



Drone Insurance

[DIJ is the current market leader in drone aircraft.](#) This morning my lovely wife pointed out that they are offering drone insurance. This made me curious, as it may create moral hazard for the insurance carrier.

The reason is simple. If you know your drone can be easily and quickly replaced at minimal cost, you will probably take more chances when flying the thing. Here's a recent example from a soccer match in Argentina:

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Moral hazard can create adverse selection. In this case, **the adverse selection might be only high-risk drone owners buying the insurance.** That would drive up costs and could create economic losses for DIJ. To make a guess about whether this is the case, we need to look at the details of the actual policy.



(click for larger image)

For this example, I'll use the DIJ Mavic Pro. [Here's a pdf of](#)

[the entire FAQ section](#). The good stuff is after the photos where the terms of service are defined.

[DJI Care Refresh](#)

Mitigating Moral Hazard

Economists have spent a lot of time over the past few decades trying to invent contracts that at least reduce the expected cost of adverse selection. We have identified two general contract structures that seem to work. (These definitions are from Jeffrey M. Perloff, *Microeconomics* 8e 2018 pages 661-663).

State-Contingent Contracts: In a state-contingent contract, one party's payoff is contingent on only the state of nature.

Profit-Sharing Contracts Even if the principal cannot observe the state of nature or the agent's actions, the principal may be able to design a contingent contract that reduces the moral hazard problem by making payments contingent on an outcome, such as profit or output. One common contingent contract is a profit-sharing contract, in which the payoff to each party is a fraction of the observable total profit.

DIJ uses both methods to mitigate moral hazard. The state-contingent parts limit coverage in the event that any one of several actions are taken. **For example, if you modify your drone with parts not approved by DIJ, your warranty is void.** Also you are limited to two replacements in a year. And coverage lasts one year, after which it can't be renewed. Unless, of course, you replace your drone twice. In that case the policy is terminated after the second replacement.

The profit-sharing part (or, more appropriately for this case, cost-sharing) is the fees the owner must pay for various

events. For example (still using the Mavic Pro in the U.S.) **the up-front price of the policy is \$99. The replacement price is \$79 for the first and \$129 for the second.** And, of course, there is no third replacement. Nevertheless, **the retail price of this baby is \$999. The most you'll pay out-of-pocket is \$307.** To figure out whether this warranty creates moral hazard we need to delve into the details of the state-contingencies.

Does the Insurance Create Moral Hazard?

The excerpts below are from the Terms of Service (see the pdf file above for the complete source).

First, **limit the parts that are covered:**

4 Which parts can be replaced under DJI Care Refresh?

Mavic Pro, Mavic Pro Platinum and Spark: aircraft, gimbal, camera, battery and propellers.

Second, **limit the duration of coverage:**

6 Can I renew my DJI Care Refresh when it expires? How many times can I purchase DJI Care Refresh for my aircraft?

No, you cannot. Currently, each product is eligible for only one DJI Care Refresh. The service plan cannot be renewed after it expires.

Third, **DJI keeps their options open.** They may ship you a refurbished replacement drone (emphasis added).

7 How do I replace my aircraft under DJI Care Refresh?

DJI Care Refresh is bound to the product's S/N. If you want to replace your product, contact DJI Support via phone, email, or live chat. Then send your product to a designated DJI repair center under the instruction of DJI Support staff. Our repair staff will conduct damage assessment and send you

*an invoice. After receiving the invoice, you can either choose to repair your product or replace the aircraft under DJI Care Refresh. **You will receive a unit that is new or equivalent to new in performance and reliability** after paying the service charge specified in your DJI Care Refresh Service Agreement. The replacement's S/N will be automatically bound to your DJI Care Refresh plan.*

Fourth, be sure not to cover intentional abuse or other malfeasance

II. Exclusions

DJI Care Refresh does not cover the following:

- 1. Lost or partially lost aircraft, gimbal or accessories.*
- 2. Stolen, forgotten, or abandoned product.*
- 3. Damage caused by flight under unsuitable conditions.*
- 4. Remote controller, battery of Inspire 2, Phantom 4 Pro and Phantom 4 Advanced, and modification accessories.*
- 5. Deliberate losses.*
- 6. Abrasions and shell damage that do not affect the performance of the product.*
- 7. Direct or indirect losses caused by force majeure.*
- 8. Replacement requests for damage incurred outside the period of validity.*

9. *Extra fees resulting from technical enhancements or performance improvements.*
10. *Damage resulting from modifications that are not in accordance with manual recommendations, or the use of incompatible batteries and charger.*
11. *Damage resulting from the use of third party accessories, batteries or software.*

Fifth, repeat the mantra that there are only two replacements.

□.Replacement Service

DJI Care Refresh includes two replacements. If you claim for replacement of your product twice, DJI shall be considered to have fully executed the DJI Care Refresh service. The DJI Care Refresh service will then be terminated.

After replacement, the original product becomes DJI's property and the replacement product is your property, with coverage effective for the remaining period of the Plan.

Finally, be specific about pricing. The second replacement costs more than the first. And those prices depend on the exact model as well as where you live. The complete list is near the end of the Terms of Service. I'll include a few examples here.

□.Replacement Fee

There are no hidden charges for the replacement service. After you choose DJI Care Refresh, you will receive prioritized service. The cost of two way postage for customers within DJI Care Refresh service areas will be covered by DJI. In other areas, these costs and any

associated customer's duties are at the customer's expense. In all areas the custom fees are at the customer's expense. Each time the replacement service is requested, subject to your purchase region.

In NA region (US & Canada):

For DJI Care Refresh (Spark), the first time replacement fee is \$49, the second time replacement fee is \$69.

For DJI Care Refresh (Mavic Pro), the first time replacement fee is \$79, the second time replacement fee is \$129.

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In the EU region (27 countries):

For DJI Care Refresh (Spark), the first time replacement fee is €49, the second time replacement fee is €69.

For DJI Care Refresh (Mavic Pro), the first time replacement fee is €99, the second time replacement fee is €139.

You get the idea.

Conclusion

DIJ has done a pretty good job of limiting moral hazard. Read II. Exclusions carefully. There's quite a bit of wiggle room in there. As is so often the case, you're depending on the reputation of DIJ.

One last note: DIJ has been in business quite a few years. The market outcome is that they are still offering this insurance. That implies they have mitigated moral hazard.