

Jake D. Hoskins (PhD Candidate in Marketing)

Abbie Griffin (Royal L. Garff Presidential Chair in Marketing)

David Eccles School of Business, University of Utah

Brands and Brand Relationships Conference, Boston, MA, May 2014

**“DILUTING OR REINFORCING? THE
IMPACT OF EXTERNAL CATEGORY
EXPANSION STRATEGIES ON NEW
PRODUCT PERFORMANCE”**

Research Questions

- Can a brand build strong presence in multiple product categories?
- How does brand presence established in external categories impact performance in the focal category?
- Does the impact of external presence depend on factors such as brand strength and new to category status?

Branding Literature Expectations

Takeaway: Brands may be helped or hurt by cross-category expansion (depending on counteracting effects)

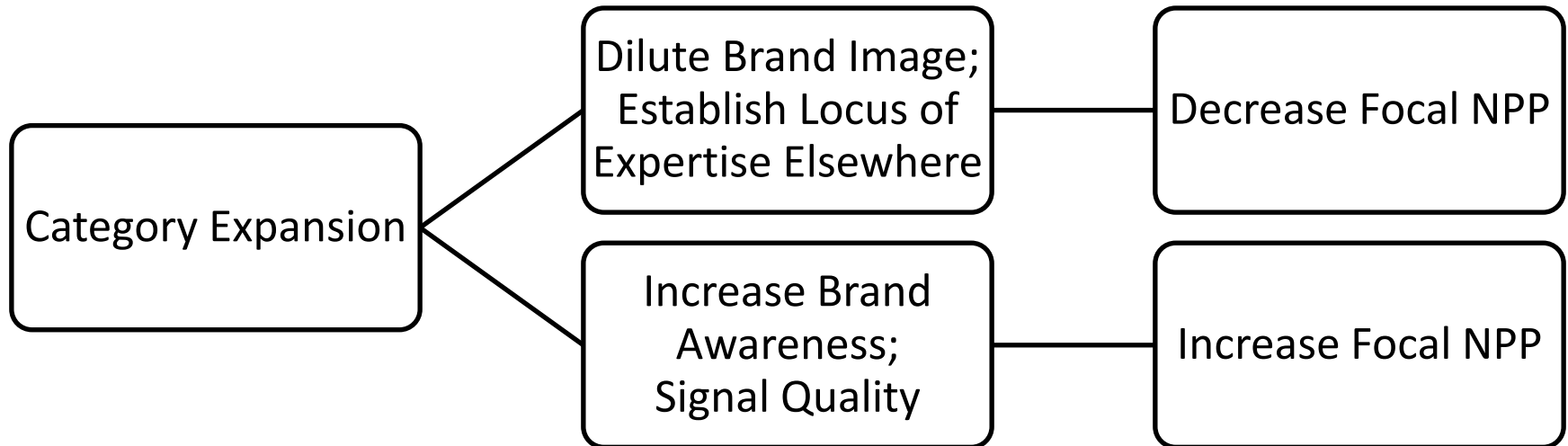


Image Dilution: Keller and Aaker, 1992; Randall et al., 1998.

Locus of Expertise: Zuckerman et al., 2003.

Brand Awareness: Dacin and Smith, 1994; Keller, 1993.

Quality Signaling: Erdem, 1998; Wernerfelt, 1988.

Various Brand Strategies

- Kraft foods vs. Procter & Gamble
- Nike vs. Titleist
- Yamaha vs. Honda
- McDonalds vs. Carl's Jr.

Data

- IRI marketing data set¹
- 2001 – 2011
- Retail store movement across 50 markets
- 31 product categories
- 11,657 new products identified (2002 – 2010)

1: Bronnenberg et al. (2008)

Observed Category Expansion Frequency

Categories Occupied	Brand Frequency	Percentage
1	3,744	85.19%
2	455	10.35%
3	105	2.39%
4	46	1.05%
5	19	0.43%
6+	24	0.59%

Variable	Description
Volume	Volume movement of the new product ¹
Stores	Number of stores the product is carried in
Grocery	Percentage of sales derived from the grocery channel
Product Variety	Average number of SKUs per store offered for the product
Price	Average price per volume unit for the product
Feature	Percentage of volume unit sold on feature
Display	Percentage of volume unit sold on display
Internal Category Equity	Revenue premium ² for the brand in the entering category: $Rev_i - Rev_{pl}$
External Category Presence	Number of external categories the brand sells products in
External Category Success	Average dollar revenues for the brand across external categories

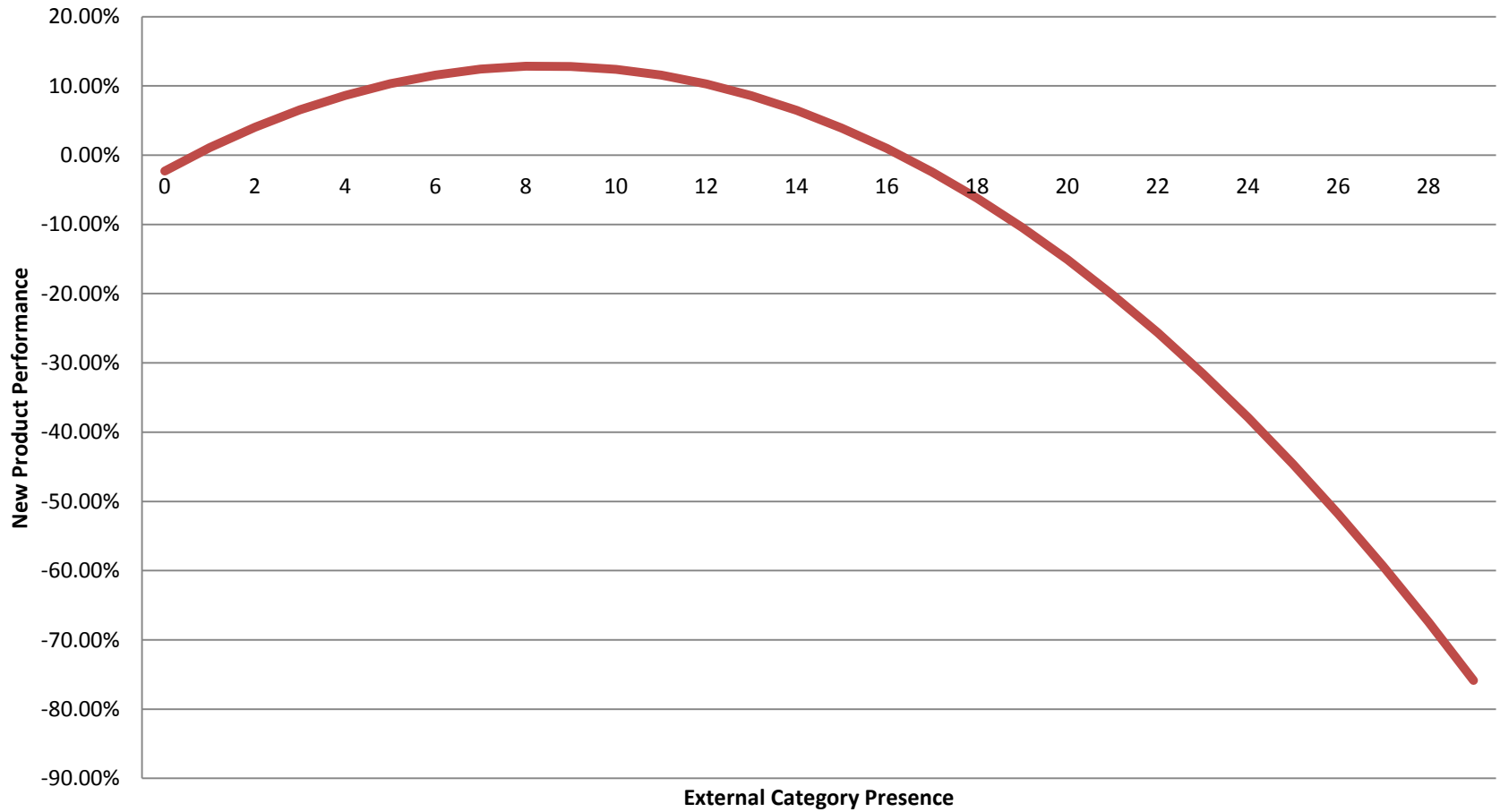
1: Performance observed at aggregate national level for first 52 weeks (1 year) on the market. Some products do not survive for a full 52 weeks of observation.

2: Ailawadi et al., 2003.

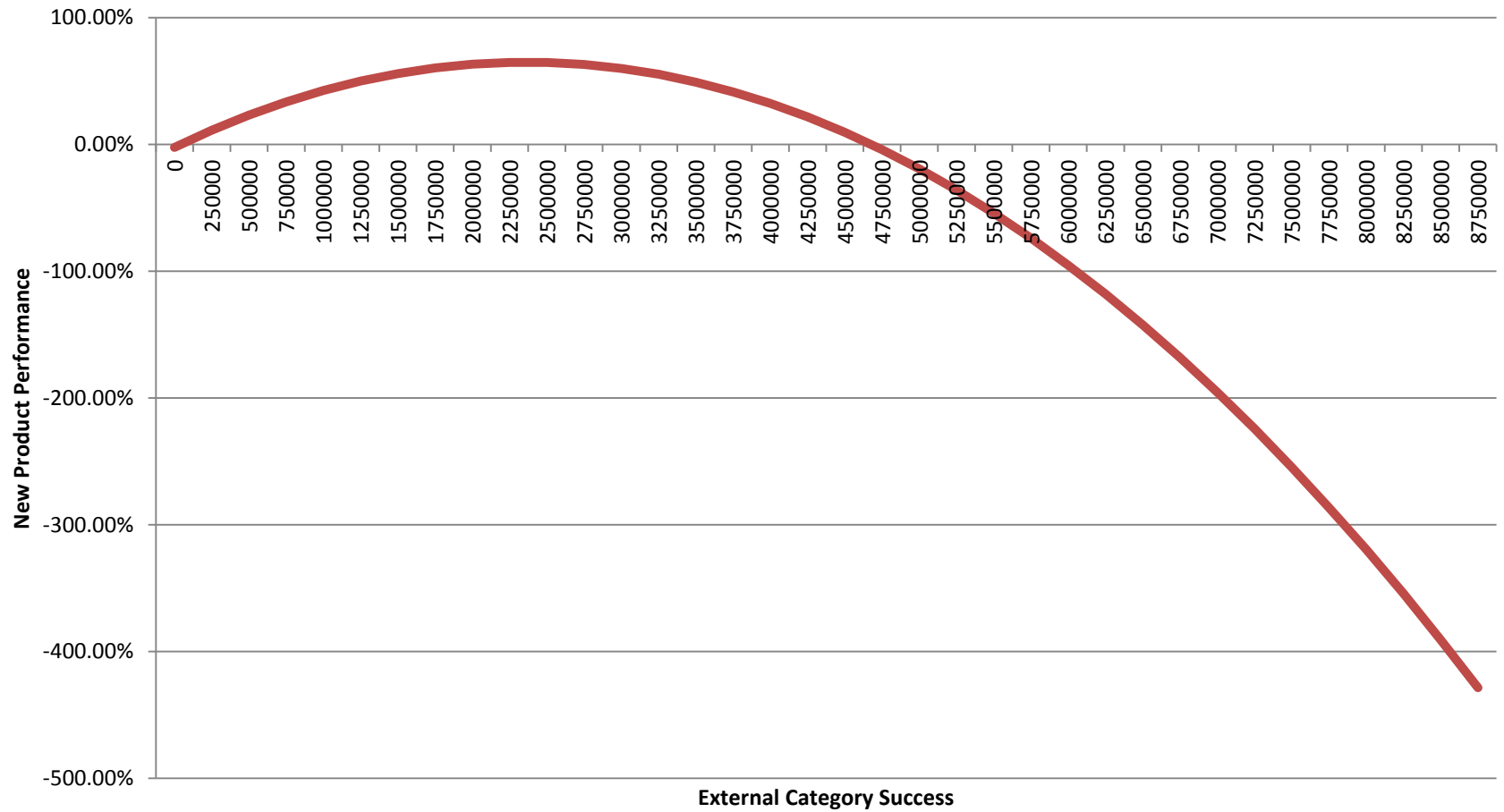
Model (i=product, t=week)	M1a	M1b	M1c	M1d
N	441,519	441,427	441,047	441,047
Adj. R ²	0.5899	0.6721	0.6727	0.6727
Constant	0.882*** (0.007)	1.165*** (0.006)	1.166*** (0.006)	1.166*** (0.006)
Lagged DV	0.732*** (0.001)	0.627*** (0.001)	0.628*** (0.001)	0.627*** (0.001)
Stores	---	0.167*** (0.003)	0.166*** (0.003)	0.166*** (0.003)
Grocery	---	0.312*** (0.001)	0.311*** (0.001)	0.311*** (0.001)
Product Variety	---	0.218*** (0.002)	0.217*** (0.002)	0.217*** (0.002)
Price	---	-0.079*** (0.006)	-0.079*** (0.006)	-0.079*** (0.006)
Feature	---	0.101*** (0.001)	0.100*** (0.001)	0.100*** (0.001)
Display	---	0.089*** (0.001)	0.089*** (0.001)	0.089*** (0.001)
Internal Category Equity (ICE)	---	---	0.092*** (0.009)	0.090*** (0.009)
External Category Presence (ECP)	---	---	---	0.079*** (0.013)
External Category Success (ECS)	---	---	---	0.027*** (0.005)

Model (i=product, t=week)	M2a		M2b	
N	441,047		441,047	
Adj. R ²	0.6727		0.6728	
	<i>Coefficient</i>	<i>Standard Error</i>	<i>Coefficient</i>	<i>Standard Error</i>
Constant	1.166***	0.006	1.161***	0.007
Lagged DV	0.627***	0.001	0.627***	0.001
Stores	0.166***	0.003	0.166***	0.003
Grocery	0.311***	0.001	0.311***	0.001
Product Variety	0.217***	0.002	0.217***	0.002
Price	-0.079***	0.006	-0.079***	0.006
Feature	0.100***	0.001	0.100***	0.001
Display	0.089***	0.001	0.089***	0.001
Internal Category Equity (ICE)	0.088***	0.009	0.091***	0.009
External Category Presence (ECP)	0.134***	0.019	0.108***	0.023
ECP ^ 2	-0.095***	0.026	-0.079**	0.026
External Category Success (ECS)	0.058***	0.007	0.053***	0.011
ECS ^ 2	-0.023***	0.004	-0.024**	0.008
ECP x ECS	---	---	0.007*	0.003
ICE x ECP	---	---	0.038***	0.008
ICE x ECS	---	---	-0.007*	0.004
New Brand x ECP	---	---	0.046+	0.027
New Brand x ECS	---	---	-0.028*	0.013

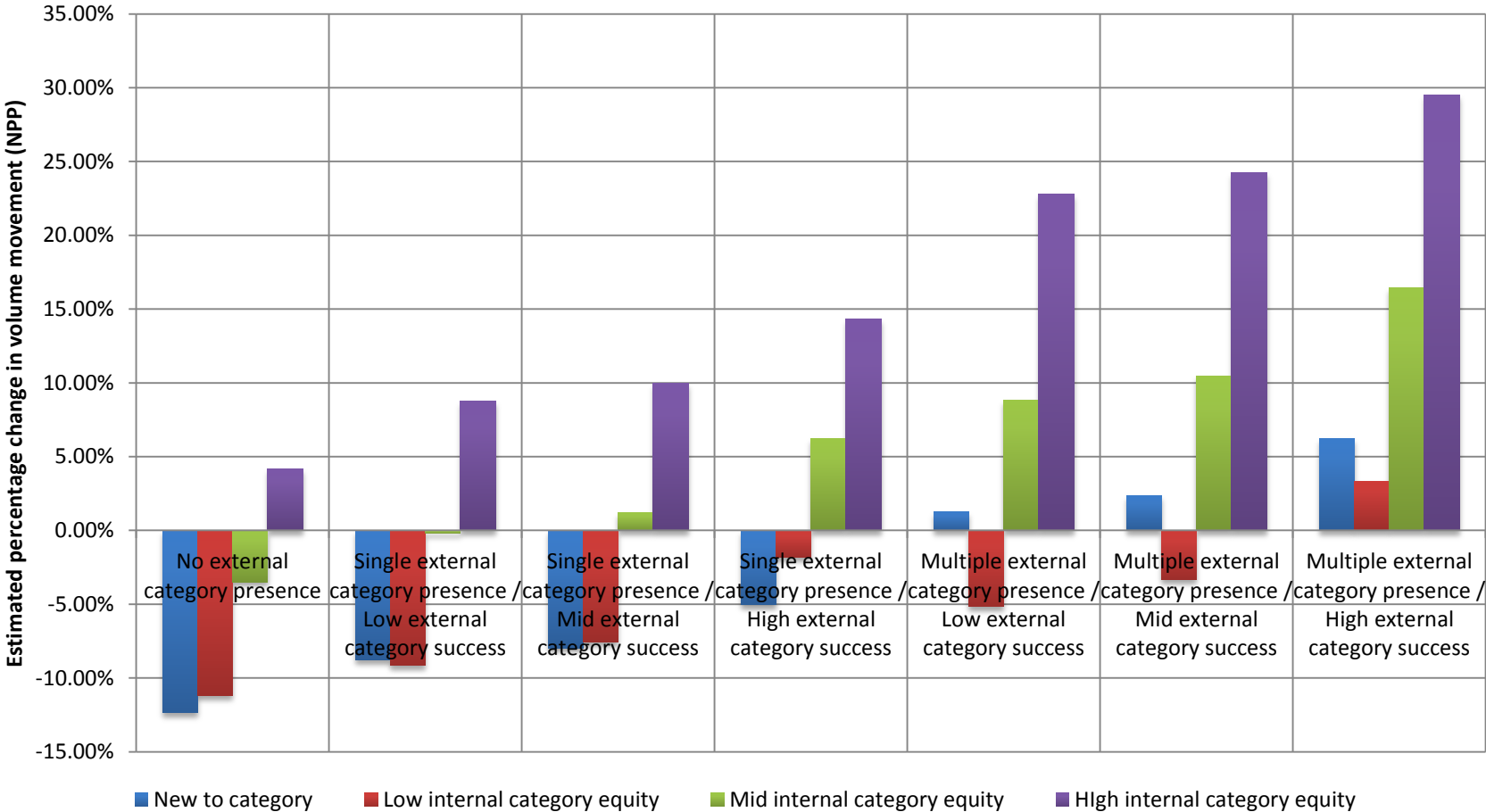
ECP → NPP



ECS → NPP



Model Predictions



Select Brand Observations

Brand	ECP	NPP	Relative NPP (1 SD above brand level mean)
Newman's Own	2	1,683.70	+0.347
Colgate	3	1,475.76	+0.294
Heinz	4	2,946.97	+0.669
Seventh Generation	5	503.54	+0.045
General Mills	8	4,133.14	+0.972
Kraft	11	753.79	+0.109

Thank You

BACKUPS

Descriptive Statistics

Variable	Mean	SD	Min	Max
Volume	1,226.61	10,412.88	0.00	845,799.20
Stores	174.78	378.85	0.00	1,828.00
Grocery	0.75	0.41	0.00	1.00
Product Variety	1.30	0.82	1.00	23.00
Price	\$13.38	\$39.69	\$0.01	\$2,102.63
Feature	0.04	0.12	0.00	1.00
Display	0.11	0.23	0.00	1.00
Internal Equity	-\$274,131.60	\$1,695,638.00	-\$11,500,000.00	\$9,056,570.00
External Category Presence	1.27	3.02	0.00	29.00
External Category Success	\$50,799.16	\$189,479.00	\$0.00	\$8,729,654.00

Correlation Matrix

	Volume	Stores	Grocery	Product Variety	Price	Feature	Display	Internal Equity	External Presence
Stores	.31	1							
Grocery	.06	.14	1						
Product Variety	.23	.11	.16	1					
Price	-.03	-.04	-.08	-.06	1				
Feature	.14	.33	.09	.08	-.02	1			
Display	.01	-.01	.18	.05	-.04	.06	1		
Internal Category Equity	.05	.20	-.01	-.15	.06	.14	.05	1	
External Category Presence	.13	.37	.05	.01	.00	.13	-.02	.08	1
External Category Success	.14	.32	.03	.01	.01	.10	-.02	.03	.65