

Flying the JetBlue Skies

Proposed Spirit Merger and Competition in Aviation

Ann Atwater

University of Florida

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Introduction

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Model and Results

Conclusion

- JetBlue Attempted to buy Spirit Airlines in 2022
- DOJ Sues to Block the Merger in 2023
- Merger Blocked in 2024 Following Trial
- This Paper Evaluates the Merger's Counterfactual Price Effects.

Preview of Results

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- In the average JetBlue-Spirit market, customers would have paid \$876,000 more following the merger.
- Under favorable assumptions, minimum fares would have risen by \$4 after the merger.
 - Under the least favorable assumptions, minimum fares would have risen by over \$20 following the merger.
- Price changes are strongest at lower end of the fare distribution, consistent with ruling in the case.

Setting

Spirit and JetBlue

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■ JetBlue

- Third Largest Low-Cost Carrier
- Recent Anti-Competitive Conduct
 - Northeast Alliance with American
 - Attempted Spirit Merger

■ Spirit

- Largest Ultra-Low Cost Carrier
- Maverick Firm Focused on Budget Focused Travelers
- Monday: Filed for Chapter 11 Bankruptcy

Data

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- Airline Origin and Destination Survey (DB1B)
 - 10% Sample of Domestic Passenger Itineraries
 - Data on Origin, Destination, Price, Route, Carrier
- Markets defined as Year-Quarter-Origin-Destination
- Market Size is the Geometric Mean of the Population of Origin, Destination Metropolitan Statistical Areas
- Products Further Defined by Carrier, Nonstop Status
 - Air Travel in One Nest, Outside Good in the Other.

Random Coefficient Nested Logit

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- Consumer i in market t has indirect utility from buying product j as defined by

$$U_{ijt} = \delta_{jt} + \mu_{ijt} + \epsilon_{ijt}$$

- δ_{jt} is the mean utility across consumers in market t for product j
- μ_{ijt} is the consumer's deviation from this mean utility
- ϵ_{ijt} is an unobserved consumer-level shock such that

$$\epsilon_{ijt} = \bar{\epsilon}_{ih(j)t} + (1 - \rho)\bar{\epsilon}_{ijt}$$

- ρ is the nesting parameter.

Random Coefficient Nested Logit Results

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Variable	Post-Pandemic	Pre-Pandemic
Price	-3.114 (0.44)	-2.947 (0.34)
Price (σ)	0.599 (0.12)	0.59 (0.12)
Nesting Parameter	0.115 (0.032)	0.136 (0.045)
Period	2017Q1-2019Q4	2021Q2-2023Q2
N Products	265196	307849
N Markets	70016	87363
Mean Elasticity	-5.211	-5.323
Spirit Mean Elasticity	-3.44	-3.15
JetBlue Mean Elasticity	-5.18	-5.16
Mean Markup	0.21	0.203

Merger Simulation

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- Three Counterfactuals
 - JetBlue, Spirit Products Combine
 - Resulting Products Have:
 - Lowest Marginal Cost of the Two
 - Average Marginal Cost of the Two
 - Highest Marginal Cost
- Today: Post-Pandemic Change in Minimum Fare

Merger Simulation Results: Minimum Fare

Lowest Marginal Cost

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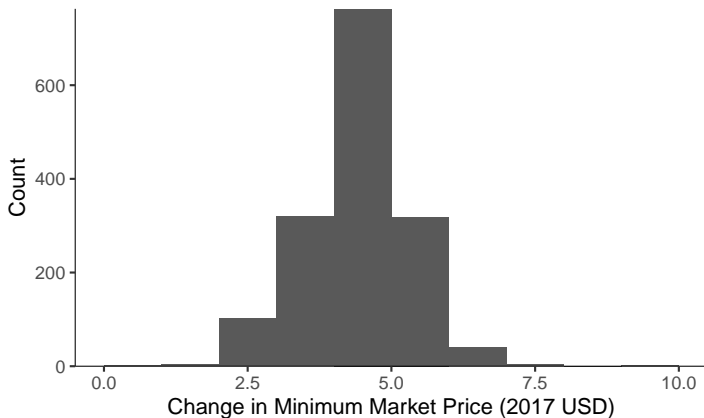
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Merger Simulation Results: Minimum Fare

Average Marginal Cost

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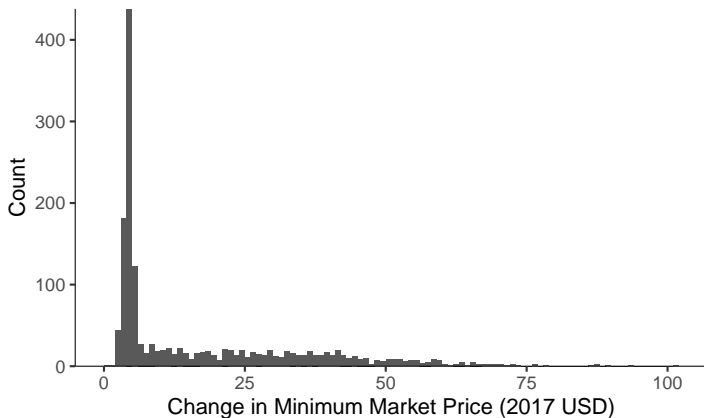
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Merger Simulation Results: Minimum Fare

Greatest Marginal Cost

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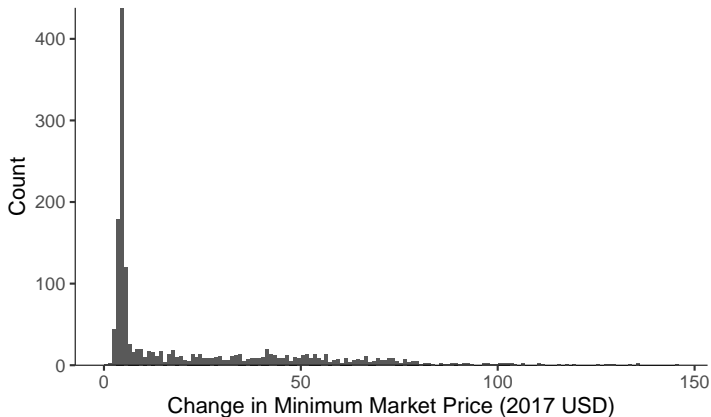
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Merger Simulation Results: Average Fare

Lowest Marginal Cost

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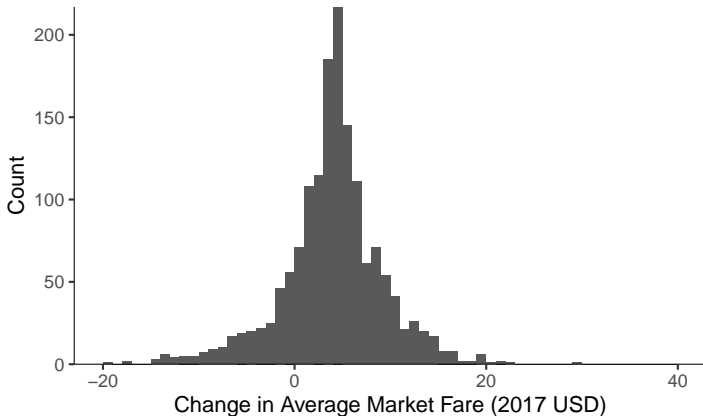
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Merger Simulation Results: Average Fare

Average Marginal Cost

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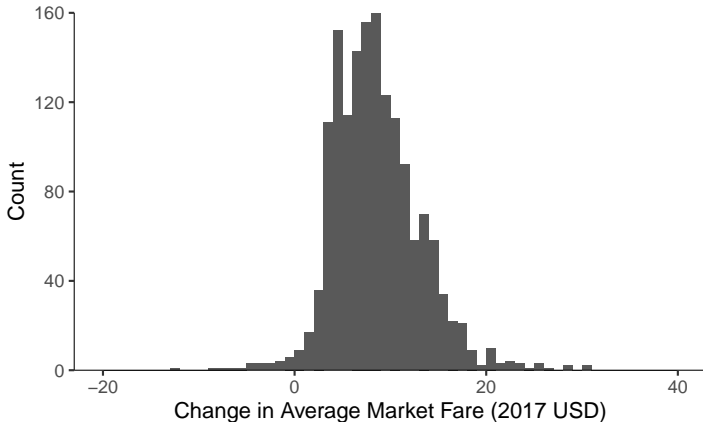
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Merger Simulation Results: Average Fare

Greatest Marginal Cost

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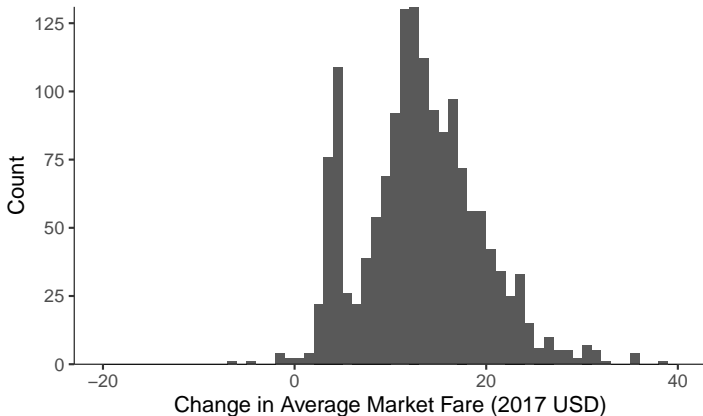
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Conclusion

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- Minimum [Average] Market Fares in JetBlue-Spirit Markets Would have Increased by:
 - Best Case: 4.47 [3.90]
 - Average Case: 17.82 [8.51]
 - Worst Case: 22.80 [13.18]
- In the average JetBlue-Spirit market under the average cost scenario, customers would have paid \$876,000 more following the merger.