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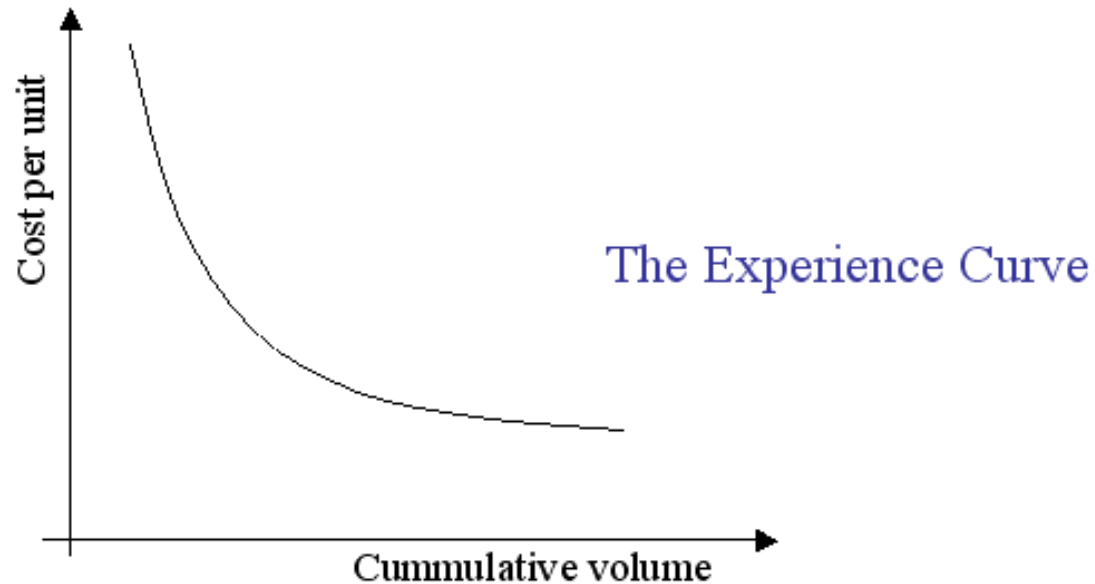
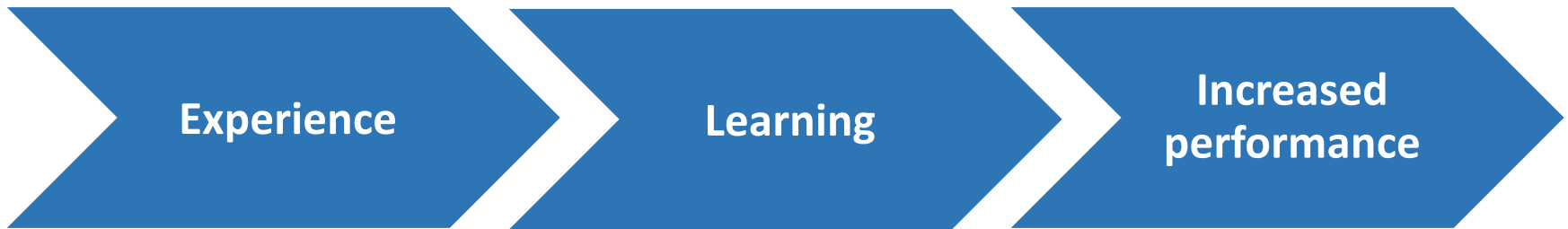
Does Experience Imply Learning?

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Traditional view: Experience as indication of learning



Operational Activities vs. Corporate Development Activities (CDAs)

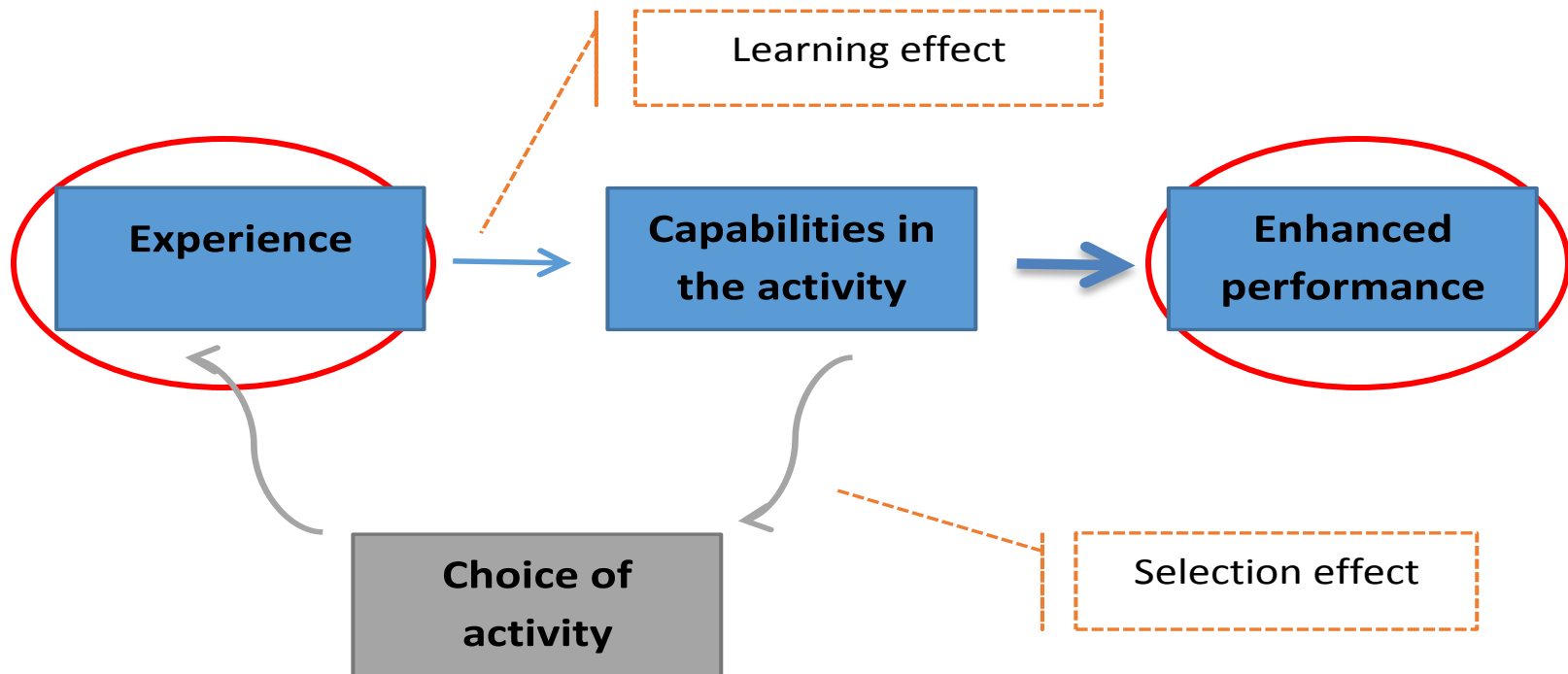
Boundary conditions to experiential learning:

- characterized by high levels of *frequency* (Starbuck 2009)
- the degree of *similarity* between the activities (Tversky, 1977, Cohen and Levinthal 1990)
- A clear understanding of the *cause-effect* relationship (Huber 1991)
- negatively affected by *outcome ambiguity* (Levitt and March 1988; Zollo 2009).

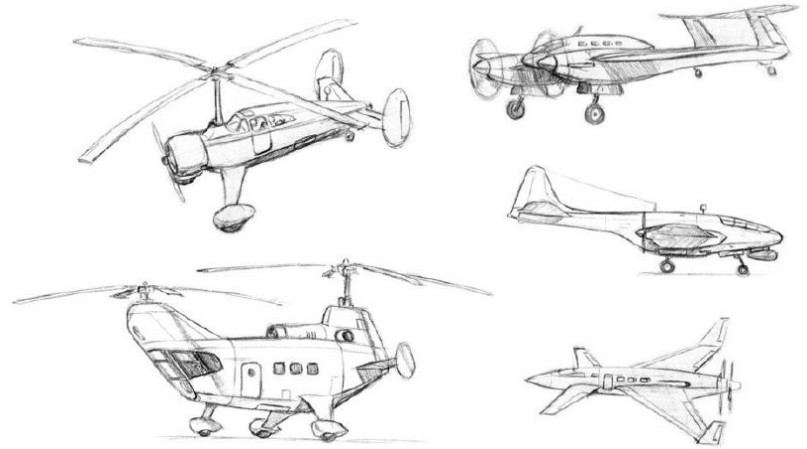
CDAs differ from operational activities:

- fairly infrequent (Zollo, 2009)
- made for diverse reasons
- much more complex and thus characterized by high levels of causal ambiguity (Zollo and Singh 2004)
- involve high levels of outcome ambiguity (Dussauge and Garrett 1995, Zollo, 2009)
- involve more discrete choices in the method (Capron and Mitchell, 2012).

In CDAs: Coexistence of Learning and Selection



Empirical Context



- Worldwide aircraft industry: 1944-2000
- 437 new product introductions (NPIs) of 159 firms
- 3 NPI modes: Internal Development, Joint Development, and Licensing
- We analyze how a firm's **experience** (i.e. number of times of using a focal NPI mode) affects its NPI **performance** (i.e. an aircraft's cumulative unit sales)

Analysis Results: The impact of NPI Mode Experience on NPI Performance (N=437)

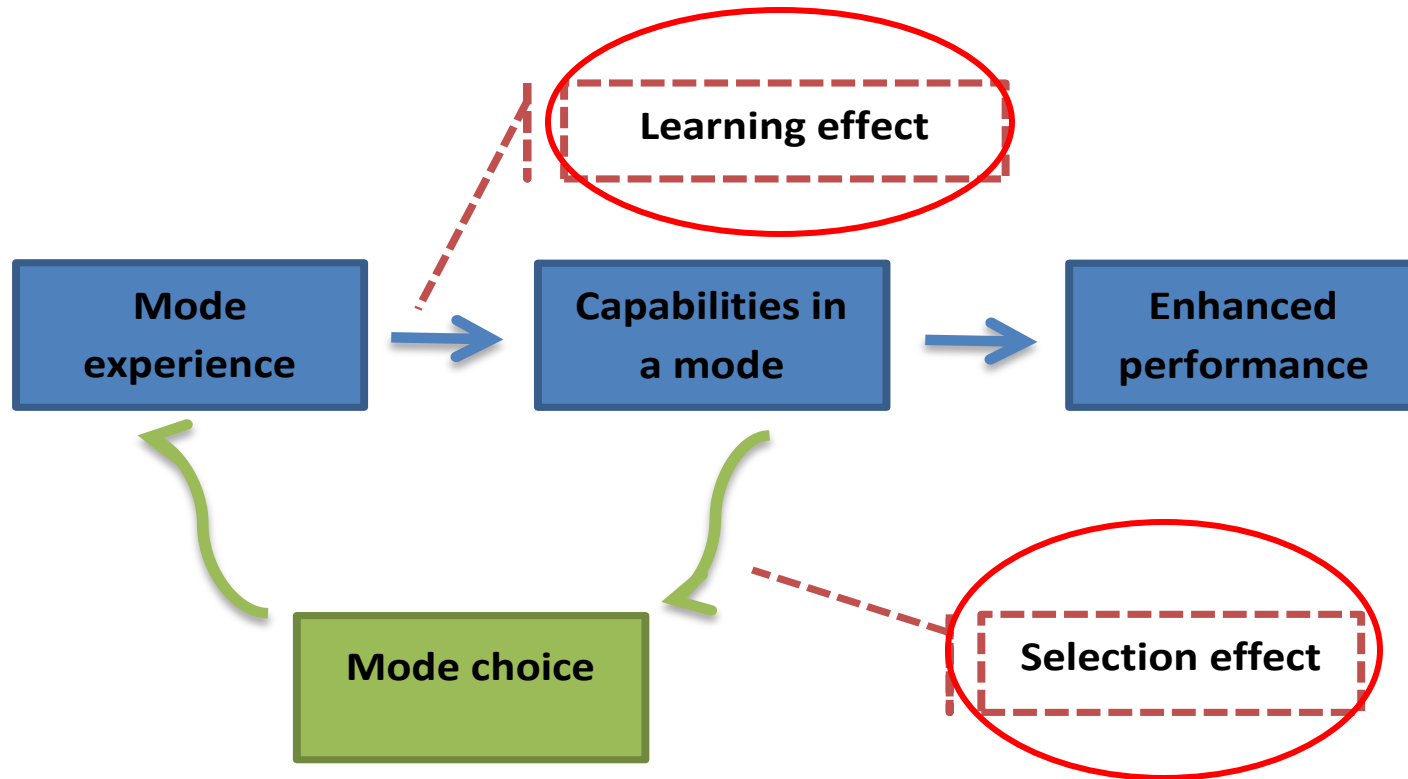
	Model 1	Model 2	Model 3	Model 4
Estimation Method	OLS (Eq. 1)	OLS (Eq. 1)	IV (Eq. 2.2)	IV (Eq. 2.2)
Mode Experience	0.148** (0.061)	0.159** (0.074)	0.051 (0.078)	0.039 (0.084)
Firm Dummies	Not included	Included	Not included	Included
Control Variables	Firm Size, State Owned, Prior Firm Performance, Incumbent, Military Design, Relative Technical Complexity, Age in Market, Area of Business, Prior Mode Success, Number of Competitors, Potential Market Size, Economic Climate, Year, Joint Development, Licensing			
F Statistics	F(16, 420) = 7.96***	F(172, 264) = 2.37***	F(16, 420) = 7.58***	F(172, 264) = 2.28***
R²/Adjusted R²	0.23/0.20	0.61/ 0.35	n/a	n/a
Underidentification test	n/a	n/a	261.528***	230.571***
Weak identification test	n/a	n/a	625.977***	328.383***
Endogeneity test	n/a	n/a	$\chi^2=3.859^{**}$	$\chi^2=4.433^{**}$

* p<.1 **p<.05

***p<.01

Summary:

Coexistence of Learning and Selection in CDAs



Summary:

In the context of CDAs, the empirically observed positive effect of experience on performance may not be due solely to experiential learning, but also driven by self-selection of experience.