Stockouts and the Success of New Products

Supplemental Appendix

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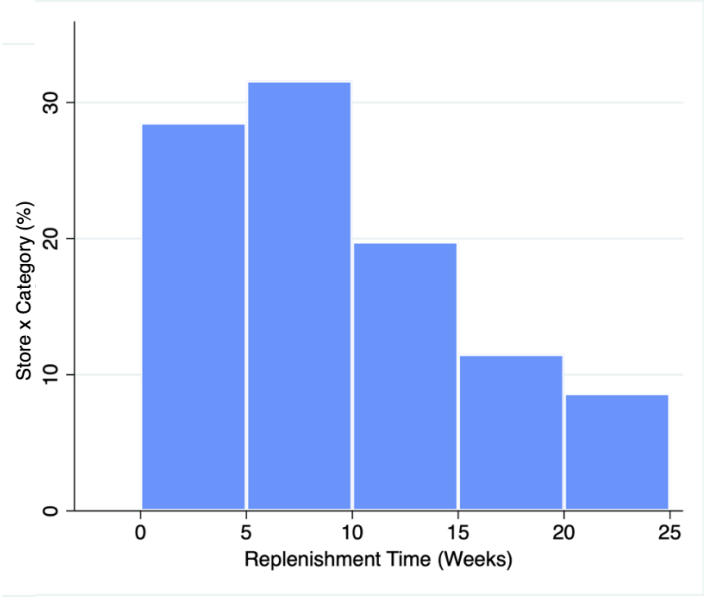
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3. Additional Summary Statistics

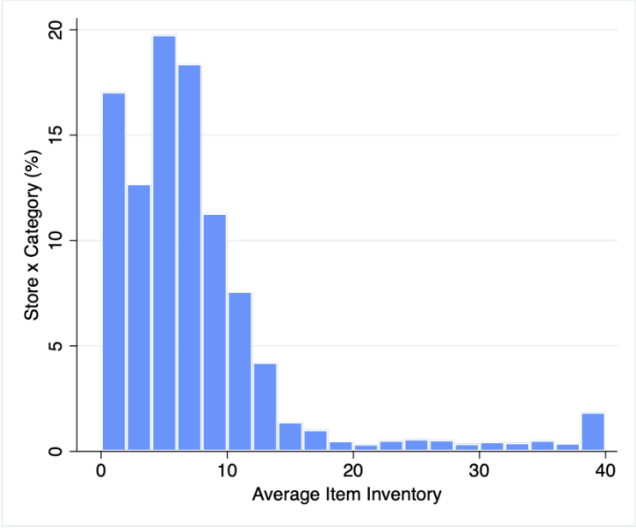
3.1. Distribution of Replenishment Time

The figure below reports the distribution of the average number of weeks required for replenishment. Average time to replenishment is first calculated at the store : item level, and then averaged up to the store : category level. The unit of analysis in the histogram is a store : category. The bars add to 100 (%).



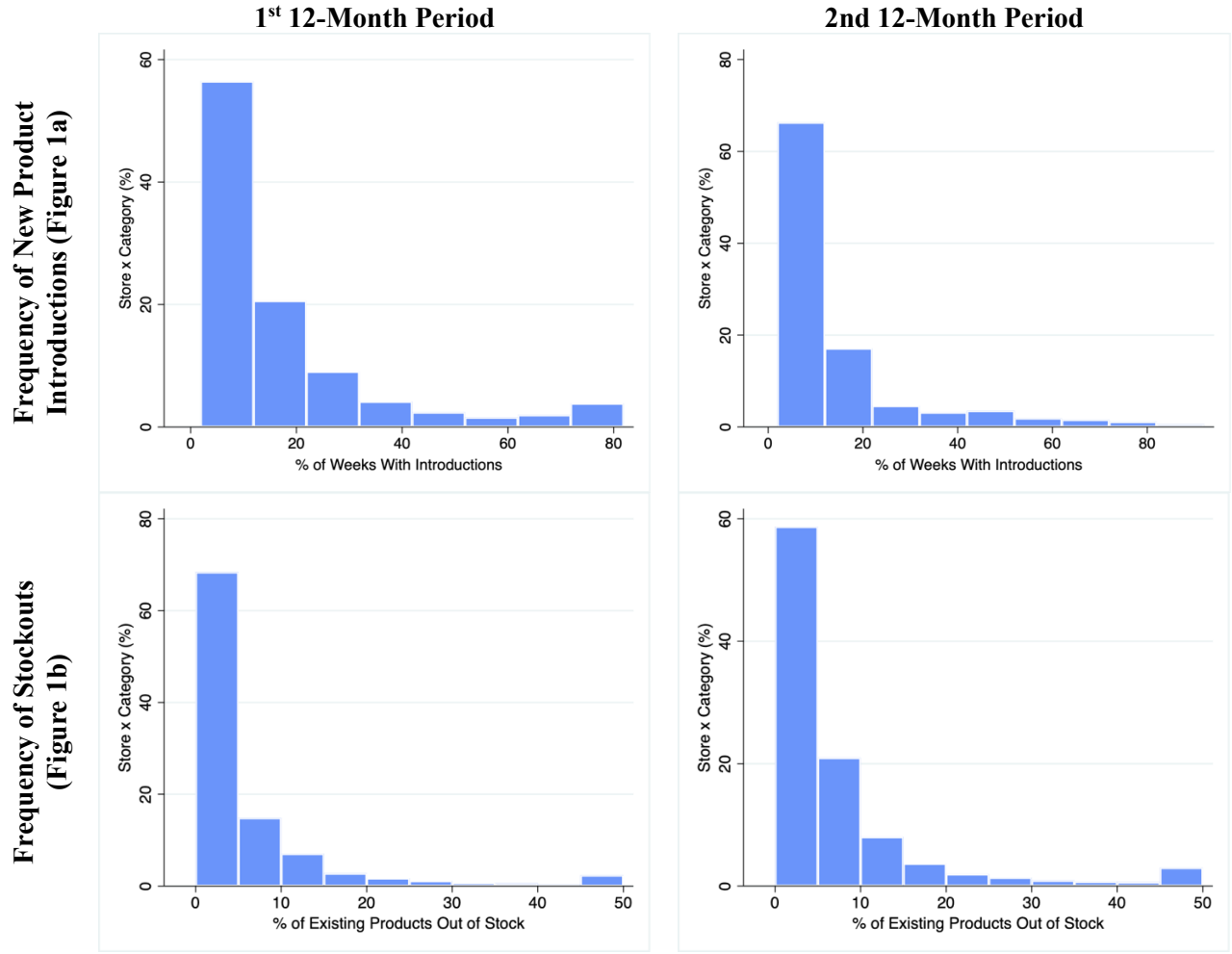
3.2. Distribution of Item Inventory

The figure below reports the distribution of average item inventory across stores and categories. Item inventory measures the number of units available in the store. Average inventory is first calculated at the store : item level (averaging across weeks), and then averaged up to the store : category level. The unit of analysis in the histogram is a store : category. The bars add to 100 (%).



3.3. Stability of the Frequency of New Product Introductions and Stockouts Over Time

Panels (a) and (b) of Figure 1 reporting histograms describing the distribution of the frequency of new product introductions and stockouts. We reconstruct these figures when using either the first 12-months of the data period or using the second 12-months of the data period. Overall, the frequency of new product introductions and stockouts appear to be stable over time. The plot on the left captures the first year and the plot on the right captures the second year.



3.4. Product Hierarchy

The table lists the categories used in the analysis, grouped by merchandising group and product group.

Consumables	Durables
Beauty	**Bed Linens and Home Décor**
Cosmetics: Brow Microfilling Eyebrow Pen	Bed Linen: Fitted Sheet
Cosmetics: Brow Wax	Bed Linen: Full Sheet Set
Cosmetics: Cream Concealer	Bed Linen: King Sheet Sets
Cosmetics: Eye Mascara	Bed Linen: Pillow Cover
Cosmetics: Eye Shadow	Bed Linen: Queen Sheet Sets
Cosmetics: Eyebrow Cream-Gel Color	Bed Linen: Top Sheet
Cosmetics: Face Bronzer	Bed Linen: Twin Sheet Sets
Cosmetics: Face Powder	Decoration: Large Rugs
Cosmetics: Foundation Brush Makeup	Decoration: Small Rugs
Cosmetics: Lipstick	
Cosmetics: Makeup Primer	**Home Appliances**
Cosmetics: Makeup Remover	Appliances: Cordless Drill
Cosmetics: Nail Polish	Appliances: Handheld Vacuum
Cosmetics: Powder Highlighter Makeup	Appliances: Household Floor Care
Cosmetics: Recovery Sleeping Mask	Appliances: Household Iron
Cosmetics: Retractable Lip Brush Makeup	Appliances: Household Robot Vacuum
Cosmetics: Skin Emulsion	Appliances: Light Duty Electric Pressure
Cosmetics: Soft Blur Foundation Makeup	Washer
Cosmetics: Stretch Marks Prevention	Appliances: Steamer
Cosmetics: Firming Cream	Appliances: Vacuum Corded
Fragrances: Mens	Kitchen: Air Fryer
Fragrances: Mens Gift Sets	Kitchen: Blender
Fragrances: Womens	Kitchen: Bread Maker
Fragrances: Womens Gift Sets	Kitchen: Can Opener
Fragrances: Womens Mini Sample Sets	Kitchen: Cold Press
Haircare: Hair Lotion	Kitchen: Manual Pressure Juicer
Haircare: Shampoo	Kitchen: Countertop Indoor Grill
Skincare: After Sun Balm	Kitchen: Microwave
Skincare: Anti-Aging Eye Cream	Kitchen: Microwave Grill
Skincare: Anti-Aging Face Cream	Kitchen: Countertop Oven
Skincare: Antiperspirant Cream	Kitchen: Drip Coffee Maker
Skincare: Boosting Face Serum	Kitchen: Electric Kettle
Skincare: Daily Face Protector Lotion	Kitchen: Electric Knife
Skincare: Face Creams	Kitchen: Espresso Coffee Maker
Skincare: Sunscreen Face Cream	Kitchen: Hand Blender
Skincare: Tanning Skin Lotion	Kitchen: Heatsoft Mixer
Skincare: Hand Soap Perfumed	Kitchen: Meat Grinder
	Kitchen: Rice Maker
	Kitchen: Sandwich Grill
Food and Alcohol	Kitchen: Tilt-Head Stand Mixer
Alcohol: Beer	Kitchen: Toaster
Alcohol: Red Wine	Kitchen: Waffle Maker
Alcohol: Sparkling Wine	Personal Care: Curling Iron

Alcohol: White Wine	Personal Care: Electric Toothbrush
Beverages: Coffee	Personal Care: Foot Massager
Beverages: Tea	Personal Care: Hair Dryer
Condiments: Olive Oil and Vinegar	Personal Care: Hair Straightener
Condiments: Salt	Personal Care: Hair Trimmer
Confectionary and Treats: Chocolate Bonbons	Personal Care: Mens Electric Shaver
Confectionary and Treats: Fruit Spread Marmalade	Personal Care: Nail Drill
Confectionary and Treats: Nougat	Personal Care: Neck and Shoulder Massager
Confectionary and Treats: Panettone	Personal Care: Womens Advanced Electronic Hair Remover
Deli: Ham	Personal Care: Womens Hair Remover
Deli: Mushroom Truffles	Sewing Machine
Deli: Pate	TV: LED 22-27
Food: Pasta	TV: LED 32
Food: Rice	TV: LED 40
Snacks: Cookies and Crackers	TV: LED 50
Spirits: Liqueur	TV: LED 55
Spirits: Rum and Vermouth	TV: LED 65
Spirits: Vodka	
Spirits: Whisky	

4. Stockouts of Existing Products on the Future Sales of New Products

4.1a. Alternative Outcome Measure: Revenue for New Product

In this robustness check, we replace the dependent variable in Equations 1 and 2 with *log Avg Weekly New Revenue Month 3*$_{is}$, which is the log-transformed average weekly dollar revenue of new product *i* sold in store *s*, in the third month (weeks 9 to 12) after new product *i* weas introduced in store *s*.

	Model 1	**Model 2**
Existing Stockouts Month 1	0.1390***	
	(0.0383)	
Existing Stockouts Month 3	0.1640***	
	(0.0319)	
% Existing Stockouts Month 1		0.0045
		(0.0078)
% Existing Stockouts Month 3		0.0080
		(0.0062)
R^2	0.534	0.534

Notes. The table reports the coefficients of interest from estimating Equations 1 and 2. The unit of analysis is a new item : store. The sample size for both models is 106,639. Robust standard errors are in parentheses. ***Indicates significantly different from zero $p < 0.01$. **Indicates significantly different from zero $p < 0.05$. *Indicates significantly different from zero $p < 0.10$.

4.1b. Alternative Outcome Measure: Sales Rank for New Product

In this robustness check, we replace the dependent variable in Equations 1 and 2 with *New Sales Rank Month 3*$_{is}$, which is the log-transformed average weekly sales rank of new product *i* in its associated product category in store *s*, in the third month (weeks 9 to 12) after new product *i* was introduced in store *s*.

	Model 1	**Model 2**
Existing Stockouts Month 1	0.0132***	
	(0.0033)	
Existing Stockouts Month 3	0.0208***	
	(0.0028)	
% Existing Stockouts Month 1		0.0037***
		(0.0007)
% Existing Stockouts Month 3		0.0038**
		(0.0006)
R^2	0.971	0.971

Notes. The table reports the coefficients of interest from estimating Equations 1 and 2. The unit of analysis is a new item : store. The sample size for both models is 106,639. Robust standard errors are in parentheses. ***Indicates significantly different from zero $p < 0.01$. **Indicates significantly different from zero $p < 0.05$. *Indicates significantly different from zero $p < 0.10$.

4.1c. Alternative Outcome Measure: Market Share

In this robustness check, we replace the dependent variable in Equations 1 and 2 with *New Market Share Month 3*$_{is}$, which is the average weekly market share of new product *i* in its associated product category in store *s*, in the third month (weeks 9 to 12) after new product *i* was introduced in store *s*. The model excludes observations where there are no sales observed in the third month.

	Model 1	**Model 2**
Existing Stockouts Month 1	0.2629**	
	(0.1295)	
Existing Stockouts Month 3	0.0990	
	(0.1284)	
% Existing Stockouts Month 1		0.0551**
		(0.0256)
% Existing Stockouts Month 3		-0.0084
		(0.0217)
R^2	0.710	0.710

Notes. The table reports the coefficients of interest from estimating Equations 1 and 2. The unit of analysis is a new item : store. The sample size for both models is 39,983. Robust standard errors are in parentheses. ***Indicates significantly different from zero $p < 0.01$. **Indicates significantly different from zero $p < 0.05$. *Indicates significantly different from zero $p < 0.10$

4.1d. Alternative Outcome Measure: Standardized Units Sold

In this robustness check, we replace the dependent variable in Equations 1 and 2 with *New Standardized Units Sold Month 3*$_{is}$, which is a count of the units sold of new product *i* in store *s*, after subtracting the average weekly units sold in month 3 for that store : category. We use average weekly units sold in the third month (weeks 9 to 12) after new product *i* was introduced in store *s*.

	Model 1	**Model 2**
Existing Stockouts Month 1	0.1080***	
	(0.0251)	
Existing Stockouts Month 3	0.1150***	
	(0.0289)	
% Existing Stockouts Month 1		0.0302***
		(0.0057)
% Existing Stockouts Month 3		0.0194***
		(0.0052)
R^2	0.544	0.544

Notes. The table reports the coefficients of interest from estimating Equations 1 and 2. The unit of analysis is a new item : store. The sample size for both models is 106,582. Robust standard errors are in parentheses. ***Indicates significantly different from zero $p < 0.01$. **Indicates significantly different from zero $p < 0.05$. *Indicates significantly different from zero $p < 0.10$.

4.1e. Alternative Outcome Measure: Standardized Revenue

In this robustness check, we replace the dependent variable in Equations 1 and 2 with *New Standardized Revenue Month 3*$_{is}$, which is the average revenue of new product *i* in store *s*, after subtracting the average weekly revenue in month 3 for that store : category. We use average weekly revenue in the third month (weeks 9 to 12) after new product *i* was introduced in store *s*.

	Model 1	**Model 2**
Existing Stockouts Month 1	0.1075***	
	(0.0251)	
Existing Stockouts Month 3	0.1149***	
	(0.0289)	
% Existing Stockouts Month 1		0.0302***
		(0.0057)
% Existing Stockouts Month 3		0.0194***
		(0.0052)
R^2	0.544	0.544

Notes. The table reports the coefficients of interest from estimating Equations 1 and 2. The unit of analysis is a new item : store. The sample size for both models is 106,582. Robust standard errors are in parentheses. ***Indicates significantly different from zero $p < 0.01$. **Indicates significantly different from zero $p < 0.05$. *Indicates significantly different from zero $p < 0.10$.

4.2a. Alternative Specifications: Additional Control Variables

In this robustness check, we re-estimate Equations 1 and 2 with the inclusion of additional control variables:

New Stockouts Month 2: a count of the number of stockouts of the new item in Weeks 5 to 8 after the new product was introduced.

New Stockouts Month 3: a count of the number of stockouts of the new item in Weeks 9 to 12 after the new product was introduced.

	Model 1	**Model 2**
Existing Stockouts Month 1	0.0205***	
	(0.0046)	
Existing Stockouts Month 3	0.0270***	
	(0.0039)	
New Stockouts Month 2	0.0180***	
	(0.0042)	
New Stockouts Month 3	-0.0622***	
	(0.0036)	
% Existing Stockouts Month 1		0.0028***
		(0.0010)
% Existing Stockouts Month 3		0.0027***
		(0.0008)
New Stockouts Month 2		0.0183***
		(0.0042)
New Stockouts Month 3		-0.0618***
		(0.0036)
R^2	0.586	0.586

Notes. The table reports the coefficients of interest from estimating modified versions of Equations 1 and 2. The unit of analysis is a new item : store. The sample size for both models is 106,639. Robust standard errors are in parentheses. ***Indicates significantly different from zero $p < 0.01$. **Indicates significantly different from zero $p < 0.05$. *Indicates significantly different from zero $p < 0.10$.

4.2b. Alternative Specifications: Additional Control Variables

In this robustness check, we re-estimate Equations 1 and 2 with the inclusion of additional control variables:

Log New Units Month 2: log of the units sold by the new product in the focal store in Weeks 5 to 8 after the new product was introduced.

	Model 1	**Model 2**
Existing Stockouts Month 1	0.0160***	
	(0.0045)	
Existing Stockouts Month 3	0.0195***	
	(0.0038)	
Log New Units Month 2	0.2990***	
	(0.0048)	
% Existing Stockouts Month 1		0.0022**
		(0.0010)
% Existing Stockouts Month 3		0.0017**
		(0.0008)
Log New Units Month 2		0.300***
		(0.0048)
R^2	0.610	0.609

Notes. The table reports the coefficients of interest from estimating modified versions of Equations 1 and 2. The unit of analysis is a new item : store. The sample size for both models is 106,639. Robust standard errors are in parentheses. ***Indicates significantly different from zero $p < 0.01$. **Indicates significantly different from zero $p < 0.05$. *Indicates significantly different from zero $p < 0.10$.

4.3. Alternative Specifications: Stockouts on Existing Items in Months 1 and 2

In this robustness check, we extend the period over which we measure stockouts on existing items to include the first and second months after the new product was introduced (weeks 1 to 8), instead of just the first month. In particular:

Equation 1: replace *Log Existing Stockouts Month 1* with *Log Existing Stockouts Months 1 and 2*

Equation 2: replace *% Existing Stockouts Month 1* with *% Existing Stockouts Months 1 and 2*.

	Model 1	**Model 2**
Log Existing Stockouts Months 1 and 2	0.0288***	
	(0.0057)	
Log Existing Stockouts Month 3	0.0208***	
	(0.0043)	
% Existing Stockouts Months 1 and 2		0.0035***
		(0.0012)
% Existing Stockouts Month 3		0.0019**
		(0.0008)
R^2	0.584	0.583

Notes. The table reports the coefficients of interest from estimating modified versions of Equations 1 and 2. The unit of analysis is a new item : store. The sample size for both models is 105,872. Robust standard errors are in parentheses. ***Indicates significantly different from zero $p < 0.01$. **Indicates significantly different from zero $p < 0.05$. *Indicates significantly different from zero $p < 0.10$.

4.4. No Stockouts in Month 3

In this robustness check, we re-estimate Equations 1 and 2 when the new product experiences no stockouts of the existing products in the third month (weeks 9 to 12) after new product *i* was introduced in store *s*. In this specification, we omit the brand : month fixed effects.

	Model 1	**Model 2**
Existing Stockouts Month 1	0.0276**	
	(0.0135)	
% Existing Stockouts Month 1		0.0013
		(0.0012)
R^2	0.598	0.597

Notes. The table reports the coefficients of interest from estimating Equations 1 and 2. The unit of analysis is a new item : store. The sample size for both models is 68,929. Robust standard errors are in parentheses. ***Indicates significantly different from zero $p < 0.01$. **Indicates significantly different from zero $p < 0.05$. *Indicates significantly different from zero $p < 0.10$.

4.5. Including the Online Channel

In this robustness check, we re-estimate Equations 1 and 2 including sales from the online channel. Throughout, the online channel is considered as a "store" and the models include store : category fixed effects. Overall, we find a similar pattern of results, suggesting that the effects of stockouts are economically consequential for both the offline and online channels.

	Model 1	**Model 2**
Existing Stockouts Month 1	0.0163***	
	(0.0044)	
Existing Stockouts Month 3	0.0228***	
	(0.0038)	
% Existing Stockouts Month 1		0.0012*
		(0.0007)
% Existing Stockouts Month 3		0.0013**
		(0.0006)
R^2	0.583	0.582

Notes. The table reports the coefficients of interest from estimating Equations 1 and 2. The unit of analysis is a new item : store. The sample size for both models is 116,308. Robust standard errors are in parentheses. ***Indicates significantly different from zero $p < 0.01$. **Indicates significantly different from zero $p < 0.05$. *Indicates significantly different from zero $p < 0.10$.

5. Causality

5.1. Instrumental Variables Analysis Using Another Random Store

In this robustness check, we repeat the instrumental variables analysis when repeating the random selection of a store.

	Log *Weekly Units*
	Model 1
1st Stage	
Stockouts in Another Store	0.105***
	(0.004)
R^2	0.929
2nd Stage	
Fitted Existing Stockout Month 1	0.092***
	(0.032)
Stockouts Month 3	-0.002
	(0.011)

Notes. The table reports the coefficients of interest from estimating Equations 3 and 4 using 2SLS. The unit of analysis is a new item : store. The sample size is 90,467 observations for Model 1. Robust standard errors are in parentheses. ***Indicates significantly different from zero $p < 0.01$. **Indicates significantly different from zero $p < 0.05$. *Indicates significantly different from zero $p < 0.10$.

6. How Long Does the Effect Persist and Do the Spillovers Also Benefit Existing Products?

6.1. Alternative Long-Run Horizons for New and Focal Existing Products

In the table below we report the detailed findings for Figure 3. In this analysis we re-estimated Equation 2 when changing the dependent variable to reflect units sold in the first month, second month, …, eleventh month, and twelfth month after the new product introduction. To facilitate comparison, the dependent variable is measured in levels (not logs):

$$Avg\ Weekly\ New\ Units\ Sold\ Month\ X_{is} = \alpha + \beta_1\%\ Existing\ Stockouts\ Month\ 1_{is} + \beta_2\%\ Existing\ Stockouts\ Month\ X_{is} + Controls_{is} + \varepsilon_{is} \quad \text{(A1)}$$

	New Products	Focal Existing Products
Units 1st Month	0.0420***	0.0154***
	(0.0041)	(0.0033)
Units 2nd Month	0.0234***	0.0043
	(0.0043)	(0.0034)
Units 3rd Month	0.0117***	0.0061*
	(0.0032)	(0.0031)
Units 4th Month	0.0062**	0.0064**
	(0.0030)	(0.0031)
Units 5th Month	0.0070**	0.0025
	(0.0029)	(0.0031)
Units 6th Month	0.0093***	0.0006
	(0.0028)	(0.0030)
Units 7th Month	0.0027	-0.0017
	(0.0030)	(0.0029)
Units 8th Month	0.0024	0.0013
	(0.0029)	(0.0029)
Units 9th Month	0.0074**	-0.0023
	(0.0029)	(0.0030)
Units 10th Month	0.0082***	0.0015
	(0.0027)	(0.0029)
Units 11th Month	0.0018	0.0013
	(0.0027)	(0.0028)
Units 12th Month	0.0054**	0.0007
	(0.0027)	(0.0027)

Notes. The sample sizes for the new products models are: 111,196, 107,616, 106,639, 104,312, 97,547, 95,846, 93,926, 91,951, 89,560, 86,876, 82,515, and 78,450 observations. The sample sizes for the focal existing products are: 33,073, 31,799, 31,526, 30,553, 29,131, 28,520, 27,767, 26,904, 25,993, 24,824, 23,506, and 22,319 observations. Robust standard errors are in parentheses.

6.2. Age of the New Product

In the table below we report the detailed findings for Figure 4. In this analysis we re-estimate Equation 2 using average weekly new units sold in month *t+2* as the dependent variable (measured in levels not logs):

$$Avg\ Weekly\ New\ Units\ Sold\ Month\ (t+2)_{is} = \alpha + \beta_1 \%\ Existing\ Stockouts\ Month\ (t)_{is} + \beta_2 \%\ Existing\ Stockouts\ Month\ (t+2)_{is} + Controls_{is} + \varepsilon_{is} \quad \text{(A2)}$$

We report the β_1 coefficients for different values of *t* (1 through 10) in the table below. Robust standard errors are in parentheses.

	β_1 Coefficient	Sample Size
Month 1 | Month 3 (t = 1)	0.0117*** (0.0032)	106,639
Month 2 | Month 4 (t = 2)	0.0055** (0.0026)	104,856
Month 3 | Month 5 (t = 3)	0.0078*** (0.0023)	98,144
Month 4 | Month 6 (t = 4)	0.0056*** (0.0020)	95,637
Month 5 | Month 7 (t = 5)	0.0061*** (0.0019)	93,188
Month 6 | Month 8 (t = 6)	0.0047*** (0.0018)	91,262
Month 7 | Month 9 (t = 7)	0.0041** (0.0019)	89,243
Month 8 | Month 10 (t = 8)	0.0061*** (0.0018)	86,438
Month 9 | Month 11 (t = 9)	0.0031* (0.0017)	82,087
Month 10 | Month 12 (t = 10)	-0.0014 (0.0015)	77,465

7. Comparing the Effects Across Categories and Customer Segments

7.1 Detailed Findings for Figure 5

We estimate the following model:

$$Avg\ Weekly\ New\ Units\ Sold\ Month\ 3_{is} = \alpha + \beta_1\%\ Existing\ Stockouts\ Month\ 1_{is} + \beta_2\%\ Existing\ Stockouts\ Month\ 3_{is} + Controls_{is} + \varepsilon_{is} \quad \text{(A3)}$$

The *Controls* include fixed effects at the item, product group : store, store : month, and brand : month levels. The estimation omits observations where these fixed effects identify a single observation.

Notice that the dependent variable is measured in levels not logs, resulting in a fully linear model, which allows comparison of the magnitudes of coefficients between different models.

We estimate Equation A3 separately for:

a. Consumable product categories (beauty and food and alcohol) and durable product categories (home appliances, bed linens and home décor).

b. Customers that made a prior purchase in the category (before the new product introduction) and customers without a prior category purchase.

c. Customers with one store visit (across the entire data period) and customers with multiple store visits.

d. Customers segmented using a tercile spit of total spending across the entire data period (including all stores and categories represented in the data).

Comparison (a) compares different product categories, while comparisons (b) through (d) compare different customers. In the customer comparisons, we balance the estimation samples by focusing on new product : store combinations for which at least one customer in each subset purchased the new product in the first three months after its introduction.

We report the β_1 coefficients in the table below. Robust standard errors are in parentheses.

	β_1 Coefficient	Sample Size
Consumables	0.0152***	83,719
	(0.0041)	
Durables	0.0046	22,895
	(0.0032)	
Prior Category Purchase	0.0167***	11,407
	(0.0052)	
No Prior Category Purchase	0.0473***	11,407
	(0.0169)	
Few Visits	0.0039**	44,007
	(0.0017)	
Many Visits	0.0191***	44,007
	(0.0051)	
Lowest Amount Spent	0.0050*	18,863
	(0.0027)	
Medium Amount Spent	0.0047	18,863
	(0.0031)	
Highest Amount Spent	0.0132**	18,863
	(0.0051)	

7.2 Best-Sellers vs. Low-Sellers Analysis

If stockouts on existing products result in increased trial of new products, we might expect that the positive impact on long-run sales of the new product will be higher if the existing product has a larger market share. When an item with many customers is unavailable, more customers need to seek an alternative item. To investigate this conjecture, we calculate total unit sales for each existing items at the category : store : month level. We focus on the calendar month preceding each new product's introduction, and within each category : store, we group the existing items into terciles using this measure.[1] We label the existing items in the highest selling tercile as "top sellers", and label existing items in the lowest selling tercile as "bottom sellers". We then estimate the following two models:

$$\begin{aligned} Avg.Weekly\ New\ Units\ Month\ 3_{is} = {} & \alpha + \beta_1 Top\ Sellers\ Log\ Existing\ Stockouts\ Month\ 1_{is} + \\ & + \beta_2 Bottom\ Sellers\ Log\ Existing\ Stockouts\ Month\ 1_{is} + \\ & + \beta_3 Top\ Sellers\ Log\ Existing\ Stockouts\ Month\ 3_{is} + \\ & + \beta_4 Bottom\ Sellers\ Log\ Existing\ Stockouts\ Month\ 3_{is} + Controls_{is} + \varepsilon_{is} \end{aligned} \quad \text{(A4)}$$

$$\begin{aligned} Avg.Weekly\ New\ Units\ Month\ 3_{is} = {} & \alpha + \beta_1 Top\ Sellers\ \%\ Existing\ Stockouts\ Month\ 1_{is} + \\ & + \beta_2 Bottom\ Sellers\ \%\ Existing\ Stockouts\ Month\ 1_{is} + \\ & + \beta_3 Top\ Sellers\ \%\ Existing\ Stockouts\ Month\ 3_{is} + \\ & + \beta_4 Bottom\ Sellers\ \%\ Existing\ Stockouts\ Month\ 3_{is} + Controls_{is} + \varepsilon_{is} \end{aligned} \quad \text{(A5)}$$

"Controls" include the same controls that were included in the main models. Recall that the classification of existing items in top sellers and bottom sellers is store specific and was conducted using data from the calendar quarter before the new product was introduced at that store.

The coefficients of interest (β_1 and β_2) from both models are reported in the table below. They confirm that stockouts on best-selling existing items are associated with a *larger increase* in future sales for the new item, compared to stockouts on less popular existing items. What is notable is that this has a persistent effect on sales of the new item two months later.

Notice that the R^2 values for both models are identical. This is correct and is not a typo.

[1] We also investigated identifying best-selling and low-selling items using quarterly sales. Measuring sales over a 13-week quarter ensures that we smooth out stochastic variation in daily and weekly sales. However, we also recognize that seasonality may mean that sales in the quarter that precedes the new product's introduction may not be an accurate measure of existing item popularity at the time the new product is introduced. Reassuringly, the pattern of findings is unchanged when using either approach.

	Equation A4	Equation A5
Log. Best-Seller Stockouts Month 1	0.0670**	
	(0.0286)	
Log. Low-Seller Stockouts Month 1	0.0370	
	(0.0248)	
Log. Best-Seller Stockouts Month 3	-0.0123	
	(0.0197)	
Log. Low-Seller Stockouts Month 3	0.0110	
	(0.0189)	
% Best-Seller Stockouts Month 1		0.0185**
		(0.0057)
% Low-Seller Stockouts Month 1		0.0021
		(0.0028)
% Best-Seller Stockouts Month 3		-0.0013
		(0.0030)
% Low-Seller Stockouts Month 3		0.0045*
		(0.0023)
R^2	0.572	0.572

Notes. The table reports the coefficients of interest from estimating Equations A4 and A5. The dependent variable in both equations is $Avg.Weekly\ New\ Units\ Month\ 3_{is}$. The unit of analysis is a new item : store and the sample size for both models is 78,104. Robust standard errors are in parentheses.