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When and how much to invest? Investment and capacity choice under product life cycle uncertainty

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### ACCEPTED MANUSCRIPT

## **Highlights:**

- We introduce a novel real option model considering the life cycle of a product.
- We solve simultaneously for optimal timing and optimal capacity choice.
- Model is applied to a case study on producing batteries for electric vehicles.
- Investment threshold follows S-curve, segmented regarding optimal capacity choice.
- Optimal capacity choice depends on degree of uncertainty in product life cycle.

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