

## Consumer Rights Improve Service Quality: Evidence from EU Air Passenger Rights

*Hinnerk Gnutzmann and Piotr Śpiewanowski*

### Executive Summary

- > Flight delay is a widespread quality problem in the airline industry, with the average flight being delayed by more than 10 minutes.
- > The problem is addressed by the Air Passenger Rights Regulation (“EC261”) on flight delay, a flagship EU consumer protection policy.
- > Under the regulation, airlines are liable for providing care as well as substantial cash compensation for passengers in case of long delays.
- > These provisions provide incentives for airlines to improve service quality, substantially reducing the likelihood of flights being delayed.
- > The key to success is enforcement. In case of airline delay, this has been achieved partly through the market: The regulation created incentives for claim agencies to emerge.
- > As illustrated by the case of air passenger rights, consumer rights policy thus not only provides insurance, but can also improve service quality.

Consumer protection is a central policy objective at the European level, enshrined in Art. 169 TFEU, which is defended through a genuine European Union (EU) consumer rights policy. A well-known area of EU consumer rights policy is the case of passenger rights, with the most prominent example being EU airline passenger rights. Currently, this example is used in discussions about an extension of rail passenger rights, which could be aligned with the existing airline regulation (European Parliament 2018). In this context, it is timely to review the case of airline passenger rights to draw broader conclusions from it.

To do so, this policy brief first presents the design of the EU passenger rights regulation, before studying its impact on airline service. As we show in Gnutzmann and Śpiewanowski

(2018), the regulation has not only strengthened the protection of passengers on severely delayed or cancelled flights (insurance component), but also increased the reliability of EU airlines across the board (service quality component). The service quality effect is an important potential welfare effect of consumer rights regulation. While the share of severely delayed passengers is generally very low, all passengers benefit from increased efforts exerted by airlines in raising reliability. This is the case if the regulation imposes sufficient costs on carriers to act as an effective incentive to raise reliability. In the airline industry, competition has not resolved problems of delay (Ater & Orlov 2015). Soft-touch regulations, such as the US delay disclosure program, appear to have been similarly ineffective (Forbes et al. 2015). This points to the important potential role of passenger rights in raising airline quality.

Additionally, the policy brief considers the broader implications of the findings. The experience of airline passenger rights holds important insights for the design of consumer protection policy more generally, especially regarding monetary compensation. First, compensating passengers generously for delay may be justified partially due to its incentive effects on transportation providers. Second, the existence of compensation can also mobilize private sector resources to increase enforcement. In the case of airline passenger rights, intermediary agencies have proliferated which help passengers receive delay compensation on a contingent fee basis.

### EU Air Passenger Rights

Aimed at “ensuring a high level of protection for passengers”, the European Union laid down air passenger rights in Regulation 261/2004 (henceforth EC261). Consumers enjoy protection under this regulation in case of “long delay”, defined as arrival at the final destination occurring at least three hours behind schedule. Thus, missed connecting flights qualify as a reason for long delay. In these cases (including denied boarding and cancelled flights), passengers have a right to care and assistance. This includes free phone calls, meal vouchers and

– in case of overnight stays – hotel accommodation, which must be fully covered by the operating carrier. Such care must always be granted, irrespective of who is at fault for the delay. Additionally, passengers receive the right to claim cash compensation for lost time, which is due unless the airline can prove the delay was caused by “exceptional circumstances”. This cash compensation is substantial – between EUR 250 and EUR 600, depending on route and length of delay – and not limited to the ticket price. The regulation is mandatory, so passengers and airlines cannot agree through conditions of carriage to limit or waive rights created by the regulation.

European air passenger rights in case of delay are exceptionally strong compared to other major aviation markets (for a survey, see ICAO 2013) or other modes of transport. To understand the success of the EC261, it is insightful to discuss the policy alternatives related to flight delay applied in other regions: prohibitive fines, third party insurance and information disclosure.

- **Fines paid to regulator:** To limit the inconvenience of the passengers forced to wait on-board, the US Department of Transport introduced in 2010 the so-called tarmac delay rule, a system of penalties for keeping passengers on-board over three (domestic) or four hours (international) before the take-off or after landing without the opportunity to deplane. Airlines who violate the rule face fines of up to \$27,500 per passenger. These fines are prohibitive, and indeed the number of reported instances of tarmac delay dropped from nearly 700 in the 12 months before the rule was introduced to just 20 cases in the 12 subsequent months. This outcome can be regarded as a success of the policy. The solution it provides comes at a relatively low cost, as passengers can be deplaned and replaned if the tarmac delay approaches the threshold value. Thus, the policy does not decrease the total delay. Furthermore, the fines introduced by this policy are transferred to the authorities instead of the affected passengers. Thus, in contrast to EC261, the tarmac delay rule does not contain the insurance component that is beneficial to the consumer.
- **Third party insurance:** A few airlines outside of the EU offer their customers third party insurance packages that include compensation for flight delay. The clear advantage is the voluntarism of the approach, which implies that the contract cannot generate welfare loss to any of the consumers. At the same time, the policy does not create incentives for carriers to reduce airline delay, even if the costs involved are relatively low.
- **Information disclosure:** Economic theory suggests that service quality should be reflected in prices. Airlines with better on-time record should enjoy a price premium. The premium should, in return, provide incentives for the airlines to improve their service quality. This idea encouraged the US Department of Transport to regularly

publish data on on-time performance of US carriers on domestic flights, specifically the share of flights arriving within 15 minutes of the scheduled departure time. However, as studies show (see, e.g., Forbes *et al.* 2015), the policy has had no impact on the average flight delays. Instead, airlines were found to be involved in ‘gaming’ the rule, that is strategically increasing scheduled flight times to reduce measured delay, and reduced delay only on the flights about to miss the cut. Alternative measures of on-time performance (e.g. mean or median delay) could thus suit the purpose of reducing the delay better. Nevertheless, for information disclosure to be effective, passengers need to be willing to incur information processing costs.

These alternative policies place a lower weight on consumer protection. In all cases, the insurance component of the EU passenger rights regulation is missing. Furthermore, the existing literature finds weak or no evidence of impact of these tools on delay reduction.

EU passenger rights are far-ranging in scope and impose considerable obligations on airlines; thus, for any cost-benefit analysis, it is essential to understand the benefit delivered to consumers through the regulation. We now turn to addressing this empirical question.

#### Identifying the impact of EU Air Passenger Rights regulation

Coverage of the EU Air Passenger Rights regulation is broad but not universal. All flights departing from an airport located in the EU fall under the scope of EC261. The situation is more complex for routes involving a non-EU airport (“extra-EU routes”). All flights departing from an EU airport, whether operated by a European airline or not, are subject to the regulation. However, on flights bound for an EU airport, but originating outside the EU, only flights operated by EU carriers fall under the regulation. Non-EU carriers do not fall under the regulation when departing from a non-EU airport. But on the return flight – departing from the EU but bound for non-EU destinations – also non-EU carriers are covered. The pattern of EC261 coverage and remedies is illustrated in Figure 1.

Figure 1: Applicability of EU Passenger Rights

	Intra-EU	Outbound from EU	Inbound to EU
EU Carrier	✓	✓	✓
non-EU Carrier	✓	✓	✗
EU Passenger Rights Apply			No Coverage
<b>Right to care</b> (including meals and accommodation) <b>Re-routing</b> (to reduce delay) <b>Cash compensation</b> (from €250 to €600 for delays over three hours at final destination)			

This within-route variation in regulation coverage is unique and allows for assessing the effectiveness of the regulation

based on an analysis of scheduled and actual flight times of all scheduled commercial flights on the top 15 most traffic intensive extra-EU airport pairs as well as of additional routes not subject to EC261 over an 8-month sample period, from November 2016 to July 2017 (Gnutzmann & Śpiewanowski 2018).

The study finds an economically important and statistically significant effect of EC261 regulation on both departure and arrival delay, as well as on on-time performance. The model attributes a departure delay reduction of 4.92 minutes on average to the EC261 regulation, after controlling for airline-hub status, route-time fixed effects and airline-fixed effects. This estimate is certainly significant compared to an average departure delay of 10 minutes on international routes, and economically important. Statistically, the result allows for very robustly rejecting the hypothesis that EC261 has no effect. The same holds for arrival delay, where the estimated EC261 impact is 3.90 minutes of delay reduction. We also find that EC261 is associated with a 5% improvement in ‘on-time performance’ (i.e. whether arrival delay is below 15 minutes).

These results show that EC261 has an important impact on flight quality through improving mean performance, rather than reducing the likelihood of extremely poor performance. At first sight, this appears surprising because the liability events under the regulation focus on long delays. However, it is important to note that delay at final destination is what matters for the regulation: carriers operating connecting flights have a strong incentive to make sure their passengers do not miss connections.

These delay reductions of EC261 cannot be explained by ‘gaming’. The fact that EC261 has a strong effect on departure delay already rules out schedule padding as an alternative explanation. Airlines affected by the EC261 regulation actually operate on tighter schedules than their unregulated competitors, partly reflecting differences in aircraft fleet. Overall, there is strong evidence that EC261 air passenger rights – and thus regulation – lead to a meaningful improvement in airline service quality.

This is not the case for alternative, purely market-based policy tools. In the airline industry, fiercer competition does not necessarily lead to more punctual flights. Competition may actually increase delays (Ater & Orlov 2015), although in other settings a positive correlation between route competition and on-time performance has been found (Mazzeo 2003). This makes it important to understand how passenger rights regulation interacts with route competition. One possible mechanism is that under low competition, airlines undertake little effort to reduce delays. In this case, the marginal cost of delay reduction is likely to be low, and the regulation can have a significant effect. A test of this hypothesis yields that passenger rights regulation is especially effective on

routes where competition is low. The effect ranges from 2.53 minutes of delay reduction on the most competitive routes to 7.78 minutes on the least competitive routes (Gnutzmann & Śpiewanowski 2018).

### Policy recommendations

Since EC261 has imposed significant costs to the airlines, estimated at over 0.6% of airline revenues, the coverage of the regulation is, unsurprisingly, criticized by airlines as excessive. This critique was especially pronounced in the aftermath of the Eyjafjallajökull volcano eruption in 2010. Once the volcano ash had settled and air traffic was fully restored, airlines calculated the costs of care imposed on them by these “extraordinary circumstances” and the European Commission commenced deliberations on possible amendments to the rule (EC 2013). Although its proposals have not been implemented, they touch on several controversial areas of EC261, making them a useful starting point for further discussion.

- **Enforcement:** As compensation has to be actively sought by the affected passengers, awareness of the regulation is crucial, and it has been steadily rising over the last years. The claim rates have been increasing thanks to information requirements as well as the emergence of so-called “claims agencies”. These agencies charge a contingency fee to distressed passengers and credibly threaten to sue airlines in case of non-compliance. Overall, significant improvements have been achieved in this dimension without regulatory changes. This is possible thanks to the relatively generous compensation amounts, which make the claims agency business models possible. This suggests that, as long as compensation amounts are not reduced substantially, priorities for passenger rights reform should be placed elsewhere.
- **Compensation conditions:** The most obvious dimension of potential change is the monetary value of the compensation or conditions under which the compensation is disbursed. The 2013 Commission document suggested an increase in definition of long delay to five to nine hours, depending on the distance. This would be a drastic curtailment of passenger rights in case of severe delay, perhaps just moderately short of abolishing them entirely. As the discussed evidence has shown, delay compensation has been instrumental in the success of the policy in improving airline service quality. As long as improving service quality is one of the policy objectives, the three-hour rule should not be relaxed.
- **Compensation value:** The current value of compensation may be perceived as relatively high, both compared to ticket prices and typical estimates of the opportunity cost of time. It has to be noted, however, that since the onset of the regulation, the real value of compensation has decreased by over 20% due to inflation. However,

there are important advantages to maintaining the current (generous) level of compensation. First, it apparently provides an effective incentive for airlines to increase reliability, benefiting all passengers. Second, it makes claims agency business models viable, which in turn supports enforcement of the regulation.

- **Extraordinary circumstances:** Extending the scope of extraordinary circumstances was one of the policy recommendations in 2013. From a service quality perspective, it is clear that penalizing airlines for events outside their sphere of influence, such as volcanic eruptions, does not lead to any improvements, while the unbounded care condition imposed on airlines is a potential threat to the airlines' financial stability. Suggested remedies, such as the introduction of an EU-wide fund financed by an airline ticket tax to deal with rare events, such as a volcano ash clouds, may sound attractive. However, the administrative costs of such a solution need to be assessed against commercial insurance.

## Conclusion

Our study shows that the EC261 regulation is highly effective in reducing flight delays. The regulation imposes significant costs on carriers for long flight delays, thus creating financial incentives for airlines to reduce such delays.

Although the regulation includes a threshold above which the rules apply, we do not observe any threshold behaviour. Instead, all flights benefit from the delay decrease. The majority of carriers operating intercontinental flights use a hub model, which means that even a short delay on one leg of a journey may be resulting in a long delay at the final destination if a connecting flight is missed. The welfare benefits of the regulation are enlarged by the insurance component: the cost of the delay imposed by the regulation that incentivizes the airlines is transferred to the affected passengers.

The effectiveness of consumer rights in raising service quality in the airline industry holds important insights for other markets. Currently, the European Commission is reforming regulations on rail passenger rights to align them with EC261. The experience of EC261 promises service quality improvements in that sector, too. One of the changes discussed includes a substantial increase in the level of compensation offered to passengers, and an important issue is whether compensation will continue to be capped by the ticket price. In the case of EC261, relatively generous (uncapped) compensation helped to compensate for initially weak enforcement by creating a market for claims agencies. Thus, the air example shows that uncapped compensation can have important enforcement effects.

## Further Reading

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## About the Authors

**Hinnerk Gnutzmann** is a post-doctoral researcher at the Leibniz University Hannover. He holds a Ph.D. from the European University Institute in Florence.

**Piotr Śpiewanowski** is an assistant professor at Vistula University and a researcher at the Institute of Economics, Polish Academy of Sciences. He holds a Ph.D. from the European University Institute in Florence.

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