a financial advantage over competitors (International Transport Forum, 2019, pp. 11-12, 16-17, 30; Yorens et al., 2015).

In Norway, there have also been multiple strikes in the aviation sector in the last two decades, partly due to increasing pressure on crews' pay and working conditions. Cabin crew and pilots, for example, have had to work more hours per year, on more demanding schedules, and have had lower wage growth compared with the average industrial worker since 2007 (Hagesæther, 2014; Underthun & Ingelsrud, 2019). The same trends seem to apply in Sweden (Melin et al., 2018). While pilots in Norway still belong to the highly-paid occupational groups (although with large variations in pay conditions), cabin crew have gone from earning relatively solid wages to becoming one of the occupational groups that was granted a special supplement for low-wage workers in connection with the last two rounds of wage settlements (Interviews, 2021; Underthun & Ingelsrud, 2019). In addition, around four out of ten cabin crew work part-time (Underthun & Ingelsrud, 2019, p. 31).

Airlines have a lot of costs, such as for owning and leasing aircraft, fuel and insurance. One cost category airlines often try to influence, especially in bad times, is the price of labour, which on average stands for a significant share of the price of an airline ticket (e.g. Hayward, 2020; Traut, 2019). According to an analysis from 2013, in a weighted average labour costs amounted to 21.8% of revenues for 19 of the airlines in Europe, but there was a large spread between the companies with the lowest and highest personnel costs (CAPA, 2013).

European aviation is often a low-margin industry for the network carriers, while some of the low-cost airlines have made large profits (CAPA, 2013; European Parliament, 2016, p. 3; Ministry of Transport, 2019, p. 31). Some typical characteristics of the low-cost airlines are the use of many different bases and regional airports, operating only a single aircraft type, high seat density, short-haul flights, internet-based booking, making the customer pay separately for each service, and ensuring that planes are full. Network carriers, on the other hand, use the main airports, have one home country, lower seat occupancy, focus more on business travelers, and different types of services are included in the flight ticket to a greater extent. However, the distinction between these types of companies has become blurred, and several airlines have developed into hybrids (Brannigan et al., 2018, p. 1; European Parliament, 2016, p. 2; Ministry of Transport, 2019).

1.4 Covid-19 pandemic causes a massive hit to the industry

Earlier crises have had a large impact on the aviation sector: the terror attack on September 11, 2001 and the economic crisis in 2008/2009 for example resulted in a significant, temporary fall in the number of passengers (Boeing, 2019, p. 4). From a financial point of view, the low-cost carriers appear to have tackled these crises better than the network carriers (Underthun & Ingelsrud, 2019, s. 3). This seems to have put strong pressure on the network airlines to restructure their business in order to retain their market share. Aviation nationally, in Europe and globally is probably the industry, or among the industries, that was hardest hit by the Covid-19 pandemic (ICAO, 2020), and as of January 2022 looked set to continue to be hard hit in the future as SARS-CoV-2 mutated into a new and highly contagious version (the Omicron variant) that is spread very rapidly worldwide, also in Europe and Norway (see e.g. Ekeseth, 2021b). International aviation lost as much as an estimated \$ 371 billion in 2020, while losses for 2021 were expected to reach approximately \$ 329 billion (ICAO, 2021). In the summer of 2020, for example, the Norwegian regional carrier Widerøe was suddenly the largest airline in Europe by number of flights (!). Figure 1.3 below shows how passenger numbers fell like a rock from the third quarter of 2019 to the second quarter of 2020 after Norway was closed down on March 13, 2020.

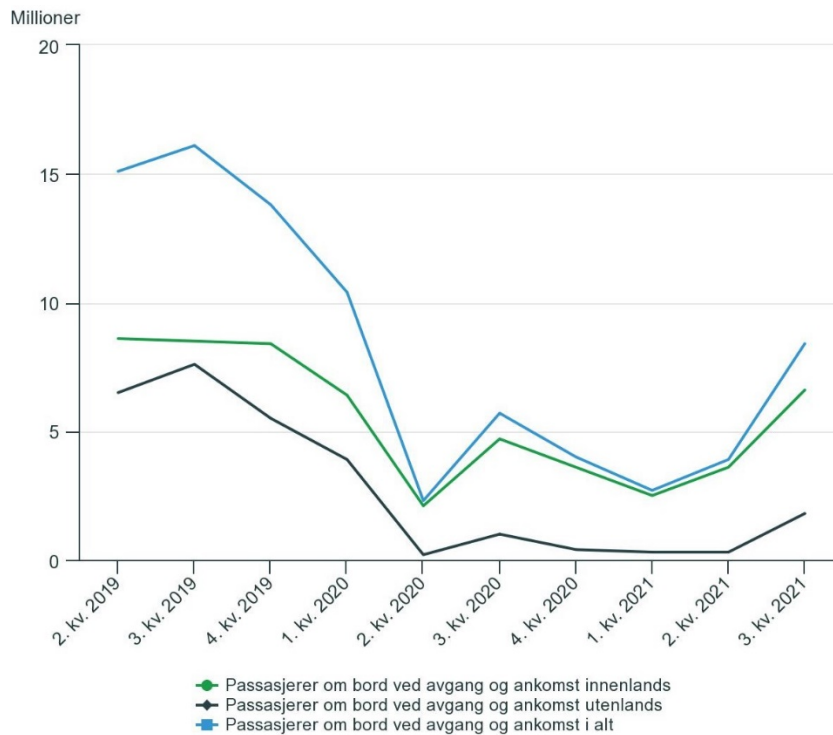


Figure 1.3: shows how the number of passengers fell like a rock until Q2 2020, rose with the easing of restrictions in the summer of 2020, fell with the tightening of restrictions in the late autumn of 2020, and then rose steeply again in line with the re-opening of the country in autumn 2021 (SSB, 2021a). The green line marks passengers on board for domestic departures/arrivals; The black line marks passengers on board for international departures/arrivals; The blue line marks the total number of passengers.

As a consequence of this enormous downturn in the aviation sector, many airlines in Europe, including SAS and Norwegian, had to be saved from bankruptcy by the authorities of their respective countries through measures such as loan guarantees and cuts in taxes and other charges. The Norwegian state also subsidised the operations of Avinor and granted the company a crisis loan. In total, the cost of such measures in different countries amounts to billions of kroner. Several airlines in Europe have gone bankrupt (Mikalsen, 2020; Rasmussen, 2020; Trumpy, 2020b; Wikipedia, 2021a). In addition, thousands of employees in European aviation have been laid off either temporarily or permanently, such as employees in airlines and at airports. The largest airlines in Norway, SAS and Norwegian, have also dismissed or terminated many of their employees both in Norway and in other countries (e.g. Brunborg & Wasberk, 2020; Trumpy, 2020a), in contrast to Widerøe, where all lay-offs have been temporary.

An additional consequence of the crisis is that the airlines, for example SAS, are working extra hard on reducing their costs in order to develop solid and future-oriented business models (e.g. Graff, 2021). The Covid-19 pandemic appears to have contributed to a new round of restructurings where several airlines in Europe will cut costs or have already cut costs by, amongst other measures, putting further pressure on the employees' pay and working conditions, increasing the use of subsidiaries in other countries, etcetera. This applies for example to SAS and Norwegian, and some airlines in the rest of Europe (e.g. ETF, 2021c; ETF, 2021d). SAS for example has previously stated that all growth in the coming years is supposed to happen in SAS Connect (previously SAIL, Scandinavian Airlines Ireland Limited).

The Covid-19 pandemic has also caused negative pressure on the employees in the aviation sector in other ways. Many have been concerned about infection with SARS-CoV-2, job

losses due to restructuring, temporary lay-offs and more. Several airlines have significantly reduced the number of employees, which, according to the Cockpit Association of Norway and Association of Cabin Crew Unions Norway, has put additional pressure on those that still work in the sector. They say that their working hours have increased and rest periods have been shortened, at a time when some for example also had additional responsibilities for children that were home from kindergarten or school during lockdowns (IFALPA, 2020; Cockpit Association of Norway & Association of Cabin Crew Unions Norway, 2021, p. 8). In addition, many employees in the aviation sector worldwide have fallen ill with Covid-19 or been in quarantine, a situation that led to the cancellation of thousands of flights Christmas 2021 (Bjergaard, 2021).

Long working hours and reduced rest periods can lead to reduced cognitive capacity, fatigue, burnout, anxiety and depression, which in turn in the worst case may also affect everyone's safety, in an industry that is generally known for a high safety level, very few accidents in general, and especially not fatal ones (e.g. Jones et al., 2005; Melin et al., 2018; Nogues et al., 2021)⁸. In the Colgan Air accident in 2009, fatigue due to too little and bad sleep of the pilots was probably a contributing factor (Hagesæther, 2014). The link between sleep, rest periods and the probability of errors by pilots and cabin crew, as well as how resting times and sleep can be protected in the best possible way, are likely to be issues that should be studied more closely in research, also independently of Covid-19's impact on conditions in the sector.

Analyses of what is likely to happen in the aviation industry in the time ahead show large variation. Some analyses conclude that the Covid-19 pandemic will have a permanent negative effect on flight demand, amongst other reasons because different actors have become used to conducting meetings digitally instead of in person.⁹ Others point out that physical meetings will clearly remain the preferred solution in many situations.¹⁰ It seems likely that aviation will sooner or later reach new peak levels, as has been the case up to now after all previous crises (Boeing, 2019, p. 7). The International Air Transport Association (IATA) forecasts for example that 2019-levels worldwide will be reached again in 2024 (IATA, 2021). Some airlines, such as SAS, seem to expect a considerable and permanent decrease in the number of business trips in the coming years. Therefore, they no longer assume that they will sell a significant number of tickets to people in the business market and adapt their operating models to compete for low-cost and holiday travellers (Graff, 2021). Other airlines, such as Lufthansa and Emirates, on the other hand seem to assess the situation differently, and expect business travel to bounce back (Nyborg, 2021a, 2021b).

⁸ Jones (2005, 225) for example says: "Fatigue is recognised as one of the most important safety issues in transportation". Jones, C. B., Dorrian, J., Rajaratnam, S. M. W. & Dawson, D. (2005). Working hours regulations and fatigue in transportation: A comparative analysis. *Safety Science*, 43(4), 225-252. <https://doi.org/https://doi.org/10.1016/j.ssci.2005.06.001>.

⁹ According to interviews conducted in connection with the project Nordic Sustainable Aviation. Ydersbond, I. M., Kristensen, N. B. & Thune-Larsen, H. (2020). *Nordic Sustainable Aviation*. Nordic Energy Research. <https://www.nordicenergy.org/article/common-initiatives-can-make-nordic-aviation-significantly-more-sustainable/>.

¹⁰ Seminar organised by Transport & Environment 2021.

1.5 Need for new regulation within the existing EEA framework

The way the companies in the sector and the industry as a whole are organised does (of course) influence the pay and working conditions of the affected employees. At the moment, there seems to be a general downward spiral in Europe when it comes to living standards and working conditions in the aviation sector. This development started in the 1990s with the liberalisation/market opening and accelerated in the 2000s when intense price competition, amongst other factors, helped to put downward pressure on the employees' pay and working conditions (e.g., Hagesæther, 2014). So now it seems that there is a "race to the bottom" in Europe where the employees in the aviation sector are subject to continually increasing pressure on their pay and wage conditions, doubtful practices in working life are on the rise, companies are split up in new and creative ways, and the number of direct employees is reduced in favour of other employment models (ETF 2021a, 2021c; Interviews, 2021). This competition also affects the Norwegian and Nordic airlines. These are issues that would benefit from further and more detailed research.

The Norwegian carriers are competing with airlines that are headquartered in other countries within the EEA. Within a completely liberalised aviation market, this means that when airlines based in one country offer worse pay and working conditions than a competing airline headquartered in another country, and these airlines compete on one or more routes, there is pressure on the pay and working conditions of the carrier headquartered in the other country. This is unavoidable within the EEA, given that there is huge variation in cost and wage levels in the different countries. But when airlines reduce their labour costs by offering their employees different types of poor pay and working conditions, for example by not offering parental leave, there is no longer a healthy competition between airlines seen from a social and economic perspective. According to our informants, there is pressure on pay and working conditions also among the Norwegian airlines, partly because of the intense competition between airlines for low-cost customers.

To counteract these tendencies, Norway can for example adopt policies that will ensure generally acceptable pay and working conditions for everyone that can be considered part of the Norwegian aviation sector. The most effective approach is probably if the Nordic countries work together to develop policies that protect national pay and working conditions. Safeguarding the conditions for employees in one's own country is in line with Regulation (EC) No 1008/2008,¹¹ article 9, which states that the authorities in the countries where an airline has an operational base, but not its main base, must ensure that the national social legislation and the EU's social legislation are correctly implemented:¹²

With respect to employees of a Community air carrier operating air services from an operational base outside the territory of the Member State where that Community air

¹¹ Regulation (EC) No 1008/2008, article 9 EU. (2008). *REGULATION (EC) No 1008/2008 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 24 September 2008 on common rules for the operation of air services in the Community (Recast)*. <https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32008R1008&from=EN>.

¹² Matters related to social and social security law are, amongst other relevant regulations, regulated by *Directive 96/71/EC concerning the posting of workers in the framework of the provision of services* and *Regulation (EC) No 883/2004 on coordination of social security systems* in the EEA regulations.

carrier has its principal place of business, Member States should ensure the proper application of Community and national social legislation.

Therefore, it is relevant to examine the pay and working conditions of employees in Norwegian aviation today, and to determine what kind of measures could be implemented to close gaps in Norwegian legislation should the analysis show that pay and working conditions are under undue pressure here as well. This report examines the following issues:

- 1) How was aviation in Norway organised in 2021?
- 2) What do pay and working conditions for the employees in the aviation sector in Norway look like?
- 3) What are the desired and possibly also undesired/controversial consequences of today's regulations for employees and businesses in Norwegian aviation? Which potential undesirable consequences arise from differing interpretations of the current rules?
- 4) How is aviation organised in other countries, for example in France?
- 5) How is aviation organised compared to road and maritime transport?
- 6) What possibilities do the Norwegian authorities have to reduce such potential undesirable consequences within the framework of the EEA Agreement?

These questions are important for Norwegian society in general for several reasons. Firstly: it could be important to retain different aviation companies in Norway, of Norwegian origin, to maintain the Norwegian transport infrastructure and thus also contribute to national security. Otherwise, Norway could become dependent on foreign operators and personnel. In Norway, aviation is regarded as part of the public transport infrastructure, especially in the northern and western parts of the country, where the state pays suppliers to fly on routes which would otherwise not be commercially viable to ensure adequate transport options for the population. Air transport is also essential to ensuring that the population has access to health and other services (Ministry of Transport, 2019).

Secondly: Retaining Norwegian aviation activity also results in positive economic effects. If Norwegian authorities fail to ensure that the employees in Norwegian aviation pay their taxes in Norway and do their work in the country, Norway loses jobs, revenue from taxes and other charges, economic activities resulting from the value added generated by the aviation industry, etcetera. Several analyses conducted for different interest groups and stakeholders show that one job in aviation generates several additional jobs on the ground, for example within the tourism industry and among companies that deliver goods and services at airports (ATAG, 2020; Federation of Norwegian Aviation Industries, 2015; SAMAK, 2017, pp. 12-13).

Thirdly: Pay and working conditions, such as duty and resting times and type of employment, can affect safety in aviation (Melin et al., 2018; Moebus, 2008; Yorens et al., 2015)¹³. If the employees in the air and on the ground have poor or suboptimal pay and working conditions, in the worst case this can result in reduced safety because, for example: a) crew members may feel pressured to work on days when they do not feel well, b) crew members may be less motivated to report errors and problems that affect safety in the air, c) crew may get fatigued at work and are not able to perform at their best, and potentially

¹³ Yorens (2015, p. 40) writes “[...] such atypical relations [bogus self-employment, zero-hour contracts and pay-to-fly employment schemes] furthermore endanger not only the health and safety of those employed, but equally the safety of air operations”.

also: d) the industry may in future struggle to get hold of the most competent personnel in Norway because potential employees prefer to work in other industries with better pay and working conditions.^{14,15}

Fourthly: In the next few years, it has been predicted from various quarters that there will be a major shortage of pilots globally. One forecast is that an additional 538,000 pilots will be needed worldwide in the period 2017-2037 (European Commission, 2019, p. 5; Kotogy & Yap, 2021; WSDOT, 2019). This situation could arise if various projections of further growth in aviation in the coming decades prove to be accurate. A large part of the growth in air transport is forecast to happen in Southeast Asia, but aviation in Europe and Norway is also forecast to increase (e.g. Boeing, 2019; EEA et al., 2019; European Commission, 2015). For various reasons, it could be an advantage if many of the pilots who fly on routes within and to and from Norway are Norwegian, or at least have solid experience of flying in demanding Norwegian conditions.¹⁶ Personnel with experience of flying in Norwegian conditions both helps to maintain safety in aviation and to ensure that Norwegian society's needs for air transport are met. Therefore, it is also important to retain those Norwegian pilots who are already certified, and to help make sure that the sector attracts new suitable candidates.

1.6 Terms and definitions

A1 certificate: The A1 certificate is a document proving that you pay social security contributions in your home country (EU member state of residence) and are therefore not subject to compulsory insurance for the duration of work assignments in other EU countries.

A4E: Group consisting of the carriers Air France KLM, EasyJet, International Airlines Group, Lufthansa Group, Ryanair.

ACMI: Aircraft, Crew, Maintenance and Insurance. Used as a term for different types of wet lease.

ATRP: Air Transport Regulation Panel, an expert panel at ICAO, the International Civil Aviation Organisation.

Block hour: means the period of time (in minutes) beginning when an aircraft first moves from the ramp blocks in connection with a scheduled flight, a non-scheduled flight or a charter flight and ending when the aircraft next comes to a stop at the ramp at any station or other point of termination as defined by industry agreements, divided by sixty (60) (Law Insider, 2021).

Bogus self-employment: persons that are employed as self-employed contractors, but who are not self-employed in practice (de facto) because they cannot control when they fly their flight hours, only work for one single airline, etcetera. Such forms of employment can

¹⁴ The report will present different examples of this later on.

¹⁵ However, recruitment to both the pilot profession and cabin crew positions seems to have been very good so far, so this is a situation that may arise in the long term, for example if people choose not to take positions in the air because they prefer occupations that are easier to combine with having a family, with more comfortable working hours etc.

¹⁶ One of our informants commented: "The wage level for such highly qualified people is higher in other countries. Despite this, Norwegian pilots preferably want to live and work in Norway." Interview 4 Cockpit Association of Norway. (2021, November 16). *Organiseringen av luftfarten innenfor EØS-regelverket* [Interview].

be used to circumvent tax rules or requirements for social benefits that follow when an employee is directly employed in a company (Turnbull, 2020).

Bonding agreement: a contract where a pilot agrees to be employed by an airline for a certain period, for example three years after the pilot has completed a type rating course for different types of aircraft.

CAA Norway: Civil Aviation Authority Norway.

Captain: the person who has ultimate responsibility for a ship, an aircraft, an ambulance or a tank, and must ensure that the vessel/vehicle/aircraft stays on course and reaches its destination. This person is authorized to implement various measures to ensure the safety of the persons on board. In airlines, corresponding to the work condition of pilot in command (PIC) (Wikipedia, 2020).

Choice-of-law rules: ability to choose which country's law is used to regulate a legal.

EASA: European Union Aviation Safety Agency, the European aviation authority.

ECA: European Cockpit Association.

EEA: the European Economic Area.

ESA: EFTA Surveillance Authority.

EU-US Open Skies Agreement: The EU's aviation agreement with the US. Also includes Norway and Iceland.

Fixed wing aircraft: an aircraft with wings that stay in the same position, i.e., not a helicopter, drone or similar.

Flag of convenience: a company establishing bases in a country where the economic and social conditions are most advantageous in order to achieve a lower tax rate, etcetera.

FTL: flight time limitations, upper limit for duty time per day. This cannot exceed 14 hours in Europe (16 hours in exceptional circumstances), and 10 hours in the United States.

Ground handling: ground services.

Home base: "home base" means the location from where the crew member normally starts and ends a duty period and where, under normal circumstances, the airline is not responsible for the accommodation of the crew member.

ICAO: International Civil Aviation Organization.

ITF: International Transport Workers Federation.

Jurisdiction: (legal) venue, i.e., which countries' courts will judge in case of legal proceedings.

Just culture: an organisational culture where employees who make errors and mistakes are not punished for reporting these, so that the industry can learn from the mistakes that happen.

Low-cost carrier: Airline that is characterized by the use of many different bases, use of regional airports, often operates only one type of aircraft, has high seat density/occupancy, short turnaround times, online booking, and makes its customers pay for each individual.

Network carrier: airline that uses the main airports, has one home country, has lower seat density.

Not-fit-for-flight/Not-fit-to-fly: When a pilot or crew member reports that they are not in a condition to fly.

Pay-to-fly: an arrangement where pilots pay the airline in order to be allowed to fly, and the pay is not sufficient to live on. The extent of this phenomenon in Norway and Europe

is uncertain. Such arrangements are a violation of the fundamental right to get paid for one's work, and these schemes are illegal.

Social dumping: employers moving production from one geographical area to another or employing people from countries with a lower wage level, in order to reduce costs and achieve a competitive advantage.

Second pilot, co-pilot: pilot that is not the pilot in command.

Wet lease: when an airline leases aircraft and crew from another airline.

Zero-hour contracts: contracts where the employees only get paid for the hours they are actually in the air. Persons that make errors/mistakes while on this type of contract can for example be punished by not getting a new contract.

2 Methods

This study employs typical methods used for case studies such as interviews with informants and collection of various written sources. Seven in-depth interviews with informants were conducted. These informants represent the Cockpit Association of Norway, the Association of Cabin Crew Unions Norway, the European Cockpit Association and the Federation of Norwegian Aviation Industries. As the study discusses issues that are perceived as sensitive and controversial, the informants have been allowed to remain anonymous. At the time of this study, there were ongoing conflicts between, for example, the management of SAS and its current and former employees, and there is significant media coverage (ECA, 2021c; Hestenes et al., 2021; Sæther & Lorvik, 2021). The Federation of Norwegian Aviation Industries chose to withdraw all its quotes after receiving an early draft report for a quote check and commenting. Like all other informants, they have reviewed and commented this early version of the report.

The study has been submitted to and approved by the Norwegian Center for Research Data (NSD). The informants were given the opportunity to do a quote check and to comment on the report in its entirety, which they also have done. Primary data is used as much as possible, but all relevant data sources have been used to shed light on the various issues discussed in this study, such as Norwegian Official Report 2019: 22 *Fra statusymbol til allemannseie - norsk luftfart i forandring* (Ministry of Transport, 2019), *Den norske modellen og fremtidens arbeidsliv – Utredning om tilkjenntingsformer og virksombetsorganisering* by the Fougner expert commission (Ministry of Labour, 2021) and the study *Lønns- og arbeidsvilkår i luftfarten* written by representatives of law firm Arntzen de Besche (Backe et al., 2021). In addition, the study draws on reports by the Civil Aviation Authority of Norway (CAA, 2016), the Work Research Institute (AFI) at Oslo Metropolitan University (Golden & Underthun, 2016; Grünfeld et al., 2019) and various consultancy firms and research institutions on behalf of the European Commission (Brannigan et al., 2018; Yorens et al., 2015).

As far as possible, the data in this report have been cross-checked against other data for verification purposes. To arrive at the best possible recommendations, the report is based on discussions of potential policy measures from various sources, including *Fremtidens flytraffik på fair vilkår* (SAMAK, 2017), also referred to as the Heunicke-report, *Fra statusymbol til allemannseie* (Ministry of Transport, 2019), *Den norske modellen og fremtidens arbeidsliv* (Ministry of Labour, 2021), *Fritt fall. På jobb i lufta til lavpris* (Hagesæther, 2014), *Civil Aviation in the Age of De-regulation* (Golden & Underthun, 2016), considerations by legal advisor Herdis Helle for the Norwegian Confederation of Trade Unions (LO) (Helle, 2021), LO's legal advisors Hellum-Lilleengen, Haider and van den Heuvel (2021), input to public hearings from the Cockpit Association of Norway and the Association of Cabin Crew Unions Norway (2021), and the interviews conducted in connection with this report (Interviews, 2021). This report also leans on previous work conducted in connection with other research projects at the Institute of Transport Economics, such as *Nordic Sustainable Aviation* (Ydersbond et al., 2020).

In this report, Norwegian aviation is defined as the various organisations that work within the sector on Norwegian soil, and which, due to the way they are organised, have a significant part of their operations in Norway. This report will only look at civil, commercial aviation for passenger transport with fixed wing aircraft (i.e., not helicopters,

drones or similar), and will focus on pilots and cabin crew. The reason for this is that this is the part of the aviation sector that appears to be most exposed to competition, since the employees often move across national borders, and where most transport work is carried out in commercial passenger transport. Also, employees in many other functions in the aviation sector experience similar pressure, e.g. personnel in technical maintenance, baggage handling and security. Commercial aviation for passenger transport includes both scheduled and charter flights, and the flights include both domestic and international trips. The report will also to some degree describe what is happening in aviation on a European level with regards to pay and working conditions for employees and seriousness of the employment, since the largest airlines in Norway, SAS and Norwegian, also compete with other carriers in a mainly European aviation market. Moreover, the EEA regulations make it fully possible for European airlines to both establish bases in Norway, to operate routes within Norway, and to operate routes to and from Norway, an opportunity they also make use of in practice.

3 Today's status: organisation and regulation

The highest authority in the aviation sector in Norway is the Ministry of Transport. The Norwegian state also owns most of the airports in Norway through its ownership of Avinor AS, which owns the vast majority of commercial airports. If an airport is serviced by the domestic trunk route network, the airport is called a main airport (“stamlufthavn”), while it is called a short runway airport (STOLport) if it is serviced by the short runway airport network (“kortbanenettet”). The responsible authority for civil aviation in Norway is the Civil Aviation Authority of Norway (CAA Norway, *Luffartstilsynet*), while accidents within the entire transport area are investigated by the Norwegian Safety Investigation Authority (*Statens havarikommisjon for transport*) for transport. Both of these directorates are subordinate to the Ministry of Transport, and the Ministry of Transport is the sole owner of Avinor AS.

Every airline is subject to the supervisory authority of one single country in order to reduce the airlines' administrative expenses. The airlines based in the EEA are subject to the supervisory authority of the country that has granted them their operating license (AOC, air operator's certificate), which in Norway is the Civil Aviation Authority Norway (CAA Norway). This license documents that they fulfill safety requirements. To obtain an operating license, the airlines must document, among other requirements, that they own aircraft and satisfy certain financial requirements (European Commission, 2021a; Ministry of Transport and Communications, 2019).

Technical standards for aircraft are fully harmonized at the international level. With regard to legislation on commercial matters, the legislation as well as its application is harmonised between the EU and Norway. Regulation of working and social conditions however is mainly *not* regulated at EU-level but left to the respective EU and EEA member countries (Ministry of Transport, 2019). The EU regulations do however contain certain general provisions on for example working and resting times.

3.1 Company structures and organisation

In 2017, there were three major actors operating the overwhelming majority of domestic flights in Norway: SAS, Norwegian and Widerøe. SAS has traditionally been a network carrier and had business travellers as customers to a larger degree than Norwegian. Norwegian, on the other hand, has focused on the low-price segment ever since it was established. On the largest commercial routes, there was and is strong competition between SAS and Norwegian, while Widerøe is the largest operator on the regional flight routes, as well as operating almost all public service obligation (PSO) routes in Norway. In the last 20 years, Norwegian has gone from being a “little sister” to SAS to approaching SAS in terms of number of millions of seats on domestic scheduled flights (Thune-Larsen, 2019). Several different companies fly in and out of Norway. In 2017, the player with the largest share of seats on flights out of Norway was Norwegian (34% of the seat share), followed by SAS

(28%), KLM (7%), Wizz Air (6%), Ryanair (5%), Lufthansa (3%), British Airways (2%) and Widerøe (2%) (Thune-Larsen, 2019).

At the start of the liberalisation/market opening period in the 1990s, the number of available seats increased considerably, before it gradually sank again due to bankruptcies in the industry, not least the one of Braathens, which for a long time was the largest airline in Norway. Thereafter, the number of seats gradually rose and in 2017 almost reached the former top level, with 24.1 million seats on domestic flights. The average price for journeys between the vast majority of domestic and international destinations has fallen considerably (Thune-Larsen, 2019).

Due to a decline in passenger numbers as a consequence of Covid-19, technical problems with an aircraft type used by the airline, and several other reasons, the parent airline Norwegian almost went bankrupt and sought bankruptcy protection in Ireland and Norway to save itself. Four subsidiary staffing companies in Sweden and in Denmark filed for bankruptcy in the spring of 2020. These were used to recruit pilots and cabin crew. This affected 1,571 pilots and 3,134 cabin crew (Hustadnes, 2020; Parat, 2020). The parent company Norwegian received bankruptcy protection in Ireland in 2021. The entire company was restructured, among other measures by closing down its long-distance network, reducing the number of aircraft, obtaining flexible leasing agreements, lowering operating costs and raising new capital (Brunborg & Lorentzen, 2021; Degnes, 2021).

In the last year, two new airlines have been established in Norway. For a few months, Hungarian Wizz Air operated Norwegian domestic routes before the company gave up on this and now only flies in and out of Norway. In the summer of 2021, the Norwegian airline Flyr started offering flights within Norway and to selected destinations abroad. In the summer of 2022, the Norwegian airline Norse Atlantic Airways started its first flights between Norway and destinations in the USA. In addition, various foreign airlines are in the process of establishing round-trip routes to various Norwegian destinations and destinations abroad (see e.g. ABC Tema, 2021a, 2021b; Newth & Hollum, 2021; Norse Atlantic Airways, 2021).

3.2 Employers' organisations and employees' organisations

In Norway, private sector employers are represented by the Federation of Norwegian Aviation Industries, while employers in the public sector such as Avinor are represented by the employers' association Spekter. Private employers include the largest airlines in Norway: SAS, Norwegian and Widerøe. The negotiating party for a large number of the employees in the sector is the Norwegian Confederation of Trade Unions (LO) through the Cockpit Association of Norway and the Association of Cabin Crew Unions Norway and the Confederation of Vocational Unions (YS) through the YS-union Parat (Parat Aviation, 2021). Employees in travel agencies, offices, air freight, traffic and other services on the ground are organised in the Union for Aviation and Tourism (FLR) (*Fagforening for Luftfart og Reiseliv*) within the LO Union of Commerce and Office Employees, which is LO's third largest union, and in the YS union Delta. Other employees are represented by the Norwegian Aircraft Technician Organisation (NFO) and the Norwegian Society of Engineers and Technologists (NITO). The table below shows an overview of the main organisations and their members, as well as who they represent. It probably *does not* provide a complete overview.

Table 3-1 Overview over unions and their member organisations, and occupational groups in Norwegian aviation

Main negotiation partner in the Norwegian Confederation of Trade Unions (LO): Cockpit Association of Norway		
LO-union	Member organisations	Occupational groups
Cockpit Association of Norway	Norske SAS Flygeres Forening (NSF)	Pilots in SAS
	Widerøes Flygerforening (WFF)	Pilots in Widerøe
	Norse Atlantic Pilotforening (NAP)	Pilots in Norse Atlantic Airways
	Flyr Pilotforening (FPF)	Pilots in Flyr
	Norsk Luftambulans Flygerforening (NLAFF)	Pilots in Norsk Luftambulans
	West Air Norge Flygerforening (WAN)	Pilots in West Air
	Helikopter Service Flygerforening (HSF)	Helicopter pilots in CHC
	Airlift Flygerforening (ALF)	Helicopter pilots and task specialists in Airlift
	Luftambulansetjenestenes Flygerforening (LTF)	Pilots in Lufttransport
	Sundt Air Flygerforening (SAF)	Pilots in Sundt Air
	Flygerutdannedes Forening (FUF) (Educated Pilots' Association)	Pilots without positions
	Fonnafly Flygerforening (FFF)	Pilots in Fonnafly
	Helitrans Flygerforening (HTF)	Pilots and task specialists in Helitrans
	Nord Helikopter Flygerforening (NHF)	Pilots in Nord
	Norsk Dronepilotforening (NDF)	
	Association of Cabin Crew Unions Norway (Kabinansattes Forbund)	OSM Aviation Academy Pilot Union (OAPU), Pilot Flyskoles Flygerforening (PIFF)
Universitetets Flygerforening (UFF)		Flight instructors at the School of Aviation, Arctic University in Norway
Pegasus Flygerforening (PFF)		Pilots in Pegasus
The Norwegian Union of Commerce and Office Employees	Norsk Kabinforening	Cabin Crew in SAS
	Norwegian Kabinforening	Cabin Crew in Norwegian
	Flyr Kabinforening	Cabin Crew in Flyr
Norwegian United Federation of Trade Unions	Fagforening for Luftfart og Reiseliv	Counter service and administration
IndustriEnergi (trade union for employees in the industry and energy sector)	Flyarbeidernes Forening	Ramp agents
The Norwegian Engineers and Managers Association		Employees in CHC Helikopter Service, Bristow and HeliOne
Norwegian Union of General Workers		
The United Federation of Trade Unions		
Norwegian Confederation of Trade Unions		

Main negotiating partner in LO: Norwegian Civil Service Union (NTL), NTL Luftfarten		
Members in Avinor, Avinor Flysikring, Torp, Falck, Notodden and Lufttransport. Largest trade union in Avinor and Oslo Lufthavn		
Main negotiating partner in YS: Parat		
Parat-unions		
Parat kabinforening	Widerøes kabinforening	Cabin crew in Widerøe
	SAS Norge Kabinforening	Cabin crew in SAS
	Norwegian Kabinforening	Cabin crew in Norwegian
	Sunclass Airlines	Cabin crew in Thomas Cook and TUI
Pilotforbundet	Norwegian Pilot Union (NPU)	Pilots in Norwegian
	Bristow Norway Flygerforening	Helicopter pilots in Bristow
	Lufttransport Rotorwing	Pilots for Lufttransport
	SAS Scannor Flygerforening	Pilots in SAS
		Rescue personnel in Norsk Luftambulans
Hovedflyplassutvalg OSL	Avam Aviation	
	SAS Ground Handling (landside and airside)	
	Menzies	
	Gardermoen Fueling Services	
	Sodexo	
	Gate Gourmet	
	SSP Norway	
	Travel Retail Norway (TRN)	
	Airport Retail Norway	
	Thai Airways	
Delta Luftfart	Avinor	Counter service and administration, ramp agents
	Stord Luftfart	
	Norwegian Armed Forces	
	Oslo Lufthavn Gardermoen	
Independent, outside central organisation		
Norsk Flygelederforening		Air traffic controllers
Norsk Flytekniker Organisasjon		Aircraft maintenance engineers
Norsk Helikopteransattes Forbund		Mechanics/engineers and administrative personnel
Norsk Ingeniør og Teknologorganisasjon (NITO)		Engineers and technologists
The Norwegian Organisation of Managers and Executives		Managers, engineers and employees in mercantile functions

3.3 Continuous rise in staff without direct employment, although direct employment is still the norm in Norway and Europe

The vast majority of pilots and cabin crew in aviation in both Norway and Europe, around 80%¹⁷ according to previous surveys in Europe and Norway, are directly employed by the company they work for. However, it is difficult to estimate exact figures (Brannigan et al., 2018; Turnbull, 2020; Underthun & Ingelsrud, 2019; Yorens et al., 2015).¹⁸

Atypical employment denotes different forms of employment where the employees are not directly employed by the airline they work for full time. Here, atypical employment is, inspired by Yorens et al. (2015) and European Parliament (2016), defined as for example a) pay-to-fly schemes, b) self-employed contractors, c) employment via staffing agencies or subsidiaries, d) crew on so-called zero-hours contracts, contracts where the employees are only paid for the hours they are in the air e) time-limited contracts, i.e., contracts with a defined end, and f) part-time contracts.¹⁹ In addition, one and the same employee may also be in a work situation where several of these atypical situations apply simultaneously, such as being on a time-limited contract via a staffing agency.²⁰ The low-cost airlines in Europe have a tendency to employ personnel on time-limited and part-time contracts and to use staffing agencies, which provides them with a cost advantage compared to the large national network carriers (Yorens et al., 2015, p. 41).

The report will discuss a) to d) in more detail, as well as the practice of wet leasing. It is uncertain how many people today are affected by such atypical forms of employment in Norway and in Europe. This is also difficult to quantify as people who are employed in this way are often not members in unions, and the employers do not necessarily want to contribute with data (Interview 3, Cockpit Association of Norway, 2021). Atypical contracts seem to be most common among the youngest groups of employees (Yorens et al., 2015, p. XIII).

¹⁷ The large European Ricardo study found that between 9% and 19% of cabin crew and around 8% of pilots were not direct employees, with large variations between the different airlines (Brannigan, C., Amaral, S., Thorpe, C., Levin, S., Figg, H., Neiva, R., Morgan-Prise, S., Ferrer, M. T., Fernández, C. G., Izquierdo, S. M., Castillo, L., Tallos, J. & Clina, C. (2019). *Study on employment and working conditions of aircrews in the EU internal aviation market*. DG Movement. <https://op.europa.eu/en/publication-detail/-/publication/97abb7bb-54f3-11e9-a8ed-01aa75ed71a1>.)

¹⁸ Underthun and Ingelsrud (2019, p. 28) write that one in five employed pilots, cabin crew, aircraft technicians and aircraft mechanics is employed in an independent subsidiary of the company they work for. This is a type of indirect employment.

¹⁹ What constitutes full-time and part-time employment is not always easy to decide in Europe, as the definition of full-time employment varies in different countries, for example 35 hours per week in France and 40 hours per week in Austria. Yorens, Y., Gillis, D., Calcke, L. & De Coninck, J. (2015). *Atypical Forms of Employment in the Aviation Sector*. European Social Dialogue, European Commission. https://www.europarl.europa.eu/meetdocs/2014_2019/documents/tran/dv/report_atypicalemploymentinaaviation/Report_AtypicalEmploymentInAviation_en.pdf, p. 36.

²⁰ One of our informants stated that this also happens in Norwegian aviation, in form of SAS using other airlines to service regional routes in Norway. In these companies, our informant says, there is a significant number of zero-hours contracts, especially when wet lease agreements are used, and this proportion is growing. Interview 1, Cockpit Association of Norway. (2021, 5 November 2021). *Interview for The Organisation of the aviation sector in a European context*.

Pay-to-fly

Of these different types of atypical employment, pay-to-fly is regarded as illegal, as it violates the fundamental right to get paid for work that has been carried out (Interview ECA, 2021). According to Yorens et al. (2015, p. 40), it is also a growing trend that airlines expect pilots to pay for their own training or that cabin crew is required to cover airlines' expenses in connection with their own training. In pay-to-fly schemes, pilots pay airlines to be allowed to fly as part of the certification process required to fly a certain aircraft type. The term in itself is somewhat controversial and describes a range of different practices. It is not known exactly how many pilots in European aviation are part of such schemes, but the existence of such agreements seems well-documented. Here, especially newly qualified pilots are exploited as they need to document a certain number of hours in the air to obtain the type ratings that will allow them to act as co-pilots on different types of aircraft. These pilots often have extra large incentives to get into paid employment quickly, as they often have sizable study loans after years of expensive pilot education (Yorens et al., 2015, p. 40). However, it is difficult to examine such conditions in practice, as the company structures under which these pilots work can be very complicated, and follow-up may for example require co-operation between different countries' aviation authorities, which at the moment only exists to a limited extent in Europe. The informants in this study believe that pay-to-fly occurs very rarely, if at all, in Norwegian aviation (Interview 4 Cockpit Association of Norway, 2021; Interview ECA, 2021; Ministry of Transport, 2019).

Self-employed

The use of self-employed pilots and cabin crew *can*, in some cases, be in accordance with the legal requirements for using this form of employment. However, this presupposes that the employees work on non-regular routes so that they can choose when to work, that they work for more than one employer and also have other types of working conditions that make them truly self-employed, such as being able to determine their holiday periods, place of work or salary.

According to our informant in the European Cockpit Association (ECA) and the Cockpit Association of Norway, it is a significant problem today that low-cost carriers such as Ryanair and Wizz Air make use of personnel who only *appear* to be self-employed (this is also referred to as "bogus self-employment"²¹), especially and to an ever larger degree in Eastern Europe. Because the employees on paper are self-employed, the airlines are not required to offer benefits such as parental leave and sick pay and can thus save money on wage costs and social benefits. In practice, however, these persons are in many cases *de facto* employees since they cannot choose their working hours, they only work for one single employer, and so on. When airlines use such atypical forms of employment, they can push down the price of having crews on planes, and therefore offer lower ticket prices, which means that competition with companies that do not use these practices no longer takes place on equal terms.

²¹ The European Commission held a hearing on the topic of bogus self-employment, and in December 2021 launched an initiative to improve the working conditions for persons that often work as self-employed contractors through digital labour platforms (i.e., do platform work) (European Commission, 2021b, December 9). Commission proposals to improve the working conditions of people working through digital labour platforms.

<https://ec.europa.eu/social/main.jsp?langId=en&catId=89&newsId=10120&furtherNews=yes>, European Commission, 2021c, March 5). *Competition: Commission invites stakeholders to provide comments on the application of EU competition law to collective bargaining agreements for self-employed* https://ec.europa.eu/commission/presscorner/detail/en/IP_21_988).

9% of employed pilots in a large, European survey (conducted for the Ricardo study) defined themselves as self-employed,²² and a large majority of those worked for low-cost carriers through a staffing agency. However, according to these pilots themselves, they only worked for one employer, did not have the opportunity to choose their own cooperation partners, influence the structure of their workdays etc., and are thus to be regarded as employees and not self-employed (Brannigan et al., 2019).²³ In another major European survey, here referred to as the LSE study, 11,4% of pilots had a form of atypical employment (Reader, Parand, & Kirwan, 2016, p. 16).²⁴ According to the respondents in the Ricardo study and the study by Yorens et al (2015) (the Ghent study), it was primarily low-cost airlines that used atypical forms of employment in Europe, and those were also the airlines that most often made use of self-employed pilots and cabin crew. However, most of these were not de facto self-employed because, among other things, they could not work for another employer at the same time and could not decide for themselves when to fly (Brannigan et al., 2019, p. ix; Yorens et al., 2015, p. XIII).

Previously, these groups from Eastern Europe were mostly organised, but according to our informants, this is the case to a much lesser extent today (Interview European Cockpit Association, 2021; Interviews, 2021). This also makes it more difficult for them to negotiate with employers to ensure good working conditions. That around one in ten pilots in Europe today is in this type of atypical employment relationship may not sound like much but may still contribute to financial profit by the airlines that use such structures. Thus, these gain an advantage over their competitors in the aviation industry, where profit margins often are slim. Low cost airlines Ryanair and Wizz Air were the companies in the Ricardo study that most often used this type of employment structure. According to the informants in the so-called Ricardo study, the consequences of the so-called “false forms of employment”, are detrimental to fair competition in aviation (Brannigan et al., 2019, pp. viii-ix).

The low-cost airlines in Europe have fewer pilots that are employed directly than the network carriers and regional airlines and use a large number of different contract types according to another large survey, the aforementioned Ghent study. This was confirmed by our informants (Interview European Cockpit Association, 2021; Interviews, 2021). From the airlines’ side, it often makes sense to use atypical contracts to handle situations such as large seasonal variations, but it also seems to be used as a tool to keep down costs:

These types of employment correspond to demands for a higher degree of flexibility. On the one hand, outsourcing can in some aspects be considered more flexible. On the other hand, subcontracting is also a technique used for social and fiscal engineering purposes (Yorens et al., 2015, p. xiii).

According to one of our informants, and also the Ghent study (Yorens et al., 2015, p. 39), the use of so-called false self-employed is an increasing problem in Europe: “Bogus self-employment is spreading quickly” (Interview European Cockpit Association, 2021).

10 years ago, most pilots in Eastern Europe were members of labour unions. Now, most pilot unions in Eastern Europe no longer exist. Most pilots in that region are hired as “self-employed.” What initially was an Irish problem [Ryanair] is now an Eastern European problem (Interview European Cockpit Association, 2021).

²² The study also included personnel working in Norwegian aviation.

²³ Case C-413/13 in the European Court of Justice, from December 4, 2020.

²⁴ 23% of the more than 7000 respondents were based in Norway.

According to several of our informants and documentation we received, there were and are cases of such false self-employment in Norwegian aviation as well (Interviews, 2021). The Cockpit Association of Norway points to several examples, such as Norwegian's use of SmartLynx for flights in 2017,²⁵ where employees did not have a fixed salary, and the organisational structure was, to put it mildly, complicated:

These members of the cabin crew were employed as self-employed contractors through the staffing agency Aerviva headquartered in Dubai in the UAE,²⁶ lived at a hotel close to Oslo Airport Gardermoen, flew out of Oslo, while their place of residence and home base were defined as England. Their wages were paid from Malta (Cockpit Association of Norway, 2021).

Staffing agencies and subsidiaries

So-called “flags of convenience” seem to be used by airlines to an ever larger degree: They move their operations to the countries that offer the most favorable conditions, for example Ireland, where company tax is lower than in other countries in the EEA (Interview European Cockpit Association, 2021). In Europe, it is also becoming increasingly common for the crew of an aircraft not to be directly employed. Not hiring directly is most common in low-cost airlines, where the vast majority of both crew and pilots in the Ricardo study said they were hired through some type of staffing agency (Brannigan et al., 2019, p. vi).

Earlier, almost all employees in aviation in Norway had a direct contract with their employer, but in 2019, one in five was employed in an independent subsidiary of the airline they worked for. At the same time, both SAS and Norwegian used staffing agencies at their bases abroad (Underthun & Ingelsrud, 2019, p. V). Employment through subsidiaries has been controversial in Norway, and trade union Parat took legal action against Norwegian where Parat argued that employees should continue to be directly employed by the mother company Norwegian instead of through various subsidiaries. The Supreme Court of Norway however ruled in favour of Norwegian and decided that their contracting solutions where employees get their contracts via subsidiaries were legal (Ministry of Transport, 2019). At the same time, the Supreme Court remarked that this situation was not in line with the intentions of the present laws and that the law should be subject to further scrutiny and development.

With the announced split-up of SAS into four different companies under the same SAS contracting/group umbrella,²⁷ more pilots and cabin crew may in future be employed via Ireland-based SAS Connect.²⁸ This may mean that the part of the aviation sector that can be regarded as Norwegian, with Norwegian employees that work under Norwegian pay and working conditions, will shrink, in favour of employees in staffing agencies that work for

²⁵ Also commented by Envaspotter: <https://envaspotter.net/2017/02/22/smartlynx-skal-fly-for-norwegian-s17/>

²⁶ “We were contacted by an employee in SmartLynx who told us the company he was employed by in Dubai refused to pay him the wages he was entitled to because of corona. Eventually, they agreed to pay a share of his salary if he accepted the offer quickly enough. And he ended up accepting it, because he did not have a choice” (Interview 2 Cockpit Association of Norway, 2021)

²⁷ The parent company is Scandinavian Airlines System Denmark-Norway-Sweden (SAS AB) and the subsidiaries are Scandinavian Airlines Ireland Limited t/a SAS Connect, and SAS Link AB. In addition, the parent company has SAS Cargo Group A/S, SAS Ground Handling Norway, SAS Ground Handling Sweden, SAS Ground Handling Denmark, SAS Eurobonus AB and Gorm Asset Management Ltd (SAS, 2021.)

²⁸ SAS Connect will be headquartered in Ireland and have a base in London. In future, the base will be in Copenhagen.

an Irish subsidiary. Moreover, SAS has indicated that all growth in the coming years is supposed to happen in Ireland/SAS Connect. SAS has also considered turning SAS Connect (formerly Scandinavian Airlines Ireland Ltd, SAIL) into a separate low-cost carrier (Ekeseth, 2021a, 2021c; Interview 1 Cockpit Association of Norway, 2021). Ireland has a much lower corporate tax rate than Norway and offers other attractive conditions, such as favourable terms for leasing and financing, and flexible rights to establish routes and working conditions (ECA, 2020/2021). Employees in SAS Connect will be employed through the staffing agency SAS Connect Crew Services and use CAE for recruitment and training (Ekeseth, 2021c).

Due to Covid-19, SAS laid off 560 pilots in Denmark, Norway and Sweden. Former pilots in SAS react strongly to the restructuring and to the fact that all future growth is planned to happen in SAS Connect and SAS Link, where they have not been offered positions, despite signals from SAS that they should be available and have their uniforms ready once the market improved (Hestenes et al., 2021; Lysvold, 2021; Meland & Akre, 2021).

Furthermore, the pilots that were terminated were not necessarily automatically qualified to fly the aircraft that will make up SAS' future fleet, as these consist of Airbus 320 and other new aircraft, which the pilots lack type ratings for. However, the union reacted most strongly to the fact that the laid-off pilots were not being offered re-employment:

Even more important is the circumvention of the preferential right to re-employment, in the way that another company that uses the same aircraft (Airbus A320) from the same bases (Copenhagen, eventually also Stockholm and Oslo) to the same destinations will hire without taking seniority into account to outcompete the "parent company", SAS Scandinavia (Interview 2 Cockpit Association of Norway, 2021; Meland & Akre, 2021).²⁹

What the legal situation in this area will look like in the future is uncertain. Following Covid-19 and the restructuring of SAS, Parat and LO both filed lawsuit against SAS with regard to the dismissed employees' right to be re-employed in their own group of companies (Parat, 2021, Bach and Ekeseth, 2022).³⁰ Furthermore, the government agreement between the Labour Party (AP) and the Center Party (SP), the Hurdal Platform, mentions that the recommendations by the Fougner expert committee will be followed up. Among other things, this committee recommends that employees should have a preferential right to re-employment throughout the group of companies (Labour Party & Centre Party, 2021).

A relocation of operations and investment to countries other than Norway by the Norwegian airlines will not only potentially mean fewer employees in aviation in Norway, and probably lower revenues from aviation in particular and the business and industry sector in general in Norway, but may also contribute to a further weakening of the pay and working conditions of employees in European aviation:

²⁹ After a more than two weeks long strike summer 2022, costing SAS more than NOK 1 billion, the leadership in SAS and the pilots in Denmark, Norway and Sweden came to agreement. This agreement included clauses that all the laid off pilots would be offered pilot positions again to the same conditions as the other pilots. The pilots on their side agreed to more demanding schedules and reduced pay, and five years without the right to strike to help save the airline from its big financial problems. The main motivation for the strike was to protect the Nordic model of employment.

³⁰ Similar lawsuits are also being prepared in Denmark and Sweden by the pilot unions there (Sveen, 2021).

What this all points to is that the natural next step in the development of Norwegian aviation under the current regulatory framework is that it will eventually be phased out and that commercial passenger aviation in Norway will primarily consist of foreign companies with Eastern European working conditions. Such a phasing out of Norwegian aviation will mean many lost jobs, lost tax revenue, erosion of the Norwegian model, further complication of oversight by the authorities and unhealthy competition driven by regulatory shopping, social dumping and flags of convenience (Cockpit Association of Norway & Association of Cabin Crew Unions Norway, 2021).

Some examples of this: so-called “creative internal restructuring” in SAS and Norwegian has, according to the unions for pilots and cabin crew, enabled the companies to use wet leasing as a cost-cutting measure on a regular basis after wet leasing went from being very expensive to relatively cheap (Cockpit Association of Norway & Association of Cabin Crew Unions Norway, 2021, p. 6; Interview European Cockpit Association, 2021). The unions also mention various examples of conditions that they believe are not compatible with a decent Norwegian working life. Some of these are described in the following (Cockpit Association of Norway, 2021; Interviews, 2021):

- a) Wizz Air’s use of a rotating, so-called self-employed labour force on Norwegian bases, with Polish personnel, via the staffing agency Confair, and wages paid from Switzerland (Cockpit Association of Norway, 2021). Here, some of the problems have been 1) lack of compliance with the EU directive on the posting of workers, which stipulates that local pay and working conditions must be offered after one year in the country, and 2) that the employees are not actually self-employed when they only work for one single employer and are not available to others (Cockpit Association of Norway, 2021; Interview 1 Cockpit Association of Norway, 2021).
- b) SAS’ transfer of activities to SAIL (now SAS Connect), as the routes it flies previously used to be staffed by Scandinavian crew members within Scandinavia, while routes to and from Scandinavia are staffed by personnel on Irish contracts. As the employees are rotated, there is no discussion about where they actually do their work, and there is also little physical oversight and inspection as SAS Connect does not fly in the country where its aircraft are registered. Through registration in Ireland, the company can reduce its corporate tax as Ireland has lower rates than the other European countries. Norwegian has earlier done the same (Cockpit Association of Norway, 2021; ECA, 2020/2021; Interview 2 Cockpit Association of Norway, 2021).
- c) DAT A/B and UAB DAT LT: These airlines jointly won the tender for the PSO route between Oslo and Florø from 2021 to 2024. UAB DAT LT uses personnel which in reality is not directly employed by the company, and the business model is therefore a kind of “sneaky wet leasing,” where employees fly under Eastern European pay and employment conditions, which in some cases are very poor (Cockpit Association of Norway, 2021; First2 resource, 2021; Interviews, 2021). Here, there are multiple problems, including the use of wet leasing in a public works contract which explicitly states that the practice is not allowed (Helle, 2021), and that the award of the tender puts pressure on Norwegian pay and employment conditions for the remaining PSO routes in Norway. This brings up a variety of issues. An illustrative example would be a Romanian pilot that flies for a Lithuanian airline, but has a contract in Malta, and in practice has his place of work and employment in Florø. What kind of social security rights does he have? Which country does he pay taxes to, what jurisdiction does apply, etcetera? (Interview 3

Cockpit Association of Norway, 2021). The award of the route to DAT A/B and UAB DAT LT makes it more difficult for new Norwegian players to establish themselves and to become serious competitors when it comes to supplying flights on PSO routes.³¹

d) Flynor has stated multiple times that their employees are Norwegian and fly under decent Norwegian pay and employment conditions (Newth & Hollum, 2021). When the company needs extra capacity, however, it has used wet leasing, for example by leasing aircraft and crew from airBaltic (Envaspotter, 2021), where the employees are recruited through the staffing agency AS Aviation Crew Resources (ACR), a subsidiary. Wages are significantly lower than in Norway. According to the Cockpit Association of Norway (2021), airBaltic has forced employees to transfer to the subsidiary, where wages were cut by 50% during the pandemic, and the employees lost social benefits such as sick pay, pension payments and paid parental leave. All of these things violate airBaltic's obligation to inform unions of various changes, including wet leases outside the country's borders, according to their formal agreement with the labour unions. In addition, according to the Latvian Aviation Union (LAU), airBaltic has made threats against trade union representatives. The Cockpit Association of Norway believes that these factors are "reminiscent of intentional trade union busting" (Cockpit Association of Norway, 2021, p. 4).

Wet lease

So-called wet lease (i.e. the leasing of aircraft and crew from another company) is not new and has existed for several decades already. Earlier, wet lease was extremely expensive, and only used to solve capacity challenges in the high season in summer and in case of technical problems. Since the 1990s, several companies that offer wet lease to airlines have been established. Now prices for wet lease are low, and some charter companies above all use this practice to procure services and circumvent local laws, according to our informant in the European Cockpit Association. Until the Covid-19 pandemic hit the world, there was a steady increase in the number of wet lease flights in Europe every year (Aziz, 2020; Interview European Cockpit Association, 2021). An example of wet lease according to one of our informants is Avia Solution Group (Interview European Cockpit Association, 2021). In addition, there are companies that specialize in hiring out crew to different airlines, and where the employees are not directly employed, but through a subsidiary in for example Asia.

How much transport capacity can be procured via wet lease is strictly limited in Norway by, amongst other things, various collective agreements between the Federation of Norwegian Aviation Industries on the employers' side and the employees' unions. The unions and SAS have an agreement that wet lease can be used for no more than 13% of flights (Interview 1 Cockpit Association of Norway, 2021). Up to 20% of SAS' domestic operations in Norway are carried out via wet lease by CityJet, an Irish company with a base in Copenhagen, and the Estonian company Xfly, where the pilots are employed through the staffing agency PAS Aviation. The employees in CityJet start their duty in Denmark, where employers' social insurance contributions are lower than in Norway. Thus, Denmark is responsible for the supervision of the working environment of the crews and Ireland supervises the company even though the employees in reality have their workplace in Norway, while the

³¹ "In addition, this is a direct flagging out of Norwegian jobs. Around 20 Norwegian jobs disappeared in June due to the new practice by the Ministry of Transport."

Norwegian aviation authorities do not supervise aircraft and companies that regularly use Norwegian airports.

That SAS uses subcontractors to produce certain types of aviation services is not exactly new: It has been part of SAS' business model for many years to use subcontractors to operate regional routes which SAS regards to be outside its core business, because the aircraft are different (up to 90 seats) and smaller than the ones in the standard fleet, the pilots need different skills and type ratings, etcetera.

Zero-hour contracts

With zero-hour contracts, the crew only gets paid for the hours they are in the air. Crew on so-called zero-hour contracts is likely to be a small problem in Norwegian aviation. Such contracts are also forbidden by the Norwegian Working Environment Act (Section 14-9). However, if the person is employed via a foreign company and works on Norwegian soil, they can, as long as they are posted workers, work under the pay and working conditions of another country. Such cases are unlikely to be identified, as it is the civil aviation authority in the country where the company is registered that is responsible for supervising airline safety. According to the unions for pilots and cabin crew, there are however persons with such contracts in Norway. The unions are of the opinion that these employees and their employers should receive follow-up in Norway to ensure decent pay and working conditions (Interviews, 2021).

3.4 Fewer employees from Western Europe, more from Eastern Europe

More and more employees in European aviation come from Eastern Europe, where pay and working conditions are generally worse than in Western Europe, employees are organised to a lesser extent, and bogus self-employment is more common (Interview European Cockpit Association, 2021; Plucinska & Humphries, 2018). One way for this to happen is that airlines first reduce their capacity. In the following, to cover their needs, they enter into wet lease agreements with companies that, for example, have crew members from Eastern Europe (Interview ECA 2021). Thus, the airlines circumvent agreements they have entered into with trade unions in Western European countries, and also the provisions of, for example, the Temporary Agency Work Directive (2008/104/EC), which stipulates that those who are employed temporarily must have at least as good working conditions as those who are directly employed.

Naturally, people who come from European countries with high unemployment are often willing to accept conditions that are significantly worse than people who come from countries with low unemployment, because they do not feel they have a choice (SAMAK, 2017, p. 11). Some airlines, such as Wizz Air and Ryanair, have also actively opposed the unionization of their workers (for example Hagesæther, 2014):

Ryanair has collective agreements in Western European countries, but not in Eastern European countries. Now all new aircraft are wet leased in Eastern European countries, and there are locally self-employed subsidiaries in Buzs, for example, in Poland (Interview European Cockpit Association, 2021).³²

³² The informant also expanded on this: "Ryanair's new planes are allocated to the Eastern European branches like Buzz, where all pilots are self-employed, leaving the Western European bases, with unionised pilots, with

The consequence of this development seems to be a so-called “race to the bottom” with regards to the pay and working conditions of the employees in European aviation (Interview European Cockpit Association, 2021; Yorens et al., 2015, p. xiv).³³ When some companies start to do regulatory shopping, this puts pressure on other companies to do the same, so they will not lose out in the competition for customers:

When competitors use employees as a buffer for the company and remove the original form of affiliation [direct employment] with the company, it can be tempting for other companies to use the same methods. As long as these companies find loopholes between national, European and international rules, this atomisation of working life will continue (SAMAK, 2017, p. 9).

According to our data, the Covid-19 pandemic has intensified the pressure on the employees’ pay and working conditions in Europe and caused several European airlines to restructure in order to cut costs, to strong protests from the unions of pilots and cabin crew (ETF, 2021c, 2021d, Interviews, 2021):

Covid accelerates it [the pressure on employees’ pay and working conditions], and I do not see where it will stop (Interview European Cockpit Association, 2021).

The Association of Cabin Crew Unions Norway points out that they are not able to compete in terms of wages with Eastern European employees in for example Wizz Air, which earn NOK 8,000 per month, are not organised, and do not work under orderly conditions. The Norwegian cabin crew experience that on Norwegian routes there is an ever increasing number of employees from countries outside Scandinavia, where wage levels are significantly lower than here: “We Scandinavians are a “dying species” on air routes in Norway” (Interview Association of Cabin Crew Unions Norway, 2021).

3.5 Atypical employment appears to have a negative impact on safety

In general, aviation is an industry known for a high level of safety, and there are very few serious accidents. This is especially true for commercial aviation in Europe. The risk for is for example much lower than in road transport, and statistically flying is one of the safest ways of travelling (Eurostat, 2021; Reader et al., 2016).

Commercial Norwegian air transport achieves the ambitious goals the Norwegian authorities have set when it comes to accident frequency (Kobberstad, 2021).³⁴ However, this does not mean that serious accidents are guaranteed not to occur again: “The absence

aircraft shortages. Ryanair might be tempted to solve the aircraft shortage in the west with lower paid wet leasing from the east” (Interview European Cockpit Association, 2021).

³³ This should be examined more closely, probably through one or more studies by independent research institutes that are able to collect large amounts of data, and also use various types of data collection to arrive at the best possible analysis. At least one major study is already looking at these issues: Yorens et al. (2015). The authors state for example on p. XIV: “[...] civil aviation legislation does not take into account the prevalence of different forms of atypical employment and outsourcing in the rapidly changing civil aviation industry. Moreover, social legislation is not able to tackle the new phenomena, leaving room for elaborate subcontracting chains and elaborate social as well as fiscal engineering. As a result, the competition nowadays is a true race to the bottom, which affects fair competition and workers’ rights as well as raises important issues in the field of safety and liability.”

³⁴ SAS was recently named one of the world’s safest airlines in a global ranking (Mikalsen, 2022).

of evidence” is *not* the same as “the evidence of absence” when it comes to factors that may negatively affect aviation safety (Interview 4 Cockpit Association of Norway, 2021; Interview European Cockpit Association, 2021; Interviews, 2021).

Indirect/atypical employment is likely to have a negative effect on safety, according to renowned researchers and others (Melin et al., 2018; SAMAK, 2017, p. 22; Yorens et al., 2015). There are many reasons for this. Here are some of them: Atypical employment, high turnover of personnel and a more distant connection between the employees and the airlines can make it more difficult for the employees to discuss professional topics and various issues related to the employment relationship, as well as the companies’ needs and future development. Both employers and employees lose out on this (SAMAK, 2017, p. 10). In addition, pilots that are employed via staffing agencies have in the Ricardo study answered to a much greater extent than other pilots that they did not receive sufficient training, that they had somewhat worse working conditions, and that there was less openness with regards to reporting on different issues/problems in aviation than those who were directly employed by an airline (Brannigan et al., 2019, pp. vii, 57).³⁵ This is something that is also pointed out by the Norwegian pilot unions:

The fundamental principle of learning to prevent similar incidents³⁶ / accidents suffers from contract consulting work because you do not want to report yourself and thus lose the next contract (Norwegian SAS-pilots Union (NSF) & Cockpit Association of Norway, 2021, p. 3).

The pilots’ perception of the safety culture³⁷ in the air depends to a large degree on what airline they are employed by, and what kind of employment contracts they have, another major study from 2016 shows (Reader, 2016, “the LSE study”). Pilots with atypical contracts and working for low-cost companies and cargo companies have responded systematically more negatively about the airlines’ safety culture than those employed by the network carriers. More than half of the selection of more than 7,000 pilots in Europe felt that fatigue was not taken seriously by their employers, and this again applied to a larger extent to pilots in low-cost companies than in network carriers. Less than one in five felt that their company was concerned about their health. Most did however experience that their colleagues took safety issues seriously (Reader et al., 2016, pp. 24, 25, 30, 70-85).

Widerøe has a system for monitoring fatigue risk, the so-called fatigue risk management system (FRMS), and other companies have a variety of similar systems. Crew on an aircraft are obliged to report themselves “not fit to fly” if they feel ill or fatigued. The question is rather how often the employees do this in practice. As this report will discuss in more detail later, a significant proportion of Norwegian pilots and cabin crew have responded that they have gone to work on days where they should have reported themselves not fit to fly (Civil Aviation Authority of Norway, 2016).

Atypical forms of employment that mean employees on the same aircraft may come from different companies can also affect safety. The fact that employees come from different companies and work on the same aircraft can in itself impact teamwork on board and thus also safety (e.g., Milch & Laumann, 2016). Furthermore, atypical forms of employment may mean that employees are more afraid of losing their jobs and can make them more

³⁵ EASA has drafted recommendations on how this can be handled.

³⁶ An incident is defined as “any occurrence in aviation, other than an accident, that is associated with the operation of an aircraft and affects, or could affect, the safety of operation” (Civil Aviation Authority of Norway, 2020, p. 9).

³⁷ This consists of safety-related norms, rules and actions that are shared by different persons within an organisation (Guldenmund, 2000, quoted by Reader et al. (2016)).

reluctant to report questionable conditions at work for fear of losing their position or accrued benefits. At the same time, atypical employment can also increase the likelihood of employees coming to work although they are ill. Furthermore, several of our informants mention that it will be (more) difficult for people who are not permanently employed to speak out. In addition, indirect employment means that employees may be afraid to cooperate with the aviation authorities in different countries and others for fear of different types of reprisals. “There is a culture of fear,” a representative of the European Cockpit Association said about conditions in Europe (Interview European Cockpit Association, 2021).

A high workload, lack of control, job insecurity, lack of social support and shift work are among the factors Melin et al. (2018) highlight as risk factors for health and safety in the air. Employees of low-cost airlines appear to be particularly vulnerable to various factors that may adversely affect their performance, and do not necessarily have access to the social benefits that are normal in the countries in which they work. For example, a recent inspection in France revealed that SmartLynx employees did not have A1 certificates, which give them access to various social benefits. However, the French Civil Aviation Authority did not hear anything about this from these employees themselves:

There was an inspection of the SmartLynx crews' working conditions in Nantes, in France. Then the crew had instructions from the company not to say a word. So, the inspectors knew in advance that they were not affiliated to French social security [had no A1 certificates], but they didn't get a copy of the contracts, they didn't get anything. And, actually now, the company is suing French authorities for these occasions (Interview European Cockpit Association, 2021).

Low-cost companies generally have worse pay and working conditions than network companies in Europe. For example, employees have to work more hours per year, and tend to have more working days that extend to the maximum of what is allowed: 14 hours in a day followed by an equally long period of rest. This contributes to fatigue in the employed pilots and cabin crew (European Parliament, 2016; Interviews, 2021; Reader et al., 2016; Yorens et al., 2015).³⁸

There are very few serious accidents in Norwegian and European aviation, and the few that do happen usually involve small aircraft in the general aviation (GA) segment (Eurostat, 2021; Kobberstad, 2021). The safety targets set for the various types of flights will be achieved and have already been achieved for commercial aviation. According to two Norwegian surveys, pilots feel free to report “unfit to fly” without this affecting their further career (Civil Aviation Authority, 2016; Underthun & Ingelsrud, 2019). Employees are *not* prosecuted if they report errors they have made as long as these were not committed intentionally. Impunity for incidents due to no fault of one's own is part of “just culture” in aviation.

Despite this, the safety culture in aviation in Norway as well as in Sweden and the rest of Europe appears to be under pressure, partly because of the intense competition (Cockpit Association of Norway & Association of Cabin Crew Unions Norway, 2021; Interviews, 2021; Melin et al., 2018). In 2015, for example, as many as 39% of pilots and 59% of cabin crew in a Norwegian survey answered that they had gone to work despite the fact that they should have stayed home (Civil Aviation Authority, 2016).

³⁸ Melin writes in a presentation from 2018: “Pilots with substandard safety climate consistently had worse working conditions, health and recovery; higher levels of anxiety and depression; more incidents and mistakes; and more dangerous safety behaviours.”

The employees in the air have various incentives not to report themselves not-fit-for-flight. When it comes to pilots, many of them, especially the younger ones, have had to take out substantial loans for their flight training, which currently costs up to NOK 1 million.³⁹ If someone reports unfit to fly, this can also mean that colleagues will have a higher workload and flights are canceled. Employees on temporary contracts are also afraid to declare themselves unfit to fly, because they fear that they will not get new assignments, and, if they work in a company with questionable employment practices, lose their jobs or do not get their contract extended (Interview 4 Cockpit Association of Norway, 2021).

The purpose of competition is to ensure safe, efficient and affordable transport. Here, one must distinguish between healthy competition and unhealthy competition. Today, competition is often unhealthy (Interview 2 Cockpit Association of Norway, 2021).

The aforementioned incentives can also help to raise the threshold for reporting serious incidents, as well as reporting oneself unfit to fly for fear of sanctions by the employer. This applies both to employees in what is regarded as Norwegian aviation, and among airlines that have their headquarters in other European countries. For example, when a Ryanair employee calls in sick for the third time, they will be told that now their colleagues will have to work more. The fourth time they report in sick, Ryanair will investigate the matter further. To avoid this, and for fear of losing their jobs, employees, according to one of our informants, go to work despite the fact that they are ill (Interview European Cockpit Association, 2021). Employees in aviation have warned against this development for many years and fear that a serious accident might have to occur before the sector is organised in a better way, such as the Colgan Air accident in the USA (e.g., Interview 1 Cockpit Association of Norway, 2021).

The problem is that the pressure on safety only becomes apparent on the day when things go badly, for example when employees are not able to do their job well on a typical 15-16-hour working day⁴⁰ that includes a return flight Oslo-Las Palmas [...] Previously, a working day consisted of flying one way, and then spending the night in a hotel until the next day (Interview with Association of Cabin Crew Unions Norway, 2021).

Both the Cockpit Association of Norway and the Association of Cabin Crew Unions Norway would like the Civil Aviation Authority of Norway to take a much more active role than it has today, for example by conducting unannounced inspections, such as checking working conditions in the cabin, and generally being more hands-on in their supervisory role. In addition, they believe that the responsibility for oversight should be transferred back to the Norwegian Labour Inspection Authority if the current civil aviation authority does not take more of an initiative (Interview 3 Cockpit Association of Norway, 2021; Interview Association of Cabin Crew Unions Norway, 2021; Interviews, 2021). The Association of Cabin Crew Unions Norway have the impression that issues they report on often are not followed up properly (Interview with Association of Cabin Crew Unions Norway) .

Despite the fact that much of the data from the survey in 2014/15 showed that working conditions were problematic, according to the Cockpit Association of Norway the CAA Norway did little to improve the situation. They also believe that it would be an advantage if someone in the CAAs' management had operational experience, i.e. had worked "on the

³⁹ Very few pilot students seem to attend public flight schools with low fees.

⁴⁰ Such days are only allowed in special circumstances. Usually the maximum length of a working day is 14 hours according to the existing flight time restrictions (FTL).

ground [had direct practical experience from aviation]” with a background as a pilot or cabin crew member (Interview 4 Cockpit Association of Norway, 2021). Also, how various inspection tasks have been solved, and to which degree the competence of the persons who are hired match the position demands in CAA Norway has been subject to criticism. Furthermore, the unions are calling for stronger co-operation between different countries’ aviation authorities in order to ensure that there is sufficient oversight in the air. However, the Civil Aviation Authority has responded to the media that the middle managers have worked with the areas they are responsible for and that the positions are being filled with qualified people (Interviews, 2021; Mauren & Dahl, 2020).

Many operations in aviation are in practice not subject to supervision due to the complicated ownership structures in the air where many airlines are registered at a long distance from the country where they operate. Moreover, the aviation authorities where they are registered have little resources and capacity to supervise aircraft and crew where they are located in practice. In order for the Civil Aviation Authority of Norway to supervise, for example, Wizz Air, they must be asked by the Hungarian civil aviation authority to do this (Interview with Association of Cabin Crew Unions Norway, 2021; Interviews, 2021). These issues are also considered to be a challenge by the Norwegian government’s expert committee on aviation, and the committee therefore encourages, among other things, that:

Future safety work should be aimed at identifying risks resulting from combinations of changed business and organisational models in European aviation and the division of roles between the national supervisory authorities (Ministry of Transport, 2019, p. 13).

3.6 Membership in unions

Several of the low-cost airlines in Europe, including Ryanair and Wizz Air, have actively opposed organisation in trade unions among their employees (e.g. Hagesæther, 2014). A large survey showed that airlines in Europe that used staffing agencies were less likely to give recognition to trade unions than network companies (Brannigan et al., 2019, p. Vii). In Norwegian aviation, however, the degree of trade union organisation is very high, as Table 3.1 also indicates.

3.7 Challenging for the employees in atypical employment to pursue their rights

In recent decades, many employees in European aviation have found themselves in situations where it is unclear which countries’ regulations apply to them, what the correct venue is if they feel that their rights are being violated, where they are entitled to various social benefits and so on (Backe et al., 2021; Brannigan et al., 2019; European Commission, 2019, p. 7; Interviews, 2021; Ministry of Transport, 2019). The examples above in subchapter 3.3 are not unique in terms of the complex structures for organising aviation in Europe.

The legislation in Norway and the EU is constantly being harmonized in this area and is practiced more or less uniformly. That is, the place of jurisdiction for an employee is in the country in which he or she carries out his or her normal work. This is often, but not always, where the person has their home base (Backe et al., 2021). The Civil Aviation Authority of Norway is supposed to monitor the working conditions of employees on

Norwegian soil, but has only limited capacity to exercise oversight and control, as examples from Hagesæther (2014) show, and our informants have also commented (Interview 1 Cockpit Association of Norway, 2021). For employees working in Norway, it is thus up to themselves and their potential unions to assert their rights: “Outside of the Civil Aviation Authority’s follow-up, it is up to the individual employees and their potential unions to ensure that they get their Norwegian rights” (Backe et al., 2021, p. 108).

Taking legal action against one’s employer, however, is probably a last resort for most people because it requires a lot of money and resources and will be emotionally demanding. Furthermore, it is uncertain whether Norwegian trade unions can file lawsuits on behalf of persons who are not members (Backe et al., 2021, p. 109).⁴¹ Unlike in other industries, pay and working conditions in aviation are not based on collective agreements for the entire sector, but instead on collective agreements between airlines and trade unions, and the collective agreements are not universally applied (Backe et al., 2021, p. 109). These various factors seem to make international employees in aviation who are stationed on Norwegian soil vulnerable to exploitation with regard to pay and working conditions (e.g. Hagesæther, 2014, see also the earlier examples in 3.3). The responsibility for employees in both Norway and Europe in such cases is fragmented (Interview 1 Cockpit Association of Norway, 2021).

Many of the employees in aviation who work on Norwegian soil are not Norwegian, and neither are they unionized (Interviews, 2021). When someone falls under the definition of posted worker, i.e. an employee who is sent by his employer to carry out a service in another EU Member State on a temporary basis, this is covered by *Directive 96/71/EC concerning the posting of workers in the framework of the provision of services and will be covered its predecessor, Directive (EU) 2018/957 of the European Parliament and the Council*.⁴² Aviation employees do not necessarily know when this directive is applicable, under what circumstances it should be used, and what it means if this directive applies to them (Brannigan et al., 2019, pp. IX-X). According to the directive, a company that establishes itself in another country with employees can be there for a maximum of one year before they must offer that country’s pay and working conditions to their employees (Interview European Cockpit Association, 2021). Workers in aviation risk “falling between the cracks” with regards to protection because it is unclear which country’s legislation applies. The aviation authorities have limited authority to conduct inspections, while those inspections that are carried out look more like random checks than sustained oversight. In addition, aviation authorities in Europe have limited capacity, and cooperation between the aviation authorities of different countries is not sufficient to ensure regular oversight at bases outside of the country where an airline has its home base (Hagesæther, 2014; Interviews, 2021). Therefore, our informants call for better cooperation between different countries’ aviation authorities (Interviews, 2021).

⁴¹ Collective redress will be re-introduced by the current Labour-Centre Party government. See: <https://www.regjeringen.no/no/aktuelt/regjeringa-vil-gjeninnfore-kollektiv-soksmalsrett/id2882221/>

⁴² See <https://www.regjeringen.no/no/sub/eos-notatbasen/notatene/2016/mai/forslag-til-endringer-i-utsendingsdirektivet-9671ef/id2502344/>

4 Pay and working conditions for pilots and cabin crew

Furthermore, it is striking that aviation in Europe is one of the most regulated sectors in terms of safety and licensing, while working conditions are only regulated to a lesser extent (SAMAK, 2017, p. 13).

4.1 Highly paid pilots and low-paid cabin crew

The study by Underthun and Ingelsrud (2019) shows the wage development for different types of employees in aviation compared with an average industrial worker. The pilots have had good wage development since 2007, while the cabin crew have experienced weak wage growth, and have gone from being a relatively well-paid occupational group to one that has received low-wage supplements in the last two wage settlements. All the same, the pilots have had a weaker wage growth than an average industrial worker (Cockpit Association of Norway & Association of Cabin Crew Unions Norway, 2021; Ministry of Transport, 2019). The average annual salary for a pilot was just over NOK 1.021 million, including supplements, in 2017, but with a large spread. Pilots with 1-3 years' seniority had an average basic salary of approximately NOK 525,000. The average annual salary for pilots who were captains was NOK 1.1 million in basic salary, and NOK 1 246,000 including supplements, while an average co-pilot had around NOK 634,000 in basic salary per year and NOK 736,000 including supplements. Various types of supplements include a daily allowance for meals and extra pay for night work (Underthun & Ingelsrud, 2019, pp. IV, 14, 15). In addition, the pilots also have a generous defined contribution pension plan and solid insurance schemes, and they have a lower retirement age than many other occupational groups (Underthun & Ingelsrud, 2019, p. 19).

According to our informants, pay and working conditions are relatively similar for the Norwegian airlines SAS, Norwegian and Widerøe, but the way seniority is calculated differs between the airlines (Interviews, 2021). In the case of new hires, pilots start at the bottom of the pay scale in their new company despite having long experience, which means that they are "locked in" in their positions (Interview 4 Cockpit Association of Norway, 2021). Newly hired pilots, however, do not belong to the highly paid employees: for example, a newly hired pilot in 2019 earned NOK 450,000 (Jordheim, 2019).

The high average salaries and the attractive pension schemes make the pilots one of the occupational groups in Norway that earn the most and have the best economic conditions (Statistics Norway, 2021b). At the same time, pilots are also one of the occupational groups that pay the most for their education: getting pilot training and type ratings for various types of passenger aircraft, if paid for privately, today costs from several hundred thousand to over one million Norwegian kroner (European Commission, 2019; Underthun & Ingelsrud, 2019, p. 19). Previously, this was not the case: it was the airlines that paid for the training of their pilots, who then committed themselves to working for the airline for a certain number of years. Many pilots also got their training from the military (European Commission, 2019, p. 5). In Norway, there is one institution that offers a publicly funded

pilot education, but this has a very limited number of places, and is very difficult to get into (UiT, 2021).

The pilot education consists of three main components: basic training to obtain a license as a pilot with an airline, certification to fly a particular type of aircraft, and also line training where the pilot gets experience of working on a commercial passenger aircraft as a regular pilot (European Commission, 2019, p 5). Basic training can cost up to EUR 100,000, while getting certified to fly a certain aircraft type used to cost around EUR 30,000 in the EU and can be even more expensive in Norway today (European Commission, 2019, p. 5; Hestenes et al., 2021; Ministry of Transport, 2019). This means that many/most of today's new pilots start their careers with a student loan that is significantly larger than for people in many other occupational groups (Frøjd, 2020).

Pilots in several of the network carriers based in other countries have higher salaries than the Norwegian ones, according to statistical data. In the low-cost companies, the captains have about the same salary as the Norwegian top level, while the co-pilots generally have lower salaries. In these companies, the salary is also more dependent on flight hours in the air, at the same time as the pension conditions are generally worse than in the network companies (Underthun & Ingelsrud, 2019, p. IV).

Cabin crew generally have a lower salary than other occupations with responsibility for the safety of passengers, and significantly lower than the average salary in Norway in 2017 of NOK 535,900.⁴³ Cabin crew earned an average of NOK 428,000 in salary including allowances. The basic salary was NOK 298,000 on average, without supplements and overtime, and approximately NOK 433,000 for those with more than 10 years' seniority without supplements and overtime. However, the lowest 5 percent earn only NOK 250,000 in basic salary, and far from everyone who wishes for this has been offered a full-time position. Cabin crew in other European countries generally seem to earn even less, but the wage level is relatively similar when compared with the average salary in these countries. In low-cost companies in Europe, a larger part of the salary is variable than in the network companies, and more of it comes from commissions for tax-free sales, payment for hours in the air, etcetera (Underthun & Ingelsrud, 2019, pp. IV, 14, 15).

Since publication of the study by Underthun and Ingelsrud (2019), wages for cabin crew have been more or less flat according to our informants. Work on evenings and weekends is not compensated for, nor is the journey to get to work, or when employees are transported from one place to another to do their work (Interview with Association of Cabin Crew Unions Norway, 2021). The cabin crew in Norway, however, seem to have better pension conditions than other low-income occupational groups, and can earn various types of supplements such as for taking the role of cabin manager, cleaning, daily meal allowance, and commissions from in-flight sales (Underthun & Ingelsrud, 2019, p. 23).

There has been a downward spiral for at least the last 15 years, with every negotiation, every opportunity, every savings round being an attempt to worsen our conditions [...] There are bad times in aviation "all the time." For example, we hear from the employer side: "If you do not contribute now: we go bankrupt, we move the company, we have to lay off people, and so on" (Interview with Association of Cabin Crew Unions Norway, 2021).

⁴³ The average salary is higher than the mean salary, which in Norway is the more telling number of normal person's economic conditions. According to a news source, the median income in 2017 was 501 840. See <https://www.smartepenger.no/jobb/2584-lonnsutvikling>

Previously, there was a requirement for a course that lasted several months, paid for by the airlines, to become a cabin employee. Today, airlines offer a 3-4-week course free of charge, but without paying the trainees. Due to, among other factors, high work pressure, little control over one's own leisure time with great unpredictability in a physically demanding job, and low wages, there is tremendous turnover among Norwegian cabin crew, according to our informants. "Half of them only work there for about six months before they leave" (Interview with Association of Cabin Crew Unions Norway, 2021). This affects both the quality of the services because there is less continuity and fewer employees with long experience, and also safety according to the informants (Interview with Association of Cabin Crew Unions Norway, 2021). "It's not possible to build a safety culture with such a large turnover," says one of our informants about this situation (Interview 4 Cockpit Association of Norway, 2021). How large this problem is in practice is difficult to quantify and should also be a topic for further research.

4.2 Demanding schedules for the employees

Shift work is the standard among pilots and cabin crew, and there are fixed schedules and variable schedules. Typical fixed schedules for employees in the airlines are: Norwegian's pilots work for five days followed by four days off, a minority of SAS pilots in the air have five working days followed by four days off, while Widerøe has seven working days followed by seven days off for pilots and six days off for cabin crew working in the network with short take-off and landing airports (STOL)-port network, so they have their own customized FTL. The fixed schedule gives employees a good idea of what to expect in the future, but little flexibility to swap shifts with others, while the variable schedules make it easier to swap shifts, but are set up on a monthly basis and make it more difficult to plan further ahead (Underthun & Ingelsrud, 2019, pp. 34-35). For example, it can be difficult for an employee on a variable schedule to attend large social events such as confirmations and weddings (Interview with Association of Cabin Crew Unions Norway, 2021). A majority of SAS' pilots and cabin crew worked on variable schedules in 2019. Those with variable schedules generally have somewhat more vacation and fewer days in service than those on fixed schedules (Underthun & Ingelsrud, 2019, p. 35, 36).

More than 60 percent of the cabin crew and almost half of the pilots worked on variable schedules in 2019. The majority of the pilots and cabin crew felt that they could influence their work plan only to a small or very small extent after it was set up by the employer (Interview with Association of Cabin Crew Unions Norway, 2021; Underthun & Ingelsrud, 2019, pp. IV, 36, 39). In foreign airlines, variable schedules are more common than in the companies in which Norwegian aviation workers are most often employed. When employees on standby are called out, this can result in a longer working day. From the time an employee is called out on standby until the person is back, it can take 23 hours according to our informants (Interview 4 Cockpit Association of Norway, 2021).

Working and resting times in aviation are regulated through various EU/EEA regulations and by collective agreements between the airlines and the employee organisations. The legislation with regard to working hours for crews on aircraft in European aviation is completely harmonised with regard to the maximum number of working hours per day, week, month and year. This legislation is called Flight time limitations (FTL). These regulations set a limit where the crew must not have more than 900 block hours per calendar year but may have up to 1000 block hours within a 12-month period where the average is calculated continuously. In the course of seven days, there can be a maximum of 60 working hours, 190 working hours in 28 days, and 2,000 working hours per year. Very

long working days for employees are allowed; they may work up to a maximum of 14 hours a day within the EEA regulations, and up to 16 hours under special circumstances (Europalov, 2014; Underthun & Ingelsrud, 2019). When FTL was implemented in Norwegian legislation, the maximum length of working hours per day was increased.

In addition to working days of up to 14 hours, there is also travel time to workplaces, and travel time between two journeys/flights where an employee works. This can mean that the actual time during a day spent either at work or traveling there may be significantly longer. In the case of unforeseen events, the time spent at work can also be longer than 14 hours, such as 15 hours or more, and our informants say that the average working time per year for cabin crew includes up to 900 block hours in the air (Interview with Association of Cabin Crew Unions Norway, 2021).

The flight time limitations, i.e. the fact that working days of up to 14 hours are allowed in Europe, probably entail an additional safety risk, and do not appear to be in accordance with recommendations from some of the existing research, such as the experts behind the Moebus report from 2008 on how to prevent fatigue among pilots (Moebus, 2008),⁴⁴ or the results from ICAO's surveys (ICAO, 2019). Moebus (2008) points out several factors related to pilots' working hours as problematic because they mean that pilots may get fatigued, and thus threaten flight safety. These are: a) many hours on duty within a short duty period, b) long working days, c) night work, d) early start of working hours, e) crossing time zones, and f) being on standby (Moebus, 2008). Our informants shared the view that it was particularly demanding to work against the circadian rhythm and commented: "Turning night into day in particular contributes a lot to fatigue" (Interview 4 Cockpit Association of Norway, 2021).

After Norway implemented the European legislation, the maximum working time in the air was extended.⁴⁵ At night, the maximum duty time is 11 hours (Europalov, 2014). It is not only long working days that can cause fatigue in pilots and cabin crew, but also, for example, working days that start very early or end very late, and the fact that when crew are passengers on a plane, for example, this does not count as duty time, even when they are being transported between two places where they work, nor when they begin their duty time on standby (Interview 4 Cockpit Association of Norway, 2021; Interview with Association of Cabin Crew Unions Norway, 2021).

Moebus' report concludes that the maximum working time in EU OPS, which was 13-14 hours, was too long and not in line with existing scientific knowledge, and thus should be reduced (Moebus, 2008). A working document from ICAO (2019), which refers to an expert panel at the civil aviation authority of Japan, states that there is a strong correlation between the length of duty hours and the development of fatigue in pilots on aircraft with two pilots. With reference to regulations in other countries and also the results of the expert panel's fact review, the maximum length of a normal working day in Japan was to be reduced from 12 to 10 flight hours in the air (ICAO, 2019).

⁴⁴ "Duty length has been associated with the risk of accidents. For duties of 10-12 hours the relative risk of an accident was 1.7 times higher than for all duties, and for duties of 13 hours or more, the relative risk was over 5.5 times higher [Goode JH, 2003]. In addition, field studies of single-sector two-crew operations have shown that some crews were having difficulty remaining awake during overnight duties of 11 hours or more" (Moebus, 2008, p. 15).

⁴⁵ (Underthun & Ingelsrud, 2019) These write: "The new regulations further build on Regulation (EC) No 859/2008 of 20 August 2008 (EU, 2008) and Regulation (EU) No 965/2012 adopted in October 2012 and implemented in Norwegian law in regulation of 7 July 2013, by including flight and duty time rules for crew members of airlines operating commercial air transport (CAT) with aeroplanes (Regulation 83/2014)".

Various actors such as the European Cockpit Association agree with this, and believe that 10 hours would be a sensible limit for maximum working time, in line with regulations in the US (Interview 4 Cockpit Association of Norway, 2021; Interview European Cockpit Association, 2021). In the US, the maximum allowed working time is 10 hours, a rule that was implemented after the Colgan Air accident, where fatigue in both pilots was pointed out as a contributing factor to the fatal crash (Hagesæther, 2014).⁴⁶ 14 hours as the maximum allowed working period from 2016 meant an unwanted extension of the working day for the majority of pilots in Europe. Furthermore, this extension apparently also makes employees more exposed to stress and fatigue (Belden & Strømme, 2020; van Leeuwen, Ullvetter, & Kecklund, 2019). This was also commented on by our informants:

Most [pilots] in Europe, with the exception of pilots in Romania, got worse working conditions when the rule about a maximum of 14 working hours per day was introduced (Interview 4 Cockpit Association of Norway, 2021).

Furthermore, our informants also think that there is underreporting of various incidents. One of the reasons is that airlines in different job announcements look for personnel without air safety incidents on their CVs. This makes employees reluctant to speak out. Furthermore, it is not uncommon for pilots to go to work because otherwise their colleagues will have more to do, and there may be a negative financial impact on the employer (Interview 4 Cockpit Association of Norway, 2021). Pilots and cabin crew experience that they are exposed to ever increasing pressure in the form of pressure on pay and working conditions, which results in unfavorable working conditions and also affects safety. They fear that a serious air accident may need to happen before conditions in the industry will be regulated in a better way, such as the introduction of new standards in the United States in the wake of the Colgan Air accident (Interviews, 2021).

The United States is 20 years ahead of us in aviation safety. There, the industry has become more regulated, and a plane ticket costs what it costs. The prices are socially responsible. It goes without saying that when a plane ticket costs 150 kroner, that comes at somebody else's expense, at the expense of those who produce that service, and that is us employees (Interview with Association of Cabin Crew Unions Norway, 2021).

As mentioned earlier, there are very few serious accidents in commercial passenger transport. This applies both in Europe and globally. When there are serious accidents however, human factors can contribute to the cause. According to the European Cockpit Association, a pilot's fatigue and illness were probably partly to blame for one of the major accidents involving a Boeing Max aircraft (Interview European Cockpit Association, 2021). Depression and anxiety were contributing factors to the accident in which a German pilot flew a passenger plane straight into the Alps (BEA, 2016).

Aviation is one of the (few) industries that is exempt from some of the Norwegian Working Environment Act's provisions on working time (Cockpit Association of Norway & Interview with Association of Cabin Crew Unions Norway, 2021; Underthun & Ingelsrud, 2019).⁴⁷ In aviation, it is normal to have 60-hour weeks with 5 working days, i.e. 12-hour days, and to be on duty for up to 7 weekends in a row, according to the unions for pilots and cabin crew (Cockpit Association of Norway & Interview with Association of

⁴⁶ The commission investigating the accident disagreed on this point. From the descriptions of the working hours of the pilots who were responsible, documented in Hagesæther's (2014) book, it seems very likely that the pilots were in bad shape that day due to very little and bad sleep before the flight.

⁴⁷ Ironically enough, considering how much responsibility the employees have for the lives and health of others, one of the other occupational groups with such an exception are doctors (Hagesæther, 2014).

Cabin Crew Unions Norway, 2021). Widerøe, which operates most Norwegian PSO routes, has another exception, so that the employed pilots can fly seven days in a row followed by seven rest days for these routes (Europalov, 2014). The long working days and demanding schedules in aviation mean that employees do not necessarily get to rest properly between two work periods (Interview with Association of Cabin Crew Unions Norway, 2021). The pilots have in various surveys and also in other contexts said that they have fallen asleep while at work (e.g. European Parliament, 2016; van Leeuwen et al., 2019; Veiby & Brekke, 2021).

The rules treat the pilots like they are machines, and are set to let the pilots work until they fall asleep (Interview European Cockpit Association, 2021).

The upper limit for work in the air (the European flight time limitations, FTL) is 900 block hours per calendar year, alternatively 1,000 block hours in a 12-month period where the average is calculated continuously. In seven days, the allowable maximum is 60 hours of duty, in 28 days 190 hours of duty, and in total a maximum of 2,000 work hours during a year (Underthun & Ingelsrud, 2019, p. 34). In comparison, employees in Norway that are covered by a typical collective bargaining agreement work 37.5 hours per week and are entitled to 5 weeks of holiday per year, which means a working year of around 1,695 hours. A man-year for people doing shift work on the mainland is around 1,568 hours. In other words: if employees in Norwegian aviation were to work up to the maximum limit set by EU legislation of 2,000 work hours per year, they would work more than 400 hours more than employees on mainland doing typical shift work. This amounts to more than ten working weeks with a normal working time of 37.5 hours, and to poorer working conditions than, for example, assistants in the Norwegian health service, who get considerable supplements for evening, night and weekend work.

In practice, however, collective agreements mean that Norwegian employees in the air have had *somewhat* longer rest periods than the minimum required by EU legislation (Underthun & Ingelsrud, 2019). In February 2019, Underthun and Ingelsrud (2019) examined, among other things, the pay and working conditions of employees who were members of the unions that were members of LO Aviation and Parat Aviation, and received 3,138 responses, which amounts to a response rate of 32 percent. SAS and Norwegian have stated to Underthun and Ingelsrud (2019, p. 34) that their pilots work between 650 and 750 block hours per year, and Widerøe's pilots from 600 to 700 block hours per year. The unions Norwegian Pilot Union (Parat) and Cockpit Association of Norway (LO) have, however, mentioned that some members have working times of up to 900 hours a year in the air. The informants in Underthun and Ingelsrud's (2019, p. 35) survey also stated that they have average working days of 9.5 hours, i.e., two hours more than an average working day for a person with a typical work week in the public sector. Approximately 40% of the cabin crew worked part-time in 2017 (Underthun & Ingelsrud, 2019, pp. 12, 31). Well over 50% of both cabin crew and pilots work 10 hours or more 3-4 times per week or more often, according to their responses to the survey (Underthun & Ingelsrud, 2019, p. 42). Furthermore, aviation employees experience stigmatization:

Our professions are stigmatized, and we are ridiculed. We experience that a pilot is only a "nicely dressed bus driver in the air," while a cabin employee is only seen as "a waiter in the air" (Interview with Association of Cabin Crew Unions Norway, 2021).

4.3 Many health issues compared to other occupational groups

Physical and mental exhaustion is widespread among pilots and cabin crew according to two surveys conducted in 2015 by the Civil Aviation Authority of Norway and in 2019 by the Work Research Institute (AFI). Approximately half of the cabin crew were often physically exhausted after the end of the working day, while this applied to approximately one in four pilots (Underthun & Ingelsrud, 2019, pp. VII, 52). 72% of the pilots and 85% of the cabin crew are physically exhausted after the end of a work period, only 19% of the pilots and 12% of the cabin crew get adequate rest and relaxation between working days apart from sleeping, according to the CAA Norway's working environment survey from 2015 (Civil Aviation Authority, 2016, p 3). 15% of the pilots felt that they did not have time to perform their job in a manner that complies with safety requirements for the working environment (Civil Aviation Authority, 2016, pp. 3, 10). In addition, the share of employees in aviation that consider applying for a new job over the next few years is higher than in other industries: around one in five pilots and one in three cabin crew (Civil Aviation Authority, 2016, p. 9).

A large number of the pilots and cabin crew are affected by sleep disorders. Of pilots on fixed wing aircraft, 40% were slightly affected, 20% quite affected and 7% badly affected by sleep disorders. 33% were slightly affected by pain in the lower back, 15% quite affected and 7% badly affected by this. Of the cabin crew, 38% were slightly affected, 24% quite affected and 15% badly affected by sleep difficulties, while many suffered from pain in the neck and/or shoulders, with 35% slightly affected, 22% quite affected and 18% badly affected. In the case of lower back pain, the pattern was similar to that of the pilots (Civil Aviation Authority, 2016, p. 11). A total of 40% of the cabin crew is quite affected or badly affected by neck and shoulder pain (Civil Aviation Authority, 2016, pp. 3, 11). The sleep problems probably have several causes, including that many of the employees do a lot of night work and to some extent also work across time zones: 47% of the cabin crew work at least half of their shifts at night, and so do 56% of the pilots (Underthun & Ingelsrud, 2019, p. VI).⁴⁸

According to Melin et al. (2018), there are many studies that show a) a connection between lack of sleep and reduced cognitive capacity in pilots, b) that depression and anxiety reduce pilots' cognitive capacity, and thus also flight safety, and c) that many hours of working time in a week, including working many hours while tired, increases the tendency for anxiety and depression in pilots. In other words, there is reason to believe that the pilots' long duty periods, unfavourable working hours, general stress and lack of sleep contribute to them having reduced cognitive capacity, that they may become depressed and anxious, and also that this situation can pose a threat to air safety.

4.4 Relationships between the parties are often contentious

The Civil Aviation Authority's survey shows that the relationship between employees and their employers is often quite bad: over 40% of both pilots and cabin crew in companies with large fixed wing aircraft have answered that they are quite rarely, very rarely or never well taken care of by the airline (Civil Aviation Authority, 2016, p. 14). On Norwegian

⁴⁸ Underthun og Ingelsrud (2019, VI) point out that the definition of "night" varies among respondents, and that the high percentages are probably due to the fact that cabin crew and pilots have shifts that stretch into the night, or start so early in the morning that this is still defined as night.

routes, it was SAS and Norwegian that operated such aircraft in 2015, when the Civil Aviation Authority's survey was carried out. The pilots and cabin crew in SAS and Norwegian have gone on strike against their employers several times in the last two decades (see e.g. Jordheim, 2019).

In a survey among SAS pilots in the summer of 2021, before it became known that SAS did not intend to offer the laid-off pilots in the company new jobs after the Covid-19 pandemic, only 6% of the pilots answered that they had confidence in the management of the company. Furthermore, 98.1% responded that they were of the opinion that SAS under its current management did not respect the Scandinavian model and its employees, and 93.9% that they did not trust the former and current management. Around 70% of active pilots in SAS responded to the survey, so they result is likely to be fairly representative for this group of employees. Earlier surveys among employees in SAS point in the same direction (Bach, 2021a, 2021b).

Widerøe however is perceived differently by the pilots it employs: In a survey of 5,751 pilots in 136 airlines, Widerøe (where 90 pilots responded to the survey) was ranked as one of the best companies to work for and ended up in 4th place in the overall ratings. In the best airlines, pilots experience that they are treated as family, they are proud to work for their employer, and make an extra effort to ensure that the company is successful. Flyr also did well in this survey (7 pilots responded) (ECA, 2021a).

4.5 Jobs that can negatively affect family life

Considerably more than 50% of pilots on large fixed wing aircraft experience that job requirements interfere with their home and family life quite often, very often or all the time (Civil Aviation Authority, 2016, p. 16). The study by Underthun and Ingelsrud (2019, p. 45) at the Work Research Institute (AFI) shows the same tendency: 65% of their respondents among pilots and cabin crew answered that the demands of the job negatively affect family life. They point out that this proportion is significantly higher than for other groups in the population who do a lot of weekend work, and also other employee groups in the aviation sector. According to the same survey by the Work Research Institute, 64% of cabin crew and half of the pilots work at least three out of four weekends, and almost ten in ten in these groups work at least parts of every other weekend (Underthun & Ingelsrud, 2019, p. VI). As mentioned, employees work up to 14 hours per day, and 15-16 hours in special cases, but are not compensated for overtime unless the work is on agreed days off or exceeds the maximum limit of 47.5 hours per week stipulated by the current collective agreement. As mentioned earlier, more than half of the respondents to the survey worked more than 10 hours 3-4 times per week (Underthun & Ingelsrud, 2019, p. VII). Work weeks of up to 60 working hours are possible in the event of irregular incidents such as delays. In 2021, SAS had an upper weekly limit of 47.5 working hours but wanted to extend this to 60 hours as allowed by the FTL regulations (Interview with Association of Cabin Crew Unions Norway, 2021).

Of course, this is problematic for family life. And an equally big problem is that we get our work schedules only a short time in advance, so there are few things than can be planned long-term in our private lives (Interview with Association of Cabin Crew Unions Norway, 2021).

When those employees also have to spend time commuting to work, work a lot on weekends, and also need to sleep, there is less time for family and friends during their work periods. At the same time, the long working days in combination with night/weekend work

contribute to fatigue after work periods, resulting in less energy for family, friends and leisure activities. 60% of the pilots and 53% of the cabin crew answer that they are quite or very satisfied with their jobs, while 29% of the cabin crew and 19% of the pilots are quite or very dissatisfied (Interviews, 2021; Underthun & Ingelsrud, 2019, p. 46).

4.6 Atypical employment leads to worse working conditions for parents

Women and men in so-called atypical forms of employment in Europe generally do not enjoy the same benefits for paid parental leave as those who are directly employed. Several of the informants in the European Ricardo study believed that atypical forms of employment are used on purpose to prevent employees from exercising their rights to parental leave. Significantly fewer of the pilots and cabin crew who worked through a staffing agency or other intermediary or were on time-limited or zero-hour contracts, had access to parental leave benefits than among those who were direct employees. Many also did not know about their rights in this context. Women seem to be most vulnerable as they risk losing their jobs if they have time-limited assignments because these are not renewed after they become mothers. Access to parental leave and parental benefits was also significantly worse at the low-cost companies than at the network companies (Brannigan et al., 2019, pp. Xi, 156, 157). However, there is no reason to believe that employees in Norwegian low-cost airlines have worse conditions for parental leave than in other Norwegian airlines.

5 Presentation of Decree 2006 and other French laws for inspiration

When it comes to comparing different legal framework conditions in Europe, one country in particular is often highlighted: France, not least because of a declaration/law from 2006 called Decree 2006 (Décret n 2006-1425 of 21th November 2006). This law stipulates that the employees of airlines with an operating base in France are also covered by French laws on pay and working conditions, not only those who work at home bases there. Airlines with such an operating base must pay a contribution to the French social security system. Here, the operating base is the place where employees work regularly or start and end their duty. The purpose of the law is to counteract social dumping in aviation, which France believed was the practice in airlines such as EasyJet, Ryanair, Vueling, Volotea, Wizz Air, Enter Air and Small Planet (ECA, 2018, p. 2; Norwegian Parliament, 2021, pp. 1, 2, 8).

The low-cost carriers Ryanair and EasyJet took the French state to court to contest the legality of Decree 2006 in 2007, and both lost at the highest judicial level in France (Parliament, 2021, p. 14). Based on this law, a number of lawsuits have been filed against various (low-cost) airlines that have operated permanently in France without offering their employees French pay and working conditions. An example of this is the Vueling ruling of 2 April 2020. However, it seems that some airlines are trying to circumvent the legislation with the help of so-called bogus self-employment, manipulating the rules for the posting of workers and fake bases (Norwegian Parliament, 2021, p. 9).

Other relevant factors: Germany and France consider type ratings, i.e. that a pilot has received training and a certificate to fly a certain type of aircraft, to be part of the employee relationship in an airline and therefore something the airlines should offer to their pilots (European Commission, 2019, p. 6; European Parliament & Council of the European Union, 2019). France has also legislated that pay-to-fly schemes are illegal (Brannigan et al., 2019, p. Viii). According to the report by the Norwegian expert committee on aviation, pay-to-fly in France is regarded as “illegal work without pay” (Ministry of Transport, 2019, p. 120). According to the European Cockpit Association, in the EEA only French aviation and labour law has an explicit definition of operating base (ECA, 2021b, p. 2):

An operating base is a set of premises or infrastructure from which an undertaking carries out a stable, habitual and continuous air transport activity with employees who have the effective centre of their professional activity there. For the purposes of the above provisions, the centre of an employee’s professional activity is the place where he/she usually works or where he/she takes up duty and returns after completing his/her assignment.

A comprehensive analysis of different national and European legislation requires new studies and is a very relevant topic for further research. In Argentina, for example, legislation requires all airlines wishing to open a base within the country’s borders to establish a legal entity that complies with Argentinian law (ECA, 2018, p. 2).

6 Road and sea transport in Europe

Many of the challenges in aviation are also familiar from other parts of the transport industry. There seems to be pressure on employees' pay and working conditions in all cross-border transport, including maritime and road transport, also in the transport activities that take place between Norway and other countries. In addition, there is pressure on wages and working conditions in parts of the Norwegian domestic road transport sector, for example in the logistics industry (e.g. Lorvik, 2021).

The road transport sector in Europe, especially for drivers of heavy goods vehicles, seems to have become an industry where employees are continually exposed to pressure on their pay and working conditions. Employees, especially from Eastern Europe and from countries outside Europe, for example, receive very low wages, have to live in their vehicles, overnight and prepare their food in parking lots, break the rest and working time regulations, and have only limited access to showers and toilet facilities (ETF, 2021b; ITF, 2021a). The harsh working conditions have contributed to more people seeking to leave the road transport industry, and as result there is a shortage of drivers in Europe today. The EU is working to improve conditions for employees in the transport industry in Europe, and billions of euros have been used to construct parking areas and support transport companies (Henley, Savage, & Tapper, 2021; Kolberg & Almås, 2021).

Working and resting times in road transport are strictly regulated by common rules within the EEA. The rules allow a maximum working time of 9 hours per day, and an average working week of 48 hours. Up to twice a week, a transport worker can drive up to 10 hours per day, but not more than 56 hours a week in total, and a maximum of 90 hours over two weeks (EU, 2021). It seems to be a significant problem that these rules are circumvented in different ways in Europe (ETF, 2021b).

The UN's International Labor Organization (ILO) has a number of conventions that set standards for working hours in the transport sector. Norway and most European countries have ratified these conventions.⁴⁹ In international maritime transport, as in aviation, the maximum normal working time per day is 14 hours, and 16 hours in special circumstances. This was implemented from 1996 onwards at the initiative of the International Maritime Organization (IMO) (Baumler, 2020).

In maritime transport, there is general application of collective wage agreements for ships sailing under the Norwegian flag, but a considerable part of the Norwegian fleet has been flagged out, and there may be few Norwegians on Norwegian ships in the freight transport sector. On ships operating in Europe, there can be crew from many countries and with many different types of contracts and pay conditions (Hagesæther, 2014), and there is a

⁴⁹ ILO was established through the Treaty of Versailles in 1919. Normal working days were defined as 8-hour days and 48-hour weeks, but not in all sectors. Sectors that were not included were for example shipping, agriculture and fisheries (Baumler, 2020).

general crew shortage. Like the road transport sector and air transportation, maritime transport is an industry where it is difficult to combine work and family life in a good way. It seems that these sectors also have similar challenges in that employees do not necessarily know what kind of rights they have, and that collective bargaining for pay and working conditions is difficult (European Commission, 2020). Therefore, it is important to conduct further research on the pay and working conditions in the various parts of the transport sector in Europe, to compare these with each other, and to see if there is anything to be learned from researching the regulations both at EU level and at national level across sectors.

7 Potential regulations of company structures in aviation

7.1 Need for new regulation within the framework of EEA regulation

The way the companies and the industry as a whole are organised does (of course) influence the pay and working conditions of the affected employees. As mentioned earlier, there seems to be a general downward spiral in Europe when it comes to working conditions in the aviation sector. This development started in the 1990s with the liberalisation/market opening and accelerated in the 2000s when intense price competition, amongst other factors, helped to put downward pressure on the employees' pay and working conditions (e.g. Hagesæther, 2014). So now it seems that there is a "race to the bottom" in Europe where the employees in the sector are subject to continually increasing pressure on their pay and wage conditions, fraudulent and unethical practices in working life are on the rise, companies are split up in new and creative ways, and the number of direct employees is reduced in favour of other employment models (ETF 2021a, 2021c; Interviews, 2021). As shown, this competition also affects the Norwegian and Nordic airlines. Rules and regulations that affect the company and industry structure are therefore important for the development of employees' working conditions. These are issues that would benefit from further research.

The Norwegian carriers compete with airlines that are headquartered in other countries within the EEA, and within a completely liberalised aviation market this means that when airlines based in one country offer worse pay and working conditions than a competing airline that is headquartered in another country, and these airlines compete on one or more routes, there is pressure on the pay and working conditions of the carrier headquartered in the other country. This in itself is unavoidable within the EEA, given that there is huge variation in cost and wage levels in the different countries. But when airlines reduce their labour costs by offering their employees different types of poor pay and working conditions, for example by not offering parental leave, there is no longer healthy competition between airlines seen from a social and economic perspective. According to our informants, there is pressure on pay and working conditions also among the Norwegian airlines, partly because of the intense competition between airlines for low-cost customers (Interviews, 2021).

To counteract these tendencies, Norway can for example adopt policies that will ensure generally acceptable pay and working conditions for everyone that can be considered part of Norwegian aviation. The most effective approach is probably if the Nordic countries work together to develop policies that protect national pay and working conditions. Safeguarding the conditions for employees in one's own country is in line with Regulation (EC) No 1008/2008,⁵⁰ article 9, which states that the authorities in the countries where an

⁵⁰ Regulation (EC) No 1008/2008, article 9 (EU, 2008).

airline has an operating base, but not its main base, must ensure that the countries national social legislation and the EU's social legislation are correctly implemented:⁵¹

With respect to employees of a Community air carrier operating air services from an operational base outside the territory of the Member State where that Community air carrier has its principal place of business, Member States should ensure the proper application of Community and national social legislation.

Therefore, it is relevant to examine the pay and working conditions of employees in Norwegian aviation today, and what kind of measures could be implemented to close gaps in Norwegian legislation should the analysis show that pay and working conditions are under undue pressure here as well. This report examines the following issues:

1. How was aviation in Norway organised in 2021?
2. What do pay and working conditions for the employees in the aviation sector in Norway look like?
3. What are the desired and possibly also undesired/controversial consequences of today's regulations for employees and businesses in Norwegian aviation? Which potential undesirable consequences arise from differing interpretations of the current rules?
4. How is aviation organised in other countries, for example in France?
5. How is aviation organised compared to road and maritime transport?
6. What possibilities do the Norwegian authorities have to reduce such potential undesirable consequences within the framework of the EEA-agreement?

Here, we will present a “menu” of different measures the Norwegian authorities could implement to improve the conditions for employees in the aviation sector and to ensure competition on equal terms.

7.2 Change requirements for public procurement in general

Since the public sector is Norway's largest buyer of various goods and services, it has the opportunity to influence how these goods and services are produced through its procurement processes, for example by requiring that pay and working conditions in the companies that win tenders must be decent (see discussion in among others Halvorsen & Flaarønning, 2019). One possibility to help ensure solid standards is *to disallow collaboration between different companies to win public tenders* (inspired by Helle, 2021). This means it is clear which supplier has won a tender, and winning a tender together with other parties should no longer be a back door for introducing “sneak wet leasing,” or other methods of introducing undesirable/fraudulent standards for pay and working conditions, neither in aviation nor in other industries. The division of responsibilities can be unclear when several companies win a contract together, and it can also be more difficult for the buyer to follow up any subcontractors and thus ensure that all the conditions in a contract are met. Furthermore, tender cooperation may constitute a breach of competition law, which stipulates that companies that can compete with each other shall not cooperate on a tender

⁵¹ Rules related to social and social security law are for example regulated by *Directive 96/71/EC concerning the posting of workers in the framework of the provision of services* and *Regulation (EC) No 883/2004 on coordination of social security systems*.

(Norwegian Agency for Public and Financial Management (DFØ), 2021). An evaluation of possibilities and constraints within the EEA law conducted by the Law Department for the Norwegian Ministry of Justice and Public Security, there is room for limiting the use of sub-contractors, but does not limit the opportunity for states to allow for joint tenders (Ministry of Justice and Public Security, 2022, pp. 12, 13).

To prevent rogue actors from benefiting from winning public tenders, one relevant option is for national authorities to use the Oslo model for a serious working life (or equivalent). In this case, the model needs to be adapted to aviation. The Oslo model entails, among other aspects, a requirement to use mainly permanent employees (in at least 80% positions), a requirement to pay wages in line with collective wage agreements during the assignment period, also for employees in staffing companies, that key personnel must be able to communicate in Norwegian, that there must be real and effective mechanisms for control and registration, and that the buyer has the right to access *all information* that is relevant to the fulfillment of the contract. This also applies to subcontractors (Oslo Municipality, 2021). In public building and construction works, requirements similar to those in the Oslo model have already been implemented, and the Støre government is discussing the introduction of a *Norwegian model* for a serious working life in the transport sector, including aviation, which will apply to national public tenders (Labor Party & Center Party, 2021, p. 48).⁵² It is also relevant to discuss aviation in the new action plan against social dumping in the transport sector, where work has begun in 2022 (Døvik, 2021).⁵³

If there had either been a ban on tender cooperation, or a Norway model for public procurement had been in place, Danish Air Transport in collaboration with UAB DAT LT would probably not have been able to win the tender for the PSO route between Oslo and Florø for the period 2021-2024 (First2 resource, 2021; Helle, 2021; Interviews, 2021). The same would have applied if the purchaser, the Ministry of Transport and Communications, had reviewed the contracts carefully to ensure that the provision that wet lease should only be used under exceptional circumstances had been fulfilled in practice (Helle, 2021).

7.3 Use a reference index or ensure general application of collective agreements in aviation, potentially develop a nationwide collective agreement between the central organisations for pilots and cabin crew and the Federation of Norwegian Aviation Industries

As mentioned earlier, in aviation today, unlike in other industries, there are no nationwide agreements or general application of collective wage agreements. The number of employees that the unions represent is lower than what the General Application Act⁵⁴ requires to make collective agreements generally applicable (Backe et al., 2021). In the aviation industry, collective wage agreements are negotiated between the unions in each airline and the airlines they work for, not between the employees and the employers' organisations.

⁵² Mentioned at the aviation conference of the Norwegian Confederation of Trade Unions (LO), 10 November 2021.

⁵³ See also e.g.: <https://www.transport.no/siteassets/dokumenter/horinger/innspill-til-rekrutteringstiltak--regjeringens-handlingsplan-mot-sosial-dumping-i-transportsektoren.pdf>

⁵⁴ Act of 4 June 1993 No. 58 relating to General Application of Collective Agreements (General Application Act). See: <https://lovdata.no/dokument/NL/lov/1993-06-04-58>

Employees in Norwegian aviation, and also in many other industries, do not have a guaranteed minimum wage, as there is no general minimum wage in Norway. There are cases where employees in aviation have lived on Norwegian soil for months at a time without benefiting from Norwegian pay and working conditions (Hagesæther, 2014; Interviews, 2021).

Workers, especially in aviation and other parts of the transport sector, are highly mobile groups that are constantly moving across national borders, and who therefore, as mentioned earlier, experience especially high pressure on their pay and working conditions. The introduction of either a reference index or the general application of collective wage agreements is also relevant for ensuring fair pay and working conditions for third-country nationals working on Norwegian-registered aircraft. In such cases, demands for fair/social pay and working conditions can be made in order for them to obtain a work permit in Norway (LO lawyers Hellum Lilleengen et al., 2021, p. 3).

A reference index could be introduced through cooperation between the parties in working life (employers and employees) that operate ordinary passenger transport in Norway, i.e. SAS, Norwegian, Widerøe and Flyr in 2022.⁵⁵ This would be based on those collective agreements that are most representative (Cockpit Association of Norway & Interview with Association of Cabin Crew Unions Norway, 2021, p. 6; Norwegian SAS-pilots Union & Cockpit Association of Norway, 2021). This national common standard must be based on the existing collective agreements on pay and working conditions, so that it represents the working conditions in the industry. This can then be referred to in the Norwegian regulation on posted workers, so that the state can make use of the possibility mentioned in the Posted Workers Directive (Directive 96/71/EC) for the state to “use the most representative collective agreements as a basis for determining the minimum conditions to which posted workers are entitled” (Cockpit Association of Norway & Interview with Association of Cabin Crew Unions Norway, 2021, p. 6). For Widerøe, which operates almost all PSO routes as of 2021, their collective wage agreement, if it will be made the standard, will be a guideline for this type of flights (Interviews, 2021).

General application of collective wage agreements is an alternative measure which would be the preferred solution of the Federation of Norwegian Aviation Industries and is entirely possible to implement. Together with the unions, there is ongoing work on the topic (Interviews, 2021). Finally, one could also imagine that it is possible to reach a collective agreement between the central organisations in working life that represent employees in aviation, i.e. the Norwegian Confederation of Trade Unions (LO)/the Confederation of Vocational Unions (YS), and the Federation of Norwegian Aviation Industries.

Furthermore, the current government intends to strengthen the framework for general application of collective agreements and to ensure Norwegian pay and working conditions in Norwegian aviation (Labour Party & Centre Party, 2021; Nygård, 2021). According to legal advisors for the Norwegian Confederation of Trade Unions, it is entirely possible to implement such requirements, as long as these requirements for pay and working conditions are sufficiently defined and accessible. They refer to both ILO Convention no. 94 and Ordinance (No. 112 of 2008) on salary and conditions of work in public works contracts (FOR-2008-02-08-112) section 5, as well as the objective of the EU’s new directive on public procurement (Directive 2014/24/EU). The latter directive aims to make it possible for public sector buyers to take social considerations into account in their

⁵⁵ Norse Atlantic Airways got its air operator’s certificate (AOC) from CAA in the end of December 2021 and offer transatlantic flights between Norway and the US from summer 2022.

procurements, and that it “(also) is legitimate to take into account employee rights in public tenders” (see discussion with lawyers for LO Hellum Lilleengen et al., 2021, pp. 2, 3).

7.4 Cooperate with Nordic countries to improve working conditions both in the Nordics and in Europe

Chapter 3 and 4 of this report shows that pilots and cabin crew as per today experience working conditions that regularly leave them fatigued and also vulnerable to physical and mental illness. One of the reasons for this is the constant pressure on both pay and working conditions. There are signs that this is already having a negative effect on safety in the air, as more people, according to surveys, for example go to work even though they think they should have stayed at home. In the worst case, the pressure on employees’ pay and working conditions could result in serious accidents, something the pilots and the cabin crew themselves have warned against for several years. Nevertheless, it seems that various airlines in Europe, including in Norway, engage in regulatory shopping, venture into legal gray areas, use complicated business models, take advantage of lack of oversight, and make other types of adjustments to circumvent different types of EU and national legislation so that they can push down prices, for example for the labour force they use (ECA, 2020/2021; Golden & Underthun, 2016; Hagesæther, 2014; Interviews, 2021). Improving conditions in aviation with regard to pay and working conditions for aviation workers within the EEA should ideally be based on measures that apply to the entire EEA, and which are adopted at EU level.

A starting point for counteracting these tendencies is that the Nordic governments together could develop a joint Nordic *Declaration on working conditions*, similar to the *Declaration on carbon neutrality* (Sipilä, Jakobsdóttir, Solberg, Lövin, & Lilleholt, 2019) under the auspices of the Nordic Council of Ministers, where they work together to establish common goals for a socially responsible working life and counteract social dumping through common concrete measures. Then they need to create a strategy to achieve these goals. This could include, for example, that:

1. The aviation authorities all use the same methods to uncover and deal with unjust/inequitable conditions in aviation.
2. The Nordic countries share data to a larger extent than before.
3. The Nordic countries work together for a joint understanding and uniform application of laws which protects the Scandinavian/Nordic model in working life
4. That all Nordic countries implement the Oslo/Norway model to ensure a serious working life in public procurement.
5. More Nordic countries introduce general application of collective wage agreements. There is no general application of collective agreements in aviation in Sweden and Denmark today (Bergsli, 2015).
6. (Re)introduction of collective redress in all Nordic countries so the unions can institute legal proceedings in cases of unlawful use of contract labour (Birkelund, 2021; Norwegian Government, 2021).
7. Certification with the Nordic Swan Ecolabel for airlines, based on the extent to which the airlines comply with a number of environmental and social requirements.

As of 2022, Norway holds the chairmanship of the Nordic Council of Ministers and can use its power to set the agenda to address issues the country perceives as important. Nordic

co-operation in this area is particularly relevant, because 98% of the seats on flights starting in the Nordic region and with a destination in the Nordics are offered by Nordic airlines, and there is significant air traffic between the capitals (Ydersbond et al., 2020).

Furthermore, the Nordic countries have a long history of good co-operation, which facilitates co-operation in other areas as well. A Nordic strategy must also be seen in context with existing aviation strategies, as well as the new Norwegian aviation strategy that is under preparation and will be launched in 2022.

Furthermore, the Nordic countries could consider working together through the EU/EEA to achieve common European practices (including more and better oversight of aviation) and to prevent jobs from ending up in the countries with the worst pay and working conditions in and outside Europe to an ever increasing extent, through creative ways of reorganising airline structures, flags of convenience, systematic and extensive use of wet leasing, and more. In the effort to influence legislative work at EU level, France could be a relevant partner country due to Decree 2006 and the strong role of employees in aviation there.⁵⁶ France took over the EU presidency on 1 January 2022 and held it to 1 July 2022.

In this way, Norway alone or together with the other Nordic countries can take the lead and set the standard and thereby achieve a desired development in working life, employment and the business and industry sector nationally. The alternative seems to be that more and more of the national airlines are flagging out, partly to achieve better economic conditions and partly because they are having to compete on terms that are perceived as unfair. This is because airlines in other countries have lower costs due to generally lower wage levels, lower tax rates, lower requirements for pension schemes and other types of poorer working conditions.

7.5 Introduce stricter requirements in tenders for PSO routes

The government/authorities can introduce specific requirements for PSO routes, not only environmental requirements to phase in environmentally friendly aircraft (Ministry of Transport, 2019; Ydersbond et al. 2020; Wangsness et al., 2021), but also requirements that ensure that aviation that is publicly financed happens on conditions that support a socially just/serious working life (i.e. a socially sustainable working life) and stricter safety requirements:

To ensure decent pay and working conditions on publicly financed routes, the Norwegian state could introduce a requirement to use either a reference index, as described above, or a generally applicable collective agreement as a guideline for the minimum wage level on PSO routes in Norway. This is probably in line with the new government's intention to "fight social dumping in aviation and facilitate the operations of serious actors in the industry," as stated in the new government's platform, the Hurdal platform (Labour Party & Center Party, 2021, p. 43). *Ordinance (No. 112 of 2008) on salary and conditions of work in public works contracts* should probably be taken into use in the tenders for PSO routes to ensure that the employees on these publicly financed routes have solid and safe working conditions (see discussion by lawyers to the Norwegian Confederation of Trade Unions Hellum Lilleengen et al., 2021).

Another possible measure is to introduce a requirement to establish a local base. Lawyer to LO Herdis Helle (2021) believes that requiring suppliers to have established a local base as

⁵⁶ There already is an international declaration on working conditions, from representatives of the governments of Belgium, Denmark, Germany, Luxembourg and the Netherlands (Bellot et al., 2018).

a precondition for participating in PSO tenders would *not* be a correct interpretation of the law, because this could distort competition and prevent non-Norwegian airlines from taking part in the competition for PSO routes. However, it may be possible to introduce a requirement to establish a local base if a company *wins* the PSO tender, and that employees there have a sufficient connection to the country to fall in under Norwegian jurisdiction and have to comply with the Norwegian Working Environment Act. Furthermore, establishing a local base will support local business and industry, which is one of the objectives with supporting PSO routes (Interview 2 Cockpit Association of Norway, 2021). This measure can help to secure workers' rights and help all companies competing for PSO routes in the Norwegian market to do so on more equal terms, and prevent social dumping for foreign workers living and working in Norway (Cockpit Association of Norway & Association of Cabin Crew Unions Norway, 2021; Interviews, 2021). Introducing such requirements for a local base can be justified as “proportionate” within existing EU/EEA legislation:

Section 4 of the Ordinance [EU regulation] states that the regulation does not preclude stricter nationally determined social regulation of working life, and that it does not preclude stricter regulation through collective agreements concerning working conditions, health and safety at work between the parties in working life (Europalov, 2014).

Another possible requirement is that aircraft flying on Norwegian PSO routes must have at least one employee on each flight who speaks Norwegian so that all passengers receive information in a language they understand in the event of an emergency (Hagesæther, 2014; Interviews, 2021). If there are no employees on Norwegian PSO routes who speak Norwegian, this can constitute a safety risk in various ways. For example, people who do not speak English, be it children, the elderly who never learned enough English at school, or others, such as people with mental impairments, may not be able to communicate well with the crew on the plane. Being able to communicate well is especially important in situations that could potentially affect safety. The rescue services in Norway currently require employees to speak Norwegian (Interview 4 Cockpit Association of Norway, 2021). Such a measure is likely also in line with the EEA agreement, according to the aforementioned evaluation conducted by the Law Department in the Ministry of Justice and Public Security in Norway (Ministry of Justice and Public Security, 2022, p. 5).

If no employees on PSO routes speak Norwegian, as Hagesæther (2014) and others point out, this will not be enough to ensure good service for passengers or to protect the safety of what is considered to be part of public transport in Norway. Flying can be scary, especially for children, and in this case, it is important that there are some adults there who can talk to them (Skatval, 2019). One possibility is to require communication skills in a Scandinavian language among the employees, but this is probably not sufficient to ensure that people who do not understand Swedish or Danish at all will communicate well with the crew.

Another potential requirement would be to reduce the maximum length of working days on PSO routes: For safety reasons, on these routes it would be good if the maximum working time was 10 hours a day, which is the maximum working time in aviation in the US, not the Europe-wide 14 hours that are standard in the EEA today. After about ten hours of work, the likelihood of making errors, suffering injuries and the like increases for employees in general, “and there is no reason why this should not apply to aviation as well” (Baumler, 2020; Savant, 2021). On the PSO routes, there are often particularly demanding weather conditions, both in the air and on the ground, which are likely to make the pilots and cabin crew significantly more tired than on other types of flights (Interviews, 2021). These particularly demanding conditions are, among other factors, due to the polar low

pressure that lies along the coast in northern Norway, the fact that there are some short runways, and that there is a lot of bad weather, including storms. The Association of Cabin Crew Unions Norway and the Cockpit Association of Norway believe that 10 hours of work per day is a reasonable limit (Interview 2 Cockpit Association of Norway, 2021; Interview 4 Cockpit Association Norway, 2021; Interview with Association of Cabin Crew Unions Norway, 2021). For the same reason, it may also be appropriate to require that the pilots who fly on these routes have significant experience of flying under very demanding weather and driving conditions, and with the type(s) of aircraft used on the Norwegian STOL-port network (Interview 4 Cockpit Association of Norway, 2021).

7.6 Strengthen the surveillance authority and its expertise

One possible measure is to increase funding for the Civil Aviation Authority Norway to ensure the follow-up of pay and working conditions in aviation, such as following up various regulations and directives, so that all employees on “Norwegian” domestic routes can receive labour and HSE inspections, including checks on various pay-to-fly schemes, false self-employment and other types of atypical employment contracts, and that all types of businesses can be inspected. Surveys can and should also include foreign personnel in Norway. To get the best possible data, it is probably crucial to be able to carry out certain types of inspections at the location where operations take place. Furthermore, it is important that the Civil Aviation Authority makes unannounced visits and uses methods where employees feel safe enough to speak out about difficult working conditions without fear of sanctions (Backe et al., 2021; Interviews, 2021).

In addition, more cooperation is needed between the various aviation authorities in the EEA, between the Civil Aviation Authority Norway and the European Union Aviation Safety Agency (EASA), as well as between various agencies in Norway, such as the Civil Aviation Authority Norway and the Norwegian Labour Inspection Authority (ECA, 2018; Interviews, 2021; Ministry of Transport, 2019). Furthermore, the authorities in Norway, the Nordic countries and the EU can do the same as the authorities in the US and cooperate to prevent the use of flags of convenience. The Norwegian Safety Investigation Authority (NSIA) also emphasizes that the aviation authorities in different countries need to cooperate more closely, partly because there is a constant increase in the use of dry and wet leasing. Therefore, there is an “increased need for information flow, harmonization of supervisory practices and coordination between the authorities” (Norwegian SAS-pilots Union & Cockpit Association of Norway, 2021, p. 3).

Establishing a Norwegian national centre for aviation research to “close the gaps” in the existing knowledge is also an option. The employees there can, among other things, systematically research which factors result in higher and lower safety in the air, the effect of job insecurity on decisions to go to work or stay at home in case of illness for different occupational groups in aviation, the effect of Covid-19 on safety in aviation, what creates a good working environment in the air, and so on. A centre like this can also be seen in connection with research on how aviation can be made more sustainable in an ecological sense.

7.7 Improve Norwegian legislation for employees in aviation

The terms “home base” and “operating base” should be defined in Norwegian law (Backe et al., 2021; ECA, 2018, 2021b; Golden & Underthun, 2016). “We need a Norwegian

Decree 2006” (Interview 1 Cockpit Association of Norway, 2021). “Home base” is already defined in European legislation. Norwegian legislation should probably require airlines that stably/regularly offer transport within Norway and between Norway and abroad to establish bases in Norway. Here, employees must be subject to Norwegian pay and working conditions and have access to social benefits in Norway. The airlines that have operating bases in Norway must register their operations and pay social security contributions to Norway, as they do in France.

Those who work stably in Norway for companies that are here for more than one year should have access to Norwegian rights, wages and obligations, and be subject to Norwegian law. Airlines must not be allowed to evade local laws and taxes and offer employees much worse pay and working conditions in places where they have an operational base by rotating personnel, for example on a two-monthly basis (Interview European Cockpit Association, 2021).⁵⁷ The home base should be where personnel conduct their most important activities and should be a stable place. The rules for the home base must apply to everyone who works there, regardless of the organisation they work for. A change of home base is the same as a change of workplace and must correspond with the location where the employees actually do their work. The employees must know where their venue if they experience legal issues is located (ECA, 2021b; Interview 1 Cockpit Association of Norway, 2021; SAMAK, 2017).

One possibility is to strengthen the Directive 96/71/EC concerning the posting of workers in the framework of the provision of services (The Posted Workers Directive, *utsendingsdirektivet*). The predecessor will also likely be implemented in Norwegian law: Directive (EU) 2018/957 of 28. June 2018 amending Directive 96/71/EC concerning the posting of workers in the framework of the provisions of services to improve the opportunities for oversight by the aviation authorities. Norway probably also needs a specification of the Posted Workers Directive (Directive 96/71/EC) with regards to when this directive should and should not be applied (ECA, 2021b, p. 4). The Posted Workers Directive should be uniformly applied everywhere in Europe.⁵⁸ When a person, or persons from a company, have worked in another country for 12 months, and 18 months in special cases, the legislation of the host country shall apply, including minimum wages if there are generally applicable collective agreements in an industry, and after 24 months the person is also entitled to social benefits. Furthermore, a posted employee cannot legally replace another posted employee (Interview European Cockpit Association, 2021).

As a general rule, employees must be directly employed by the airline that owns the operating license (AOC). This is also the normal situation in Norway today. SAMAK (2017, p. 6) proposes that at least 75% of the crew should be directly affiliated with an airline, and that temporary workers should only be accepted during peak seasons, such as in the summer. They suggest that this should also apply to at least half of the employees in the company who are responsible for safety. According to them, such rules already exist for maintenance technicians on aircraft. SAMAK (2017, p. 6) also argues that crews on the same aircraft should have the same pay for the same work as a principle. If persons are on temporary contracts via staffing agencies or wet leasing schemes and are based in Norway, the Posted Workers Directive (Brannigan et al., 2019) and also the Temporary Agency Directive may be applicable (European Commission, 2019).

⁵⁷ Norwegian SAS-pilots Union and the Cockpit Association of Norway (2021) are of the opinion that this applies to DAT on the route Oslo-Florø.

⁵⁸ What is NOT defined as posting of workers: 1) more than 24 months with consecutive postings, 2) if the same task at an operating base is carried out for more than 12 months, 3) does not apply to self-employed persons in aviation.

The state should prevent atypical employment situations. One strategy is to establish clear national rules for prohibiting the incorrect/fake use of self-employed contractors⁵⁹ and to create an explicit definition of “self-employed” in Norwegian legislation. Pilots who are so-called self-employed should not be allowed to fly unless they can show that they are in fact self-employed and not to be considered employees of an airline. Here it is also possible to implement a section from *EU Regulation 1008/2008 on common rules for the operation of air services* that self-employed persons working from operational bases in Europe are considered to be direct employees of the airlines, and/or to require companies that receive an AOC to offer direct employment in the operating company. If pilots and cabin crew are to be self-employed, they should have a certificate or license for this, and the airline that buys the services must have standards to follow them up. The Cockpit Association of Norway and the Norwegian SAS-pilots’ Union believe that there are very few flying personnel in Europe who are de facto self-employed (Norwegian SAS-pilots Union & Cockpit Association of Norway, 2021).

The alternative is a further flourishing of the use of creative employment models that put long-term flight safety under strong pressure (Norwegian SAS-pilots Union & Cockpit Association of Norway, 2021, p. 13).

Another measure is to ban pay-to-fly schemes since they constitute exploitation of newly qualified pilots’ labour and mean that pilots who already have large loans after completing their education get into further debt. This can be done on the basis of the Working Environment Act and the ILO Convention (Norwegian SAS-pilots Union & Cockpit Association of Norway, 2021; SAMAK, 2017).

To combat social dumping, unfair competition and poor working conditions, another possible measure is to reduce the opportunities of airlines operating in Norway to use wet leases as a way to reduce expenses at the expense of employees’ pay and working conditions. The public sector should set clear requirements for pay and working conditions in all purchases of flight services, also when an actor chooses to make use of wet lease (Cockpit Association of Norway & Association of Cabin Crew Unions Norway, 2021, p. 13). Hired personnel, such as through wet lease agreements, should work on Norwegian pay and working conditions, for example with the wage level following the aforementioned reference index, generally applicable collective agreements, or the collective agreement of the airline that is hiring.

The Fougner expert committee’s recommendations are relevant in this context. Among other measures, they recommend strengthening permanent employment in working life, and to strengthen employees’ right to re-employment in their own jobs after lay-offs. They also propose to remove access to using temporary employment (Fjellanger & Møller-Hansen, 2021). Particularly relevant for the aviation sector, where SAS and Norwegian, among others, have carried out significant reductions in personnel in the wake of the Covid-19 pandemic, is that the Fougner committee recommends, among other measures, to introduce a rule where employees in downsizing processes will be given priority when vacancies are announced in the same group of companies (Ministry of Labor and Social Inclusion, 2021). Another issue many in the Fougner committee raised was that when, for example, personnel is hired via a staffing agency, employer’s responsibility should be shared between the company that is hiring and the staffing agency (Hasås, 2021).

Norwegian authorities could also assess the effects of transposing the EU Directive on Transparent and Predictable Working Conditions (*Directive (EU) 2019/1152*) into

⁵⁹ “Bogus Self-Employment”, i.e. false self-employed, which an expert committee will now look at more closely on behalf of the EU Commission.

Norwegian law. If the directive is not to be transposed, Norway could consider implementing a similar set of rules here. This directive will be implemented in EU member states by 2022 and requires employers to provide free training/education to their employees when this is required by EU or national legislation or in relevant collective agreements (European Commission, 2019, p. 6; European Parliament & Council of the European Union, 2019, p. 18). This is the case in aviation in Germany and France.⁶⁰ Based on the abovementioned practice in Germany and France, this will make it relevant for the airlines in Norway to pay for type ratings for new aircraft types for their employees, so that for example SAS pays for the employees to get type ratings for the new Airbus neo 320 aircraft.

The expert committee on aviation (*Luftfartsutvalget*) recommends the Norwegian authorities to consider whether compliance with the legislation to ensure workers' rights should become a precondition for obtaining and maintaining an operating license with reference to Regulation (EC) No 1008/2008 (Ministry of Transport, 2019, pp. 12, 13).

7.8 Various measures at EU-level

- Work to tighten the flight time restrictions in the EEA regulations, so that the maximum permitted working time is reduced from 14 hours to, for example, 10 hours, similar to the US (Baumler, 2020; Moebus, 2008).
- Continue to work against social dumping in aviation. One possibility is not to allow airlines that engage in social dumping, receive a lot of state aid in their home countries, ban and obstruct trade unions for their employees, and violate various types of basic human rights, such as the companies that are headquartered in the Gulf states, to have departures from national airports (Hagesæther, 2014; ITF, 2021b). According to Hagesæther (2014, p. 150), the airport authorities have the right to establish relevant requirements, and several countries, including Germany and Austria, have said no to allowing new departures from these companies. SAMAK (2017, p. 5) proposes that European legislation should restrict access to the European market for airlines that do not live up to the ILO conventions. The disadvantage of denying access to these companies is potential reciprocity: that European companies will probably not have access to these airlines' markets either, and that established bilateral agreements adopted at the highest political level will be breached. At the same time, a possible advantage is that domestic companies may have better opportunities to compete on long-haul flights. In any case, it is probably best to meet the airlines from the Middle East that violate different types of rights with a common EU strategy, as Golden and Underthun (2016) point out.

⁶⁰ (37) "Where employers are required by Union or national law or collective agreements to provide training to workers to carry out the work for which they are employed, it is important to ensure that such training is provided equally to all workers, including to those in non-standard forms of employment. The costs of such training should not be charged to the worker or withheld or deducted from the worker's remuneration. Such training should count as working time and, where possible, should be carried out during working hours. That obligation does not cover vocational training or training required for workers to obtain, maintain or renew a professional qualification as long as the employer is not required by Union or national law or collective agreement to provide it to the worker. Member States should take the necessary measures to protect workers from abusive practices regarding training"

- At EU level, it is also important to work systematically to keep up with new issues and development trends in an industry where companies are constantly finding new ways to organise themselves.
- One option is to examine whether there should be minimum prices for airline tickets, so that the airlines are guaranteed a profit (Interview 1 Cockpit Association of Norway, 2021). This has been introduced in Austria (Eiselin, 2020).

8 References

- ABC Tema. (2021a, 4 November 2021). Ny direkte rute mellom Bergen og Paris. *ABC Nyheter*. Retrieved from: <https://www.abcnyheter.no/reise/reisenyheter/2021/11/04/195799569/ny-direkterute-mellom-bergen-og-paris>
- ABC Tema. (2021b, 18 Oktober 2021). United Airlines åpner ny direkte rute mellom Bergen og New York. *ABC Nyheter*. Retrieved from: <https://www.abcnyheter.no/reise/reisenyheter/2021/10/18/195795470/united-airlines-apner-ny-direkterute-mellom-bergen-og-new-york>
- ATAG. (2020). *Aviation Benefits Beyond Borders*- Retrieved from: https://aviationbenefits.org/media/167186/abbb2020_full.pdf
- Avinor. (2014/2015). *Luftfartens samfunnsnytte*. Retrieved from: <https://avinor.no/globalassets/konsern/om-oss/rapporter/luftfartens-samfunnsnytte.pdf>
- Aziz, R. A. (2020). European ACMI/ Wet-Lease Market - Short-Term Difficulties, But Long-Term Growth Forecasted, March 2020. Retrieved from: <https://www.iba.aero/insight/european-acmi-wet-lease-market-short-term-difficulties-but-long-term-growth-forecasted-march-2020/>
- Bach, D. (2021a, 21 November 2021). Intern SAS-undersøkelse viser mistillit allerede før pandemien. *E24*. Retrieved from: <https://e24.no/naeringsliv/i/wO9A45/intern-sas-undersokelse-viser-mistillit-allerede-foer-pandemien>
- Bach, D. (2021b, 30 October). SAS-piloter: 6 prosent sier de har tillit til ledelsen. *E24*. Retrieved from: <https://e24.no/naeringsliv/i/oWwk8K/sas-piloter-6-prosent-sier-de-har-tillit-til-ledelsen>
- Bach, D. and F. C. Ekeseth (2022, 4 February). Flygerforbundet saksøker SAS. *E24*. Retrieved from: <https://www.e24.no/nyheter/2022/02/04/flygerforbundet-saksoker-sas>
- Backe, C., Holo, L., & Sture, K.-M. (2021). *Lønns- og arbeidsvilkår i luftfarten*. Oslo: Arntzen de Besche.
- Baumler, R. (2020). Working time limits at sea, a hundred-year construction. *Marine Policy*, 121(November 2020), 1-14. doi:<https://doi.org/10.1016/j.marpol.2020.104101>
- BEA. (2016). *Final Report. Accident on 24 March 2015 at Prads-Haute-Bleone (Alpes-de-Haute-Provence, France) to the Airbus A320-211 registered D-AIPX operated by Germanwings*. Le Boruget Cedex: BEA.
- Belden, P. O., & Strømme, Ø. J. (2020). *Virkingen av endringene i arbeidstidsreglementet for norske piloter*. Nord University. Retrieved from: <https://nordopen.nord.no/nord-xmlui/bitstream/handle/11250/2680474/BeldenogStromme.pdf?sequence=1&isAllowed=y>
- Bellot, F., Olesen, O. B., Borne, E., Scheuer, A., Bausch, F., & Niewenhuizen, C. V. (2018). Declaration by Belgium, Denmark, Germany, Luxembourg and The Netherlands. The Social Agenda in Aviation - Towards Socially Responsible Connectivity.
- Bergsli, A. T. (2015, 1 December 2015). Fakta: Minstelønn i Europa. Retrieved from: <https://arbeidslivet.no/Internasjonalisering/EU-og-EOS/Fakta-Minstelonn-i-Europa/>
- Birkelund, H. R. (2021, 4 November 2021). Derfor er kollektiv søksmålsrett viktig. *FriFagbevegelse*. Retrieved from: <https://frifagbevegelse.no/nyheter/derfor-er-kollektiv-soksmalsrett-viktig-6.158.829565.b89f646892>

- Bjergaard, A. P. (2021, 26 December 2021). Omicron slår hardt på juletrafikken. *Finansavisen*. Retrieved from: <https://finansavisen.no/nyheter/luftfart/2021/12/26/7794626/omicron-slar-hardt-pa-juletrafikken>
- Boeing. (2019). Commercial Market Outlook 2019-2039. Seattle: Boeing.
- Brannigan, C., Amaral, S., Thorpe, C., Levin, S., Figg, H., Neiva, R., . . . Clina, C. (2018). *Study on employment and working conditions of aircrews in the EU internal aviation market*. Brussels: DG Movement. Retrieved from: <https://op.europa.eu/en/publication-detail/-/publication/97abb7bb-54f3-11e9-a8ed-01aa75ed71a1>
- Brunborg, I., & Lorentzen, M. (2021, 26 May 2021). «Nye» Norwegian er klar: Forlater konkursbeskyttelsen med friske milliarder. *E24*. Retrieved from: <https://e24.no/naeringsliv/i/rgoM0R/nye-norwegian-er-klar-forlater-konkursbeskyttelsen-med-friske-milliarder>
- Brunborg, I., & Wasberk, E. S. (2020, 16 March 2020). Norwegian permitterer over 7.300 ansatte. *E24*. Retrieved from: <https://e24.no/boers-og-finans/i/8mkorQ/norwegian-permitterer-over-7300-ansatte>
- CAPA. (2013). European airline labour productivity: CAPA rankings. Retrieved from: <https://centreforaviation.com/analysis/reports/european-airline-labour-productivity-capa-rankings-104204>
- Civil Aviation Authority. (2016). *Luftfartstilsynets undersøkelse av arbeidsmiljøet i sivil luftfart i 2015*. Bodø: Civil Aviation Authority Norway. Retrieved from: <https://luftfartstilsynet.no/globalassets/dokumenter/andre-dokumenter/luftfartstilsynets-undersokelse-av-arbeidsmiljoet-i-sivil-luftfart-2015.pdf>
- Civil Aviation Authority. (2020). *Norske flysikkerhetsresultater 2019*. Bodø: Civil Aviation Authority. Retrieved from: <https://luftfartstilsynet.no/globalassets/dokumenter/flysikkerhet/norske-flysikkerhetsresultater/norske-flysikkerhetsresultater-2019.pdf>
- Cockpit Association of Norway. (2021). Eksemplifisering av sosial dumping i praksis - det norske luftfartsmarkedet. Oslo: Cockpit Association of Norway.
- Cockpit Association of Norway, & Cabin Crew Association Norway. (2021). Høringsinnspill fra Norsk Flygerforbund og Cabin Crew Association Norway til høring om Kartlegging av utviklingen i luftfarten etter pandemiutbruddet innspill til luftfartsstrategi. Oslo: Cockpit Association of Norway, Cabin Crew Association Norway.
- Degnes, O. G. (2021, 28 October 2021). Norwegian med overskudd og milliarder på bok. *Finansavisen*. Retrieved from: <https://finansavisen.no/nyheter/luftfart/2021/10/28/7760076/norwegian-har-7-6-milliarder-i-cash>
- Døvik, O. (2021, 12 December). Advarer mot å bestille varer med fri frakt NRK. Retrieved from: <https://www.nrk.no/norge/advarer-mot-a-bestille-varer-med-fri-frakt-1.15764878>
- ECA. (2018). Discussion paper. REVISION OF REGULATION 1008/2008, Principal Place of Business / Establishment of Operational Bases. Brussels: European Cockpit Association.
- ECA. (2020/2021). How Norwegian left thousands out of work. From "cost control" to "lost control". *European Cockpit Association*. Retrieved from: <https://www.eurocockpit.be/news/cost-control-lost-control>
- ECA. (2021a). European airlines ranked from 'Social Excellence' to 'Social Junk' [Press release]. Retrieved from: <https://www.eurocockpit.be/news/european-airlines-ranked-social-excellence-social-junk>
- ECA. (2021b). Specific national legislation measures to reduce social dumping in aviation. Brussels: European Cockpit Association.
- ECA. (2021c, 25 November 2021). Terminated employees warn SAS against taking off without them. *European Cockpit Association*. Retrieved from: <https://www.eurocockpit.be/news/terminated-employees-warn-sas-against-taking-without-them>

- EEA, EASA, & EUROCONTROL. (2019). *European Aviation Environmental Report 2019*. Copenhagen: EEA, EASA, & EUROCONTROL. Retrieved from: <https://ec.europa.eu/transport/sites/transport/files/2019-aviation-environmental-report.pdf>
- Eiselin, S. (2020, 9 June 2020). Austria defines a minimum price for flights. *Aero Telegraph*. Retrieved from: <https://www.aerotelegraph.com/en/austria-defines-a-minimum-price-for-flights>
- Ekeseth, F. C. (2021a, 9 November 2021). Check-in: SAS Connect kan bli selvstendig konsept. *E24*. Retrieved from: <https://e24.no/boers-og-finans/i/jawvLz/check-in-sas-connect-kan-bli-selvstendig-konsept>
- Ekeseth, F. C. (2021b, 15 December). Omikron truer luftfarten: – Det forverrer seg. *E24*. Retrieved from: <https://e24.no/boers-og-finans/i/5Gymrm/omikron-truer-luftfarten-det-forverrer-seg?referer=https%3A%2F%2Fwww.vg.no>
- Ekeseth, F. C. (2021c, 29 September). SAS etablerer nytt datterselskap. *E24*. Retrieved from: <https://e24.no/boers-og-finans/i/RrOmrr/sas-etablerer-nytt-datterselskap>
- Envaspotter. (2021, 19 August). AirBaltic skal fly for Flynor. *Envaspotter*. Retrieved from: <https://envaspotter.net/2021/08/19/bt-flyr-flyr/>
- ETF. (2021a). Gemeinsame Pressemitteilung: Europäische Transportarbeiter-Föderation (ETF) und ihre Mitgliedsgewerkschaften: Kapers - Schweiz, Vida - Österreich, Aircrew Alliance und ver.di - Deutschland sowie B.United - Tschechische Republik [Press release]. Retrieved from: <https://www.etf-europe.org/wp-content/uploads/2021/08/Gemeinsame-Pressemitteilung.pdf>
- ETF. (2021b). Human trafficking and slavery on the road: the ETF demands justice now! [Press release]. Retrieved from <https://www.etf-europe.org/human-trafficking-and-slavery-on-the-road-the-etf-demands-justice-now/>
- ETF. (2021c). Letter to Commissioner Schmit Alitalia. Brussels: European Transport Workers' Federation.
- ETF. (2021d). Letter to Commissioner Schmit Norwegian Air Shuttle. Brussels: European Transport Workers' Federation.
- REGULATION (EC) No 1008/2008 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 24 September 2008 on common rules for the operation of air services in the Community (Recast), (2008).
- EU. (2021). Road transportation workers. Retrieved from: https://europa.eu/youreurope/business/human-resources/transport-sector-workers/road-transportation-workers/index_en.htm
- Europalov. (2014) Felles regler for sivil luftfart: bestemmelser om flytidsbegrensninger og hviletid. <https://europolov.no/rettsakt/felles-regler-for-sivil-luftfart-bestemmelser-om-flytidsbegrensninger-og-hviletid/id-6717>
- European Commission. (2015). *An Aviation Strategy for Europe*. Brussels: European Commission.
- European Commission. (2019). *Aviation Strategy for Europe: Maintaining and promoting high social standards*. Brussels: European Commission.
- European Commission. (2020). *Study on social aspects within the maritime transport sector*. Brussels: European Commission. Retrieved from: <https://oxfordresearch.eu/wp-content/uploads/2021/05/Maritime-transport-sector.pdf>
- European Commission. (2021a). Aircraft operators and their administering countries. Retrieved from: https://ec.europa.eu/clima/eu-action/eu-emissions-trading-system-eu-ets/monitoring-reporting-and-verification-eu-ets-emissions/aircraft-operators-and-their-administering-countries_en
- European Commission. (2021b, 9 December). Commission proposals to improve the working conditions of people working through digital labour platforms. Retrieved from: <https://ec.europa.eu/social/main.jsp?langId=en&catId=89&newsId=10120&furtherNews=yes>

- European Commission. (2021c). Competition: Commission invites stakeholders to provide comments on the application of EU competition law to collective bargaining agreements for self-employed [Press release]. Retrieved from: https://ec.europa.eu/commission/presscorner/detail/en/IP_21_988
- European Parliament. (2016). Employment and working conditions in EU civil aviation. Retrieved from: [https://www.europarl.europa.eu/RegData/etudes/BRIE/2016/580915/EPRS_BRI\(2016\)580915_EN.pdf](https://www.europarl.europa.eu/RegData/etudes/BRIE/2016/580915/EPRS_BRI(2016)580915_EN.pdf)
- European Parliament, & Council of the European Union. (2019). Directive (EU) 2019 on transparent and predictable working conditions in the European Union.
- Eurostat. (2021, November 2021). Air safety statistics in the EU. Retrieved from: https://ec.europa.eu/eurostat/statistics-explained/index.php?title=Air_safety_statistics_in_the_EU&oldid=549008
- Federation of Norwegian Aviation Industries. (2015). *En nyttig og bærekraftig luftfart*. Retrieved from: <https://www.nholuftfart.no/siteassets/bilder/en-nyttig-og-barekraftig-luftfart.pdf>
- First2 resource. (2021). First2 Resource & [Service Company] AGREEMENT FOR SERVICES.
- Fjellanger, R., & Møller-Hansen, J. (2021, 25 October 2021). Hadia Tajik om SAS-konflikten: Vil rydde opp. *VG*. Retrieved from: <https://www.vg.no/nyheter/innenriks/i/47R2w9/hadia-tajik-om-sas-konflikten-vil-rydde-opp>
- Frøjd, K. (2020, 24 May 2020). Pilotstudentens drøm ødelagt av korona: – Blir gjeldsslave som 23-åring. *TV2*. Retrieved from <https://www.tv2.no/a/11462123/>
- Golden, D., & Underthun, A. (2016). *Civil Aviation in an Age of De-Regulation – Social Risks and Benefits*. Oslo: The Work Research Institute.
- Graff, C. (2021, 20 October 2021). - SAS må tilpasse seg en ny hverdag. *TV2*. Retrieved from: <https://www.tv2.no/a/14300823/>
- Grünfeld, L. A., Myklebust, A., Underthun, A., Elnæs, H. J., & Thune-Larsen, H. (2019). *Kartlegging av myndighetsbestemte rammebetingelser for norsk luftfart*. Oslo: Menon Economics. Retrieved from: <https://www.menon.no/wp-content/uploads/2019-13-Kartlegging-av-rammebetingelser-for-norsk-luftfart.pdf>
- Hagesæther, P. V. R. (2014). *Fritt fall: på jobb i lufta til lavpris*. Oslo: Pax.
- Halvorsen, T. R., & Flaarønning, T. (2019). *Fra Skiensmodell til Osломodell for hele landet. Nasjonale retningslinjer for mer rettferdige og bærekraftige innkjøp*. Oslo: Agenda.
- Hasås, T. (2021, 23 June 2021). Fremtidens arbeidsliv: Fougner-utvalget har sett på fremtids arbeidsliv. Her er deres 15 forslag til endringer. *Frifagbevegelse*. Retrieved from: <https://frifagbevegelse.no/forside/fougnerutvalget-har-sett-pa-fremtids-arbeidsliv-her-er-deres-15-forslag-til-endringer-6.158.800303.28d1116bdd>
- Hayward, J. (2020, 24 December). The Cost Of Flying: What Airlines Have To Pay To Get You In The Air. *Simple Flying*. Retrieved from: <https://simpleflying.com/the-cost-of-flying/>
- Helle, H. (2021). *Konkurransar om drift av FOT-ruter – vurdering av den rettslege adgangen til å stille krav til leverandøren i konkurransegrunnlaget*. Osterøy: Department of Law, LO Norway.
- Henley, J., Savage, M., & Tapper, J. (2021, 25 September). Emergency visas won't tempt European lorry drivers to UK, say haulage chiefs. *The Guardian*. Retrieved from: https://www.theguardian.com/business/2021/sep/25/european-lorry-drivers-will-not-want-to-come-to-uk-warn-haulage-chiefs?CMP=Share_iOSApp_Other
- Hestenes, S. G., Stoltz, T., Khorami, A., & Førli, A. K. (2021, 1 October). Oppsagde pilotar fly forbanna på SAS. *NRK*. Retrieved from: <https://www.nrk.no/norge/opsagde-pilotar-fly-forbanna-pa-sas-1.15674296>
- Hustadnes, H. (2020, 26 October). 570 mill. i minus i Norwegian-konkurser. *Børsen Dagbladet*. Retrieved from: <https://borsen.dagbladet.no/nyheter/570-mill-i-minus-i-norwegian-konkurser/72974197>

- IATA. (2021). 2019-2040 Current trends. International Air Transport Association.
- ICAO. (2019). Fatigue management for flight crew. International Civil Aviation Organization.
- ICAO. (2020). Effects of Novel Coronavirus (COVID-19) on Civil Aviation: Economic Impact Analysis. Montreal: ICAO.
- ICAO. (2021). Economic Impacts of COVID-19 on Civil Aviation. Retrieved from: <https://www.icao.int/sustainability/Pages/Economic-Impacts-of-COVID-19.aspx>
- IFALPA. (2020). Fatigue Mitigation for Flights Affected by COVID-19 Restrictions.
- International Transport Forum. (2019). *Liberalization of Air Transport*. Paris: International Transport Forum. Retrieved from: https://read.oecd-ilibrary.org/transport/liberalisation-of-air-transport_1170876b-en#page3
- Interview Association of Cabin Crew Unions Norway. (2021, 8 November 2021) *Interview for the Organisation of the Norwegian Aviation Sector within the EEA Agreement/Interviewer: I. M. Ydersbond.*
- Interview 1 Cockpit Association of Norway. (2021, 5 November 2021) *Interview for the Organisation of the Norwegian Aviation Sector within the EEA Agreement/Interviewer: I. M. Ydersbond.*
- Interview 2 Cockpit Association of Norway. (2021, 5 November 2021) *Interview for the Organisation of the Norwegian Aviation Sector within the EEA Agreement/Interviewer: I. M. Ydersbond.*
- Interview 3 Cockpit Association of Norway. (2021, 5 November 2021) *Interview for the Organisation of the Norwegian Aviation Sector within the EEA Agreement/Interviewer: I. M. Ydersbond.*
- Interview 4 Cockpit Association of Norway. (2021, 16 November 2021) *Interview for the Organisation of the Norwegian Aviation Sector within the EEA Agreement/Interviewer: I. M. Ydersbond.*
- Interview European Cockpit Association. (2021, 28 October 2021) *Interview for the Organisation of the Norwegian Aviation Sector within the EEA Agreement/Interviewer: I. M. Ydersbond.*
- Interviews. (2021) *Interviews for the Organisation of the Norwegian Aviation Sector within the EEA Agreement/Interviewer: I. M. Ydersbond.*
- ITF. (2021a). Exposed: European trucking's systemic exploitation of workers. Brussels: International Transport Workers' Federation.
- ITF. (2021b). Qatar Airways - the voice. <https://www.itfglobal.org/en/videos/qatar-airways-voice>. London: International Transport Workers' Federation.
- Jones, C. B., Dorrian, J., Rajaratnam, S. M. W., & Dawson, D. (2005). Working hours regulations and fatigue in transportation: A comparative analysis. *Safety Science*, 43(4), 225-252. <https://doi.org/10.1016/j.ssci.2005.06.001>
- Jordheim, H. M. (2019, 1 May 2019). Simen (29) er fersk SAS-pilot: – Jeg tjener under 450.000 i året, men det er ikke derfor jeg streiker. *E24*. Retrieved from: <https://e24.no/naeringsliv/i/8mG27A/simen-29-er-fersk-sas-pilot-jeg-tjener-under-450000-i-aaret-men-det-er-ikke-derfor-jeg-streiker>
- Kobberstad, L. (2021). Presentation at the Aviation Conference for LO Norway. Oslo: Civil Aviation Authority Norway.
- Kolberg, M., & Almås, G. B. (2021, 27 September). Mangler arbeidere etter Brexit: Trenger 100.000 sjåførere. NRK. Retrieved from: <https://www.nrk.no/urix/sjaformangel-i-storbritannia-gir-tomme-bensinstasjoner-1.15666472>
- Kotogy, A., & Yap, C. (2021, 21 September 2021). A Shortage of Pilots Looms as the Next Challenge for Airlines. *Bloomberg*. Retrieved from: <https://www.bloomberg.com/news/articles/2021-09-21/a-shortage-of-pilots-looms-as-the-next-challenge-for-airlines>
- Labour Party, & Centre Party. (2021). Hurdalsplattformen. Hurdal: Labour Party, Centre Party.
- Law Insider. (2021). Block hour definition. Law Insider. Retrieved from: <https://www.lawinsider.com/dictionary/block-hour>
- LO-lawyers Hellum Lilleengen, K., Haider, I., & van den Heuvel, A. (2021). Felles notat - NSF - om utredningen Lønns- og arbeidsvilkår i luftfarten. Oslo: LO Norway.

- Lorvik, N. (2021, 14 December). Raser over Postnord-lønninger: - Skjønner ikke hvordan de klarer å sove om natta. *Nettavisen*. Retrieved from: <https://www.nettavisen.no/okonomi/raser-over-postnord-lonninger-skjonner-ikke-hvordan-de-klarer-a-sove-om-natta/s/12-95-3424218783>
- Lysvold, S. S. (2021, 5 January). Fagforeninger hardt ut mot SAS-toppsjefen i åpent brev. NRK. Retrieved from: <https://www.nrk.no/nordland/sas-pilot-christian-laulund-kritiserer-konsernsjef-rickard-gustafson-for-bruk-av-innleide-piloter-1.15312373>
- Mauren, A., & Dahl, C. A. (2020, 1 July 2020). Luftfartstilsynet får kritikk fra flere hold: Sliter med å tiltrekke seg fagfolk. Lite effektiv drift. Utydelige ansvarsforhold. *E24*. Retrieved from: <https://e24.no/norsk-oekonomi/i/K3dkny/luftfartstilsynet-faar-kritikk-fra-flere-hold-sliter-med-aa-tiltrekke-seg-fagfolk-lite-effektiv-drift-utydelige-ansvarsforhold>
- Meland, H., & Akre, S. (2021, 8 October 2021). Oppsagt SAS-pilot Anders Eikeland raser mot SAS: – Umoralsk. *TV2*. Retrieved from: <https://www.tv2.no/a/14275397/>
- Melin, M., Lager, E., & Lindfors, P. (2018). *High-flying risks. Variations in working conditions, health, and safety behaviours among commercial airline pilots in relation to safety climate*. Gothenburg: University of Gothenburg. Retrieved from: https://gupea.ub.gu.se/bitstream/2077/55085/4/gupea_2077_55085_4.pdf
- Mikalsen, K.-E. (2020, 5 April 2020). Tror Norwegian blir dramatisk endret – hvis selskapet overlever. *Flysmart24*. Retrieved from: <https://flysmart24.no/2020/04/05/tror-norwegian-blir-dramatisk-endret-hvis-selskapet-overlever/>
- Mikalsen, K.-E. (2022, 15 January 2022). SAS blant de sikreste flyselskapene i verden. *Flysmart24*. Retrieved from: <https://flysmart24.no/2022/01/15/sas-blant-de-sikreste-flyselskapene-i-verden/>
- Milch, V., & Laumann, K. (2016). Interorganizational complexity and organizational accident risk: A literature review. *Safety Science*, 82, 9-17. doi:<https://doi.org/10.1016/j.ssci.2015.08.010>
- Ministry of Justice and Public Security. (2022). Vurdering av enkelte spørsmål knyttet til konkurranse om kjøp av flyruter med forpliktelse til offentlig tjenesteyting. Oslo, Department of Law, Ministry of Justice and Public Security.
- Ministry of Labour and Social Inclusion. (2021). *Den norske modellen og fremtidens arbeidsliv - Utredning om tilknytningsformer og virksomhetsorganisering*. Retrieved from: <https://www.regjeringen.no/no/dokumenter/nou-2021-9/id2862895/>
- Ministry of Transport. (2019). *Fra statussymbol til allemannseie - norsk luftfart i forandring*. Oslo: Ministry of Transport. Retrieved from: <https://www.regjeringen.no/no/dokumenter/nou-2019-22/id2680751/>
- Moebus, P. (2008). *Final Report “Scientific and Medical Evaluation of Flight Time Limitations”*. Zürich: Moebus Aviation. Retrieved from: https://www.eurocockpit.be/sites/default/files/FTL_MoebusAviation_Study_Final_Report_09_0122.pdf
- Newth, M., & Hollum, J. (2021, 16 November 2021). Flyr om nytt Ryanair-angrep: – Opptatt av ansvarlighet og anstendighet. *Dagens næringsliv*. Retrieved from: <https://www.dn.no/luftfart/flyr/norwegian/ryanair/flyr-om-nytt-ryanair-angrep-opptatt-av-ansvarlighet-og-anstendighet/2-1-1099503>
- Nilsen, A. A. (2019, 28 April 2019). NHO Luftfart ut mot SAS-pilotenes krav: – Undergraver sin egen arbeidsplass. *E24*. Retrieved from: <https://e24.no/naeringsliv/i/OpgOqk/nho-luftfart-ut-mot-sas-pilotenes-krav-undergraver-sin-egen-arbeidsplass>
- Nogues, S., Tremblay, D.-G., & Mansour, S. (2021). Job Demands and Job Resources Among Western Airline Cabin Crews: A Comparative Study of Canadian, German, and French Flight Attendants. *The Journal of Aviation/Aerospace Education and Research*, 30(1), 89-106. Retrieved from <https://commons.erau.edu/jaer/vol30/iss1/4/>
- Norse Atlantic Airways. (2021). Norse Atlantic Airways presents at SB1 Airline Seminar [Press release]. Retrieved from: <https://flynorse.com/press-releases/norse-atlantic-airways-presents-at-sb1-airline-seminar>

- Norske SAS Flygeres Forening, & Norsk Flygerforbund. (2021). NOTAT TIL SD UTREDNING LUFTFART. Oslo: Norsk Flygerforening, Norsk Flygerforbund.
- Norwegian Government. (2021). Regjeringa vil gjeninnføre kollektiv søksmålsrett. Oslo: Norwegian Government.
- Norwegian Parliament, (2021). Fransk lov om arbeidsvilkår i luftfarten. Oslo: Parliament's enquiry department.
- Nyborg, H. O. (2021a, 29 October 2021). Emirates øker mellom Dubai og Oslo. *Hangar.no*. Retrieved from: <https://www.hangar.no/emirates-okker-mellom-dubai-og-oslo/>
- Nyborg, H. O. (2021b, 14 December). Lufthansa satser mer på Norge. *Hangar.no*. Retrieved from: <https://www.hangar.no/lufthansa-satser-mer-pa-norge>
- Nygård, J. I. (2021). Presentation at the Aviation Conference of LO Norway.
- Oslo Municipality. (2021). Oslomodellen. Retrieved from: <https://www.oslo.kommune.no/for-vare-leverandorer/krav-til-leverandorer/oslomodellen/>
- Parat. (2020). Norwegian-konkurs i Danmark og Sverige. *Parat*. Retrieved from: <https://www.parat.com/norwegian-konkurs-i-danmark-og-sverige-2137-455904>
- Parat. (2021, 6 October 2021). SAS-piloter i Parat varsler søksmål mot selskapet. *NTB*. Retrieved from: <https://kommunikasjon.ntb.no/pressemelding/sas-piloter-i-parat-varsler-soksmal-mot-selskapet?publisherId=3693025&releaseId=17917329>
- Parat Aviation. (2021). På vingene. Retrieved from: <https://www.parat.com/luftfart/om-parat-luftfart-1722/om-oss>
- Plucinska, J., & Humphries, C. (2018, 4 December 2018). Ryanair sidesteps unions by ramping up ultra-low-cost unit. *Reuters*. Retrieved from: <https://www.reuters.com/article/us-ryanair-unions-idUSKBN1O3164>
- Rasmussen, J. E. (2020, 16 March 2020). Her er hjælpen, der kan bringe luftfarten gennem krisen. *Finans*. Retrieved from: <https://finans.dk/erhverv/ECE12012484/her-er-hjaelpen-der-kan-bringe-luftfarten-gennem-krisen/?ctxref=ext>
- Reader, T., Parand, A., & Kirwan, B. (2016). *European pilots' perceptions of safety culture in European Aviation*. Brussels: London School of Economics, European Commission, Future Sky Safety, Eurocontrol.
- SAMAK. (2017). *Fremtidens flytrafik på fair vilkår (Heunicke-rapporten)*. Oslo: Arbeiderbevegelsens nordiske samarbeidskomité. Retrieved from: <https://samak.info/wp-content/uploads/2017/01/SAMAKs-rapport-om-luftfart.pdf>
- SAS. (2021). Legal structure. Retrieved from: <https://www.sasgroup.net/about-sas/corporate-governance/legal-structure/>
- Savant, Y. (2021). Presentation at the Aviation Conference of LO Norway.
- Sipilä, J., Jakobsdóttir, K., Solberg, E., Lövin, I., & Lilleholt, L. C. (2019). Declaration on Nordic Carbon Neutrality. Helsinki.
- Skatval, J. B. (2019). Bekymring om barn som reiser med SAS wet lease. Oslo: Cockpit Association of Norway.
- Statistics Norway. (2021a, 29 October 2021). 8,4 millioner flypassasjerer i 3. kvartal. Retrieved from: <https://www.ssb.no/transport-og-reiseliv/luftfart/statistikk/lufttransport/artikler/8-4-millioner-flypassasjerer-i-3.kvartal>
- Statistics Norway. (2021b). 11418: Yrkesfordelt månedslønn, etter statistikk mål, yrke, statistikkvariabel, avtalt/vanlig arbeidstid per uke og år. Retrieved from: <https://www.ssb.no/statbank/table/11418/tableViewLayout1/?loadedQueryId=10046764&timeType=top&timeValue=2>
- Strangler, C. (2018, 28 September). Trouble in the Skies Over Europe. *The Atlantic*. Retrieved from: <https://www.theatlantic.com/international/archive/2018/09/ryanair-workers-strike-eu-labor/571447/>

- Sveen, F. (2021, 18 December 2021). Flygere går til sak mot SAS. *ABC Nyheter/NTB*. Retrieved from: <https://www.abcnyheter.no/nyheter/verden/2021/12/18/195810829/flygere-gar-til-sak-mot-sas>
- Sæther, T. M., & Lorvik, N. (2021, 18 October 2021). Oppsagte SAS-piloter med demonstrasjon: - Vil sende et signal. *Nettavisen*. Retrieved from: <https://www.nettavisen.no/okonomi/opsagte-sas-piloter-med-demonstrasjon-vil-sende-et-signal/s/5-95-321169>
- The Norwegian Agency for Public and Financial Management (DFØ). (2021, 28 September 2021). Ulovlig anbudssamarbeid – lovlig prosjektsamarbeid. Retrieved from: <https://anskaffelser.no/avtaler-og-regelverk/ulovlig-anbudssamarbeid-lovlig-prosjektsamarbeid>
- Thune-Larsen, H. (2019). *Luftfartstilbudet i, til og fra Norge før og etter liberaliseringen*. Oslo: Institute of Transport Economics. Retrieved from: <https://www.toi.no/getfile.php?mmfileid=52239>
- Traut, A. (2019). The 1,500-Hour Rule: When Does Quantity Outweigh Quality? *Journal of Air Law and Commerce*, 84(2), 267-296.
- Trumpy, J. (2020a, 6 April 2020). Nå treffer oppsigelsene flybransjen – og flygere har en bønn til staten om mer krisehjelp. *Dagens Næringsliv*. Retrieved from: <https://www.dn.no/luftfart/norwegian/wideroe/sas/na-treffer-opsigelsene-flybransjen-og-flygere-har-en-bonn-til-staten-om-mer-krisehjelp/2-1-788857>
- Trumpy, J. (2020b, 17 March 2020). SAS-sjef om dansk og svensk pakke: – De to statene har vist et tydelig eieransvar. *Dagens Næringsliv*. Retrieved from: <https://www.dn.no/luftfart/sas/koronaviruset/norwegian/sas-sjef-om-dansk-og-svensk-pakke-de-to-statene-har-vist-et-tydelig-eieransvar/2-1-775862>
- Turnbull, P. (2020). Tackling undeclared work in the air transport sector, with a special focus on bogus self-employment of aircrews: a learning resource. Brussels: European Platform tackling undeclared work.
- UiT. (2021). Luftfartsfag - bachelor. Retrieved from: https://uit.no/utdanning/program?p_document_id=275406
- Underthun, A., & Ingelsrud, M. H. (2019). *Lønn og arbeidsforhold i norsk luftfart: En kartlegging*. Oslo: OsloMet. Retrieved from: https://oda.oslomet.no/oda-xmlui/bitstream/handle/10642/8921/r2019_07_Lonn_og_arbeidsforhold_i_norsk_luftfart.pdf?sequence=2&isAllowed=y
- van Leeuwen, W., Ullvetter, C., & Kecklund, G. (2019). *The Effects of the new EASA-FTL on pilot sleep and fatigue*. Stockholm: Stockholm University.
- Veiby, G., & Brekke, A. (2021, 30 August). Slår alarm om trøtte piloter. NRK. Retrieved from: <https://www.nrk.no/norge/slar-alarm-om-trotte-piloter-1.11905651>
- Wangsness, P. B., Ydersbond, I. M., Veisten, K., & Farstad, E. (2021). *Fremskyndet innføring av elfly i Norge. Mulige samfunnsmessige konsekvenser og virkemidler*. TØI Report 1851/2021. Oslo: Institute of Transport Economics. Retrieved from: <https://www.toi.no/getfile.php?mmfileid=71283>
- Wikipedia. (2020). Fartøysjef. Retrieved from: <https://no.wikipedia.org/wiki/Fart%C3%B8ysjef>
- Wikipedia. (2021a, 4 October 2021). List of airlines impacted by the COVID-19 pandemic. Retrieved from: https://en.wikipedia.org/wiki/List_of_airlines_impacted_by_the_COVID-19_pandemic
- Wikipedia. (2021b, 2 November 2021). List of largest airlines in Europe. Retrieved from: https://en.wikipedia.org/wiki/List_of_largest_airlines_in_Europe
- WSDOT. (2019). *Electric Aircraft Working Group Report*. Seattle: Washington State Department of Transportation. Retrieved from: <https://www.wsdot.wa.gov/sites/default/files/2019/07/15/ElectricAircraftWorkingGroupReport-June2019.pdf>

- Ydersbond, I. M., Buus Kristensen, N., & Thune-Larsen, H. (2020). *Nordic Sustainable Aviation*. Oslo: Nordic Council of Ministers. Retrieved from:
<https://www.nordicenergy.org/article/common-initiatives-can-make-nordic-aviation-significantly-more-sustainable/>
- Yorens, Y., Gillis, D., Calcke, L., & De Coninck, J. (2015). *Atypical Forms of Employment in the Aviation Sector*. Retrieved from:
https://www.europarl.europa.eu/meetdocs/2014_2019/documents/tran/dv/report_atypical_employment_in_aviation_/Report_AtypicalEmploymentInAviation_en.pdf

9 Appendix 1: List of interviews

28 October 2021: European Cockpit Association (Teams)

4 November 2021: Federation of Norwegian Aviation Industries (Teams)

5 November 2021: Interview with informant 1, Cockpit Association of Norway (Teams)

5 November 2021: Interview with informant 2, Cockpit Association of Norway (Teams)

5 November 2021: Interview with informant 3, Cockpit Association of Norway (Teams)

8 November 2021: Association of Cabin Crew Unions Norway (Teams)

16 November 2021: Interview with informant 4, Cockpit Association of Norway (Teams)

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