

The Impact of Marketing (versus Finance) Skills on Firm Performance:

*Evidence from a Randomized Controlled
Trial in South Africa*

Stephen Anderson-Macdonald

Rajesh Chandy

Bilal Zia

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Performance of Emerging Market firms matters to Growth

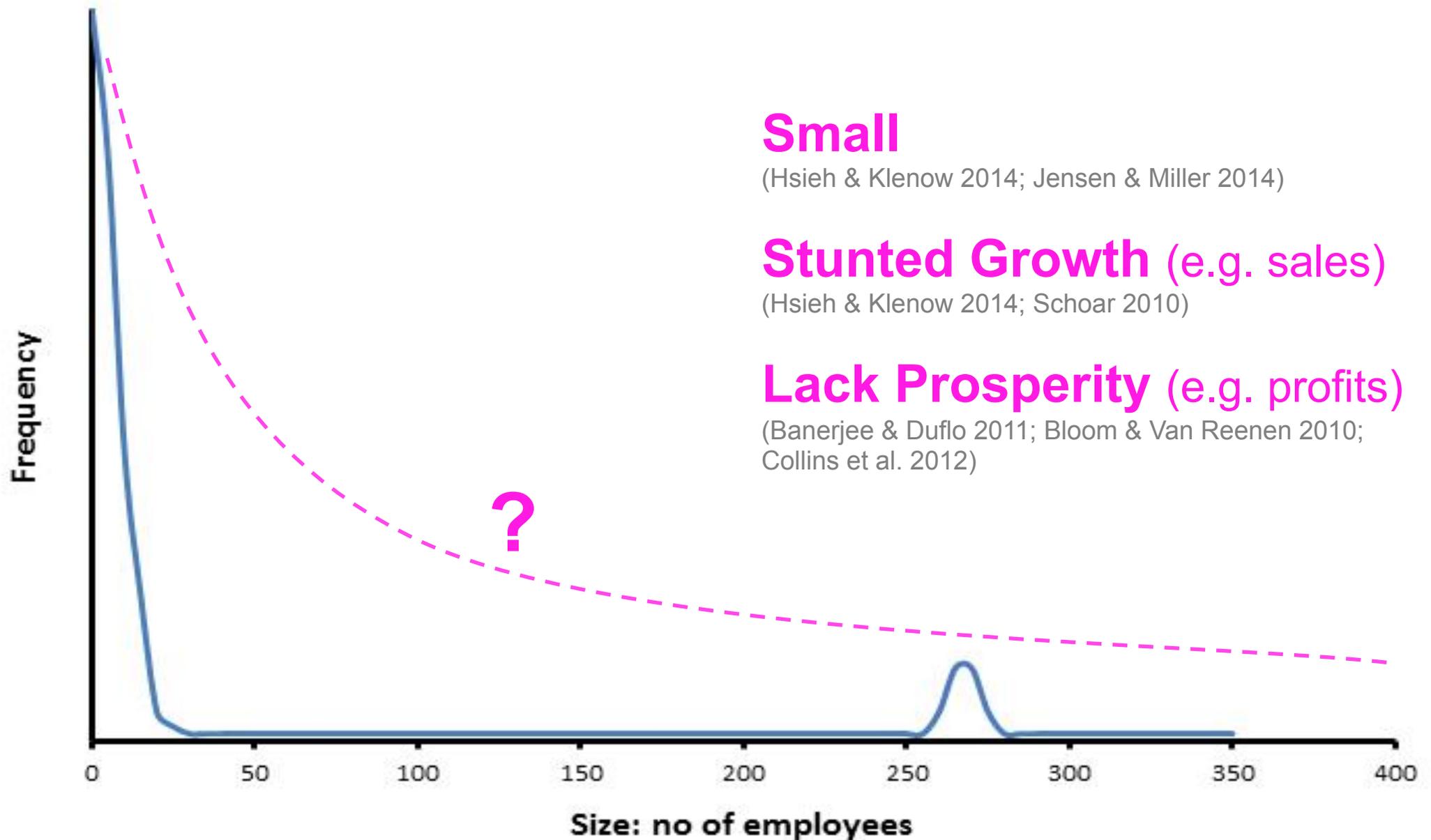
Customers, Suppliers & Distributors

↑ **Sales:** Channel efficiency & capacity

↑ **Profits:** Market stability & size



Challenges: faced by emerging market firms



Recommendations: to increase sales & profits

- **Institutions** (e.g. property rights)
- **Information** (e.g. registration)
- **Human Capital** (e.g. health)

- **Financial Capital** (e.g. credit)
- **Managerial Capital** (e.g. financial skills)

Micro-level solutions

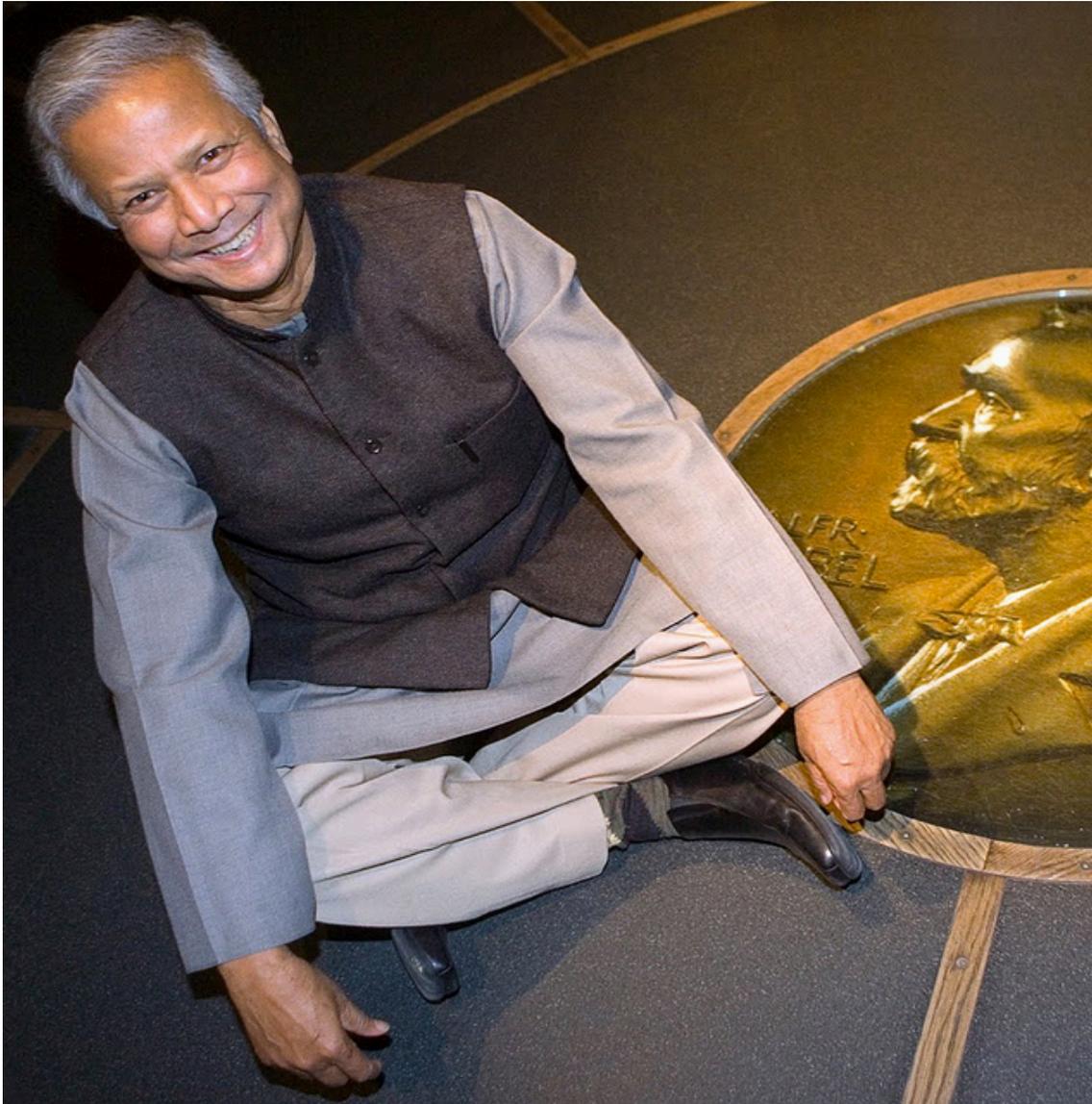
**for Small Firms:
Marketing Skills?**

- *Finance focused*

- *Evidence mixed*

(see Acemoglu et al 2005; Beck et al 2006; Bloom et al 2010; Bruhn et al 2010; Duflo et al 2012; Hsieh & Olken 2014; Jensen 1998; Karlan & Appel 2012; Nichter et al 1999; Tybout 2000; Sachs 2006)

Doubts: about business skills



Policy Makers

Researchers

Experts

**Muhammad Yunus,
Nobel Laureate:**

*“[The poor] do not need us to teach them how to survive; they already know. So rather than **waste our time teaching them new skills**, we try to make maximum use of their existing skills. Giving the poor access to credit allows them to immediately put into practice the skills they already know.” (1999)*

Results

What is the effect of business skills on performance?

- Marketing: ↑ survival 9.7%, employees 62%, sales 69%, profits 86%
- Finance: ↑ survival 12.7%, sales 39%, employees 33%, profits 75%

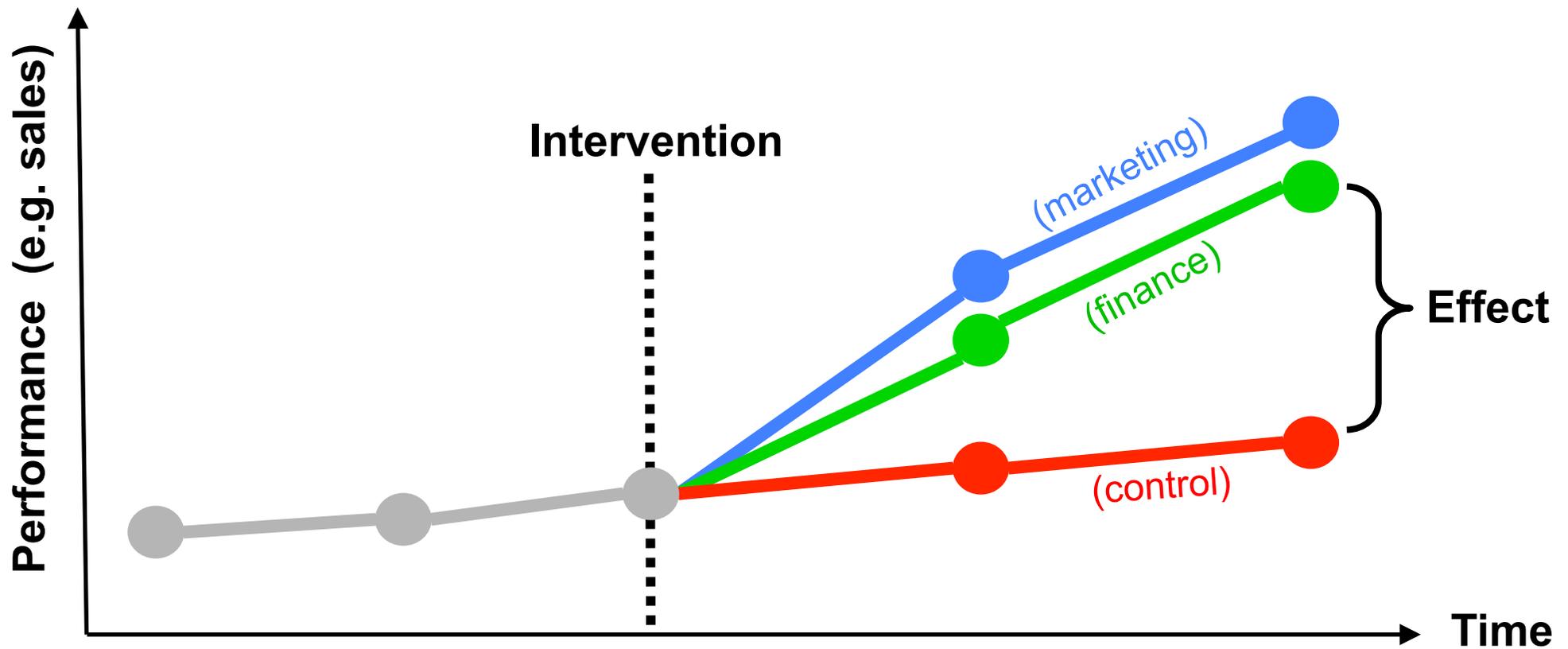
How do business skills influence performance?

- Marketing: growth focus
- Finance: efficiency focus

Who benefits more from business skills?

- Marketing: firm owners who are less exposed
- Finance: firm owners who are more established

Randomized Control Trial



Innovations: to improve signal-to-noise ratio

	“Business Skills” Training for small firms	
	Prior Studies (see McKenzie & Woodruff 2012)	Our Study
Sample:	heterogeneous	homogeneous
Intervention:	weaker	stronger
Functional focus:	general	specific
Measurement:	paper	electronic



Sampling

- 12 researchers recruited firms over 10 weeks in greater Cape Town
- 832 firms in initial sample (generalizes to population of firms in South Africa)

Rank	SIC code	Industry Description	Frequency	%
1	723	Beauty shops (e.g. hair salons, nail parlors)	98	11.78%
2	581	Eating and drinking places (e.g. restaurants, taverns, pubs)	92	11.06%
3	565	Family clothing stores (reseller)	39	4.69%
4	150	Building construction (residential and non-residential)	38	4.57%
5	541	Grocery stores (reseller)	35	4.21%
6	762	Electrical repair shops (e.g. TVs, refrigerators, air conditioners)	32	3.85%
7	835	Child day care services	28	3.37%
8	734	Services to buildings (e.g. cleaning, landscaping)	24	2.88%
9	238	Miscellaneous apparel and accessories (e.g. manufacturing belts, shoes, necklaces)	20	2.40%
10	179	Miscellaneous special trade contractors (e.g. electrical works, plumbing works)	20	2.40%
11	569	Miscellaneous apparel, accessory stores (reseller)	19	2.28%
12	349	Miscellaneous fabricated metal products (e.g. manufacturing security gates, doors)	16	1.92%
13	724	Barber shops	15	1.80%
14	233	Women's, misses' and juniors' outerwear (e.g. manufacturing dresses, school uniforms)	14	1.68%
15	737	Computer and data processing services	14	1.68%
16		All other sectors	328	39.42%

Sectors

- 15 industries account for 60% of sample
- Heterogeneity in manufacturers vs. resellers vs. service providers



Descriptives

- 1.50 employees; R13,750 monthly sales; R3,840 monthly profits
- 38% registered; 5 years operating; 53 hours/week; 6% accessed loans
- 39 years; 46% female; 62% graduated highschool; 86% black/colored



Registration & Baseline

- 5 training center locations: urban, suburban and slum areas
- Hired actors and used a 'lottery' cover story



Randomization

- 832 firms randomly assigned into 3 groups
- Check: groups do not differ (outcomes, covariates & extra variables)

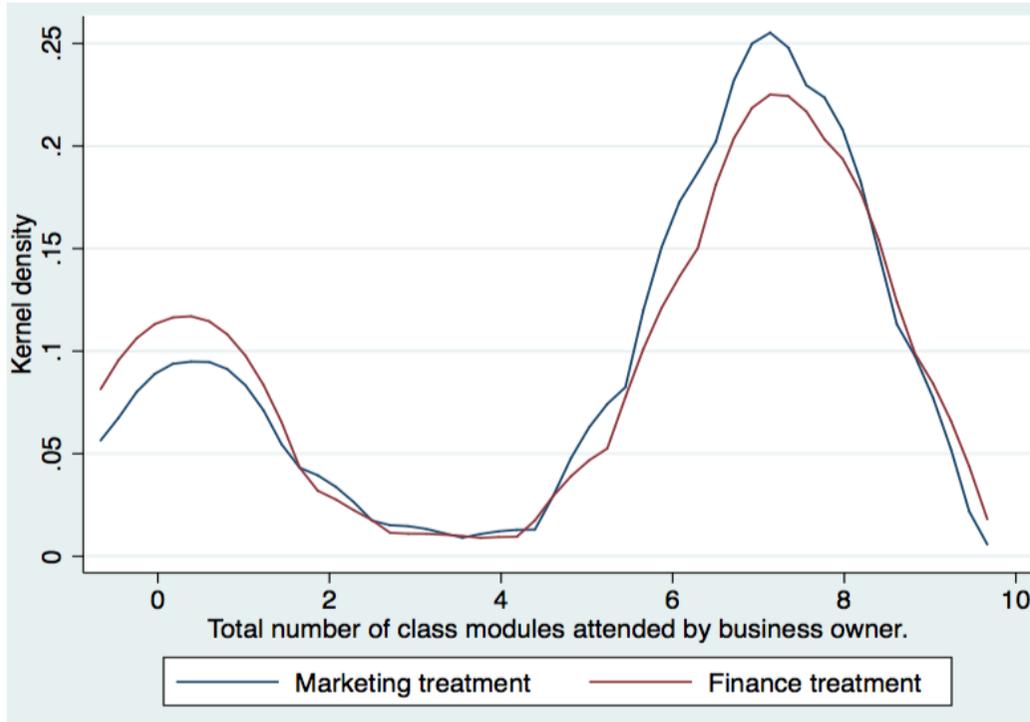


Interventions

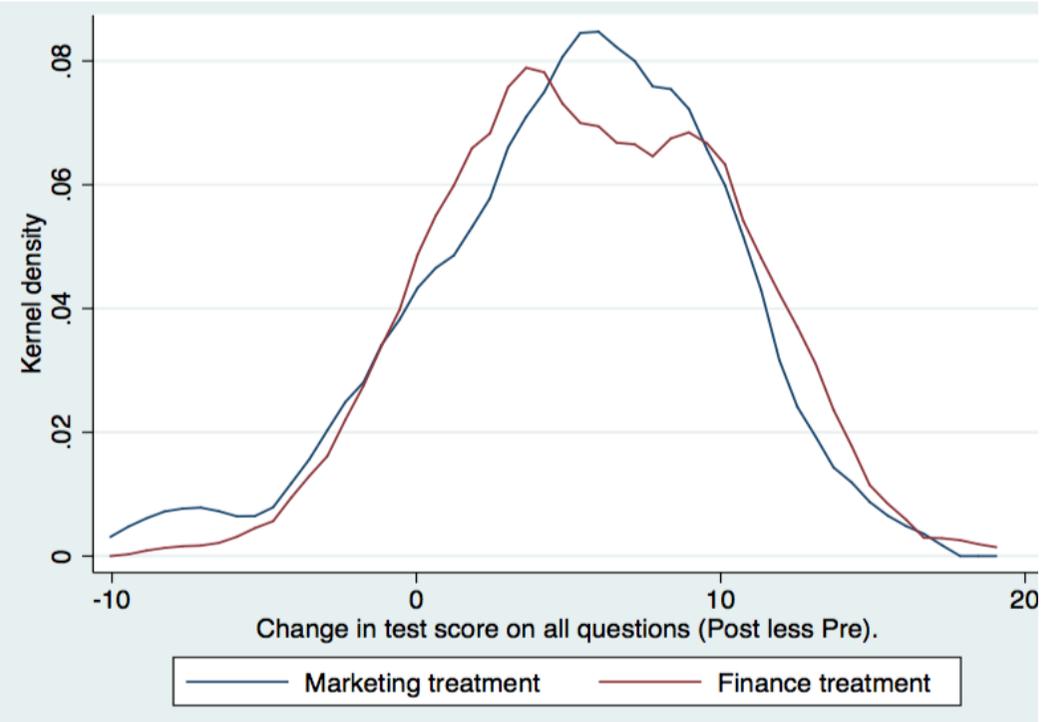
- 10 modules (weekly): concentrate on one business function for duration
- Focused on changing business behaviors

Making Sales [marketing intervention]	Managing Money [finance intervention]
<p>Module 1: What is Value? <i>Price versus value; tangible versus intangible value; communicating and creating value.</i></p>	<p>Module 1: Financial Jargon <i>The money flow; introducing financial jargon (liability, equity, revenue, expenses and assets).</i></p>
<p>Module 2: Finding Customer Needs & Solutions <i>Distinguishing customer needs versus wants; finding the sweet spot; discovering business capabilities.</i></p>	<p>Module 2: Recording Business Transactions <i>The financial process; transactions versus cash flow; the balance of accounts; debits and credits.</i></p>
<p>Module 3: Matching Solutions & Making Contact <i>Finding and prioritising opportunities; setting objectives and opening a call; building rapport with customers.</i></p>	<p>Module 3: Reporting on the Business <i>Explaining financial statements (income statement and balance sheet); asset types (current, non-current).</i></p>
<p>Module 4: Listening & Questioning Skillfully <i>Listening versus hearing; understanding content versus context; asking the right questions; knowing competition.</i></p>	<p>Module 4: Cost Structures <i>Explaining costs and cost classifications; costing; understanding opportunity costs.</i></p>
<p>Module 5: Helping Customers Make the Right Choice <i>Understanding customers' buying criteria; the value map; value winners, killers and sleepers.</i></p>	<p>Module 5: Analysing Business and Financial Decisions <i>Comparing performance to benchmarks and to historical performance; interpreting ratios (profitability, liquidity).</i></p>
<p>Module 6: Handling Questions & Concerns <i>Understanding objections; dealing with objections and questions through products, pricing, promotions, etc.</i></p>	<p>Module 6: Budgeting <i>Understanding and constructing a budget; analysing budgeted versus actual spending; monitoring variances.</i></p>
<p>Module 7: Delivering on Product/Service Promises <i>Meeting customer expectations; after sale responsibility; customers' post-purchase experience and satisfaction.</i></p>	<p>Module 7: Cash Flow <i>Understanding and predicting cash flows; distinguishing between cash and profits; understanding working capital.</i></p>
<p>Module 8: Bringing it All Together <i>Consolidation and recap of learning; students share their marketing challenges, examples and solutions.</i></p>	<p>Module 8: Funding your Growth <i>Setting business goals; assessing financial needs; understanding different funding options.</i></p>

Attendance



Knowledge Test



Intervention Checks

- Two different courses: marketing/sales vs. finance/accounting
- Comparability
 - Attendance, Graduation, Knowledge (actual behavior)
 - Participation (scored by RAs)
 - Evaluation (self-report)



Business	MONEY IN	MONEY OUT	Loans	Stocks	Materials	Employees	Location	Energy	Transport	Equipment	Food	Phone	Services	Fees	Other	SUMMARY	Ho
Monthly Sales - FINAL		7000.00															
TOTAL Money In		7000.00															
			Loans						-191.25								
			Stock & Inventory						-700.00								
			Materials & Supplies						-150.00								
			Employees						-6700.00								
			Location: Rent/Lease						-201.60								
			Energy & Electricity						-242.25								
			Transport & Travel						-531.25								
			Equipment & Machinery						-21.25								
			Food & Water						-148.75								
			Phone & Communication						-29.75								
			Services						-531.25								
			Fees & Taxes						-242.25								
			Other Costs						-255.00								
			Total Money Out						-9944.60								
			Total Profits						-2944.60								
			Is this correct? (1 if Yes; 2 if														

Midline & Endline

- 20+ researchers collected data (at business locations; 8 weeks per survey round)
- New electronic tool (more precise measurement of sales, costs, profits)

What: Effects on Performance

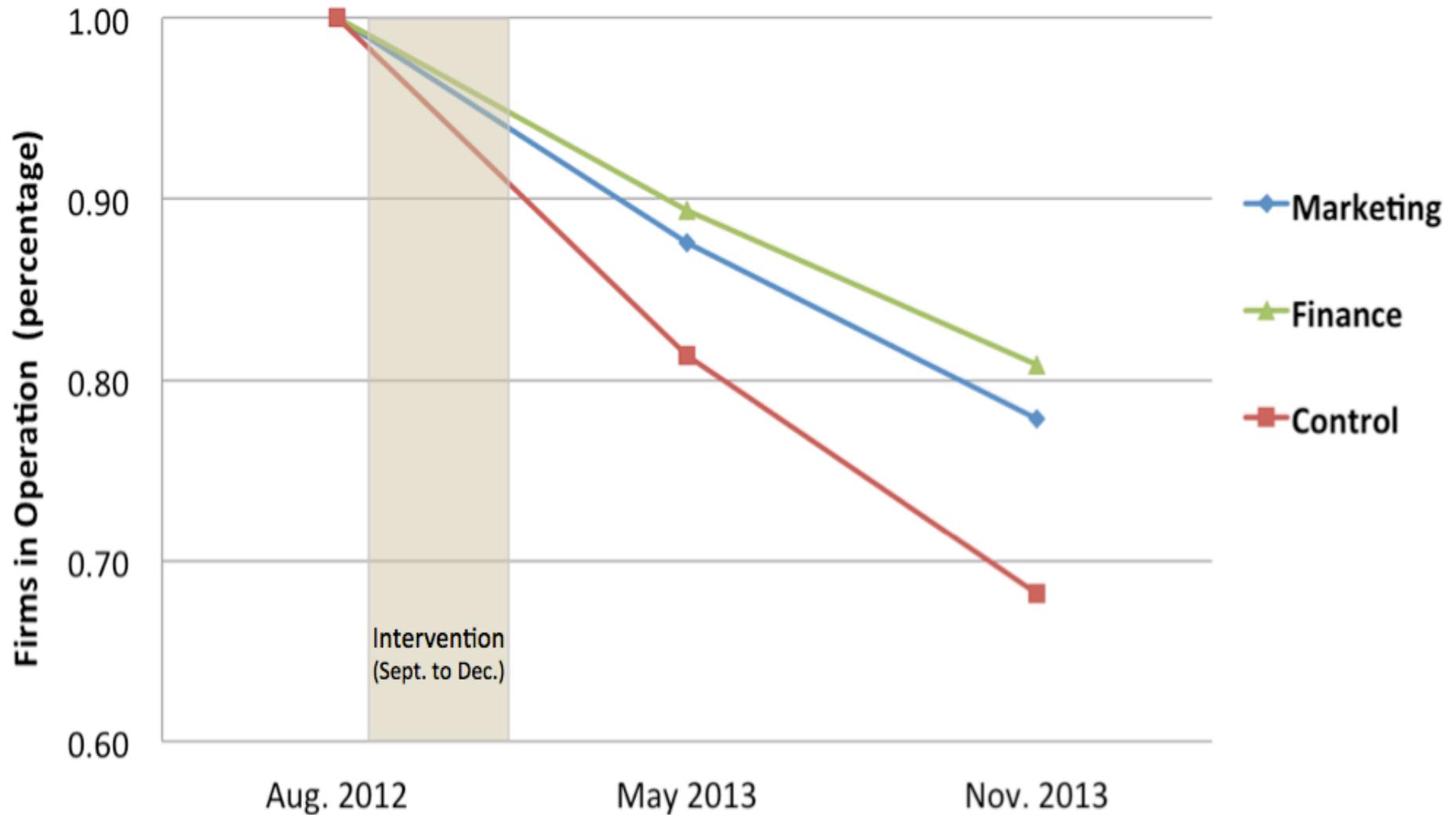
The change in a business outcome over time.

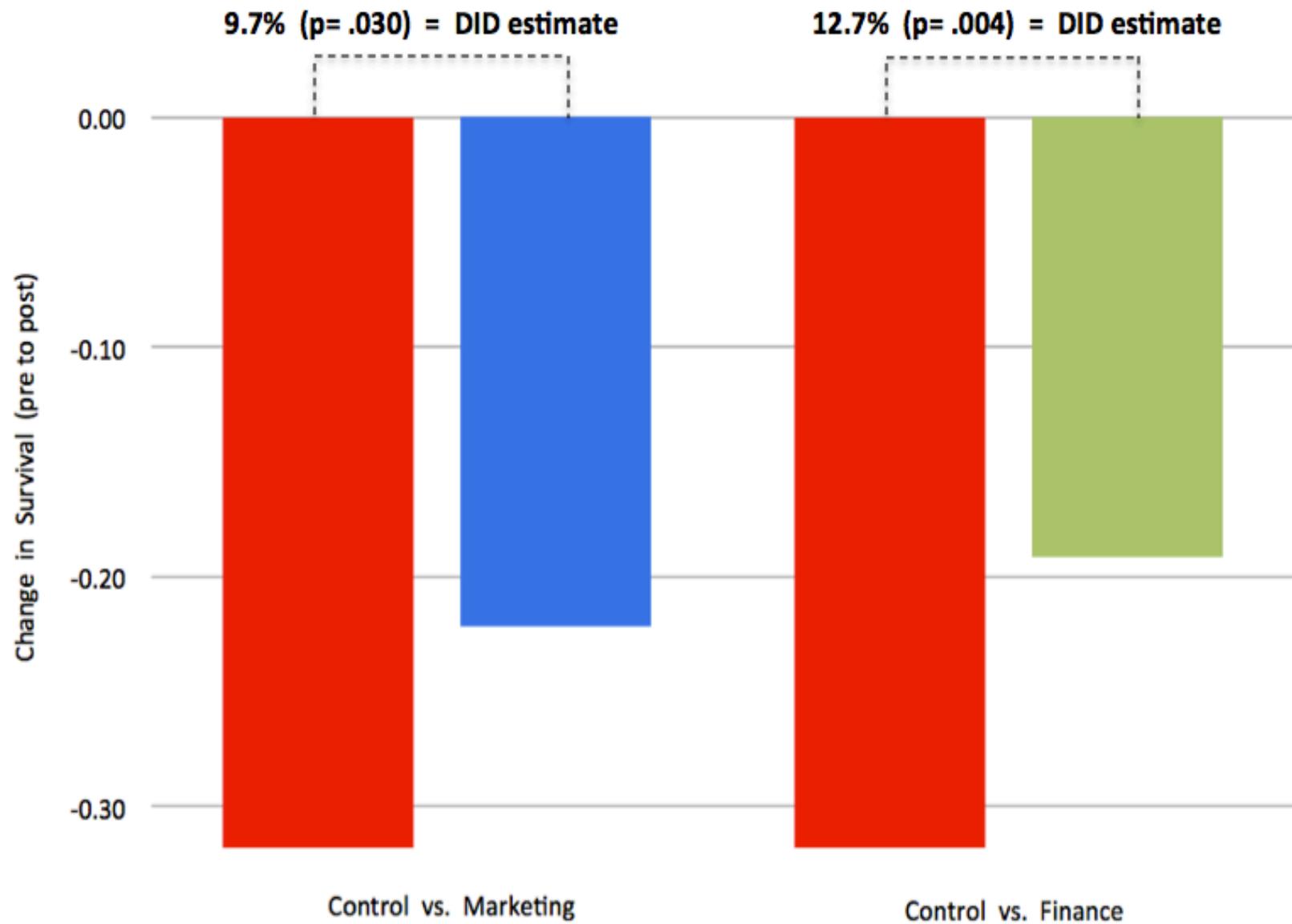
	Differences-in-Differences (compared to Control group)	p-value	% Change (DID compared to Baseline)
Survival (proportion in operation)			
Marketing	9.7%	0.030	9.7%
Finance	12.7%	0.004	12.7%
Employment (total paid staff)			
Marketing	0.95	0.000	61.9%
Finance	0.53	0.002	32.9%
Sales (total revenue per month; in SA Rand)			
Marketing	9,350	0.029	69.4%
Finance	5,697	0.099	39.3%
Profits (net income per month; in SA Rand)			
Marketing	3,038	0.064	85.8%
Finance	2,590	0.085	74.8%

Survival

Marketing: \uparrow 9.7%**

Finance: \uparrow 12.7%***

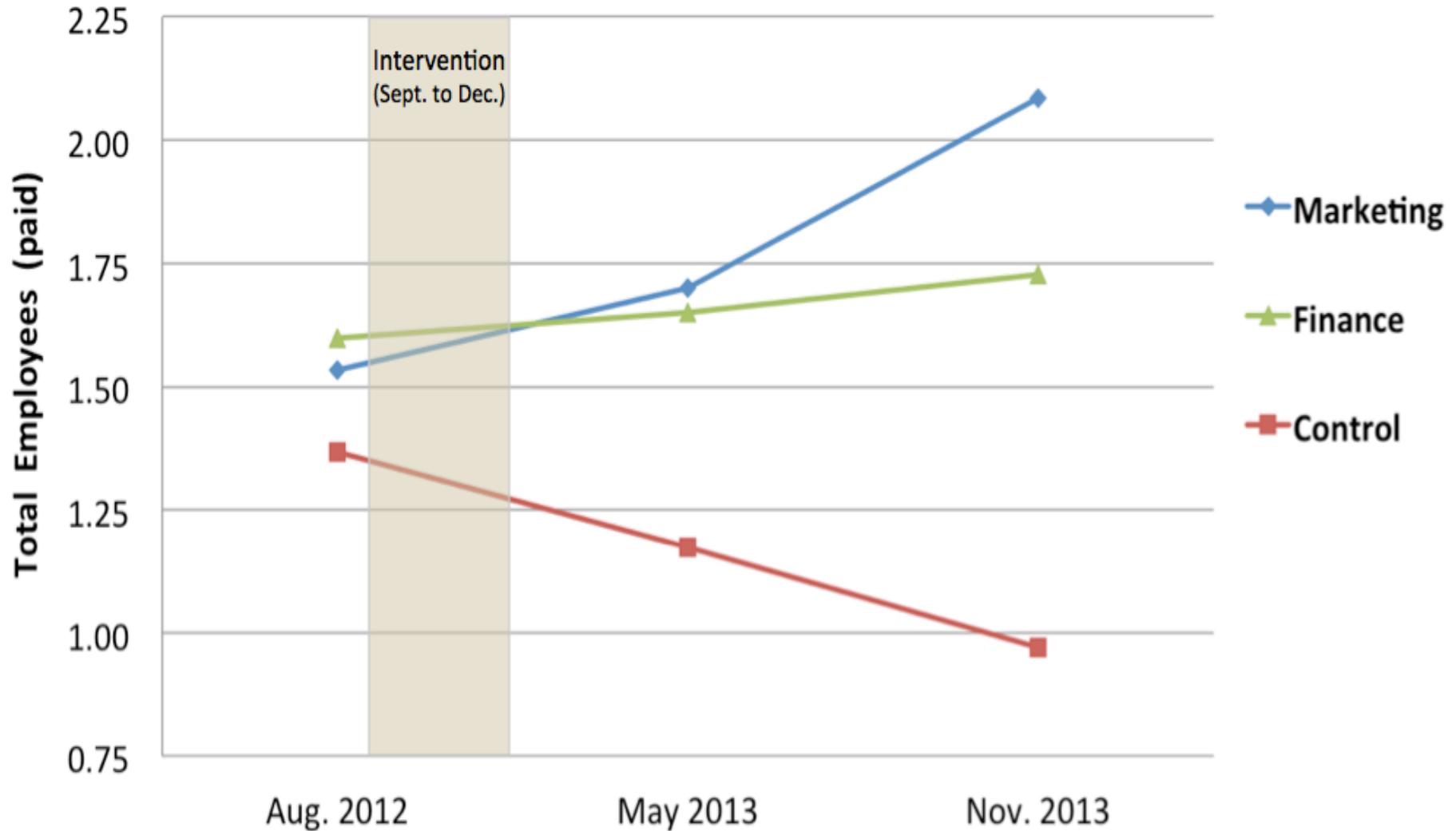


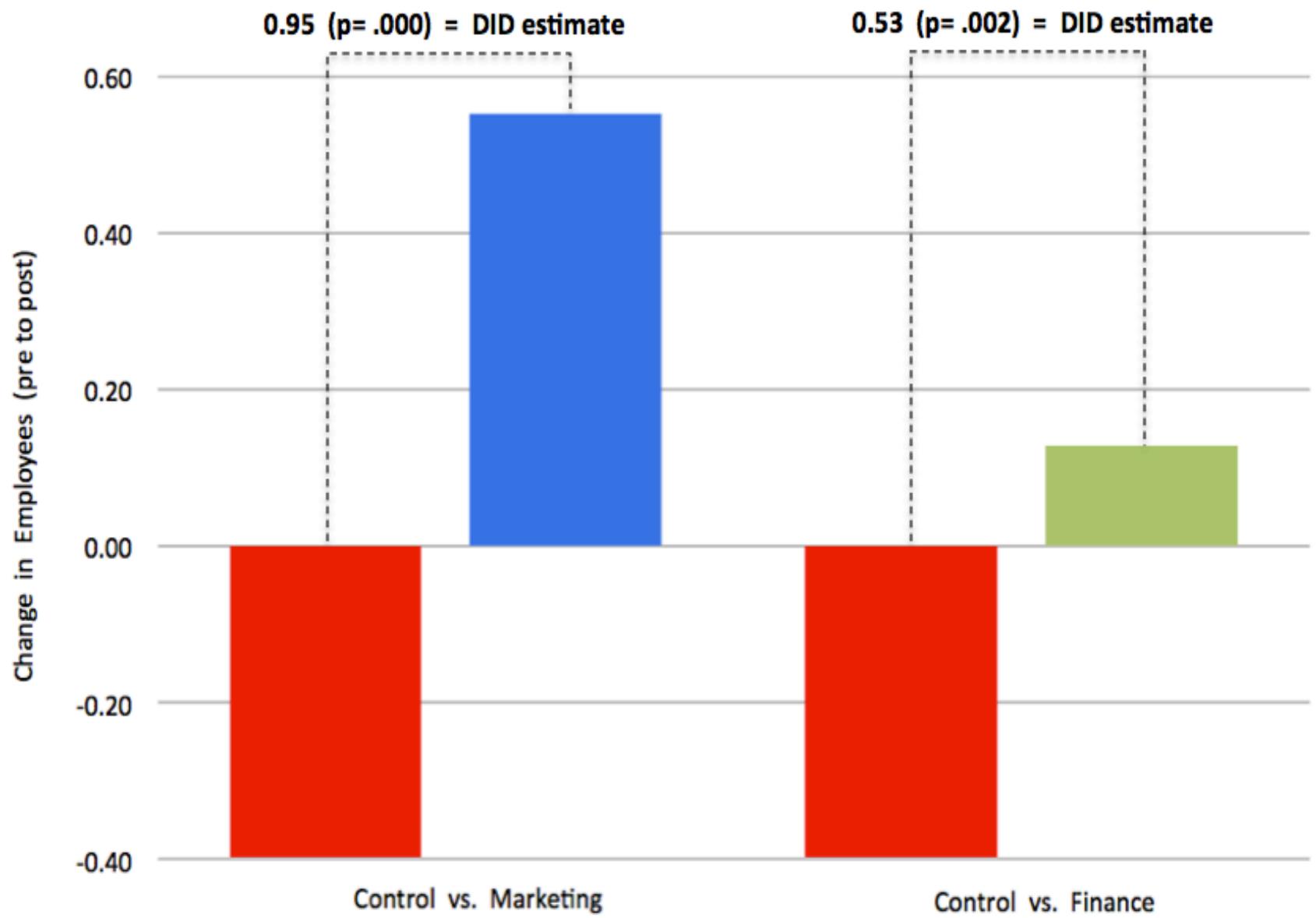


Employees

Marketing: ↑ 61.9%***

Finance: ↑ 32.9%***

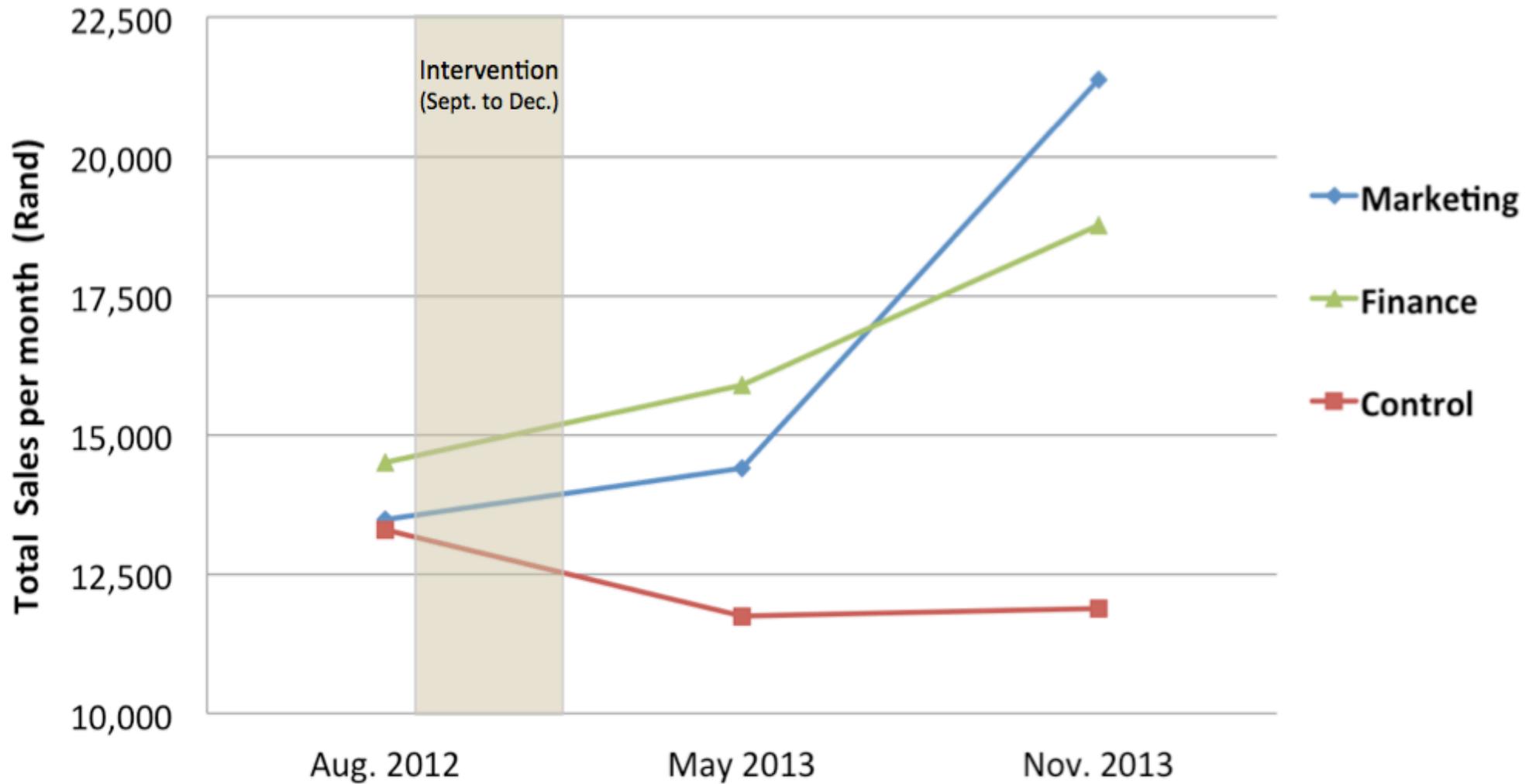


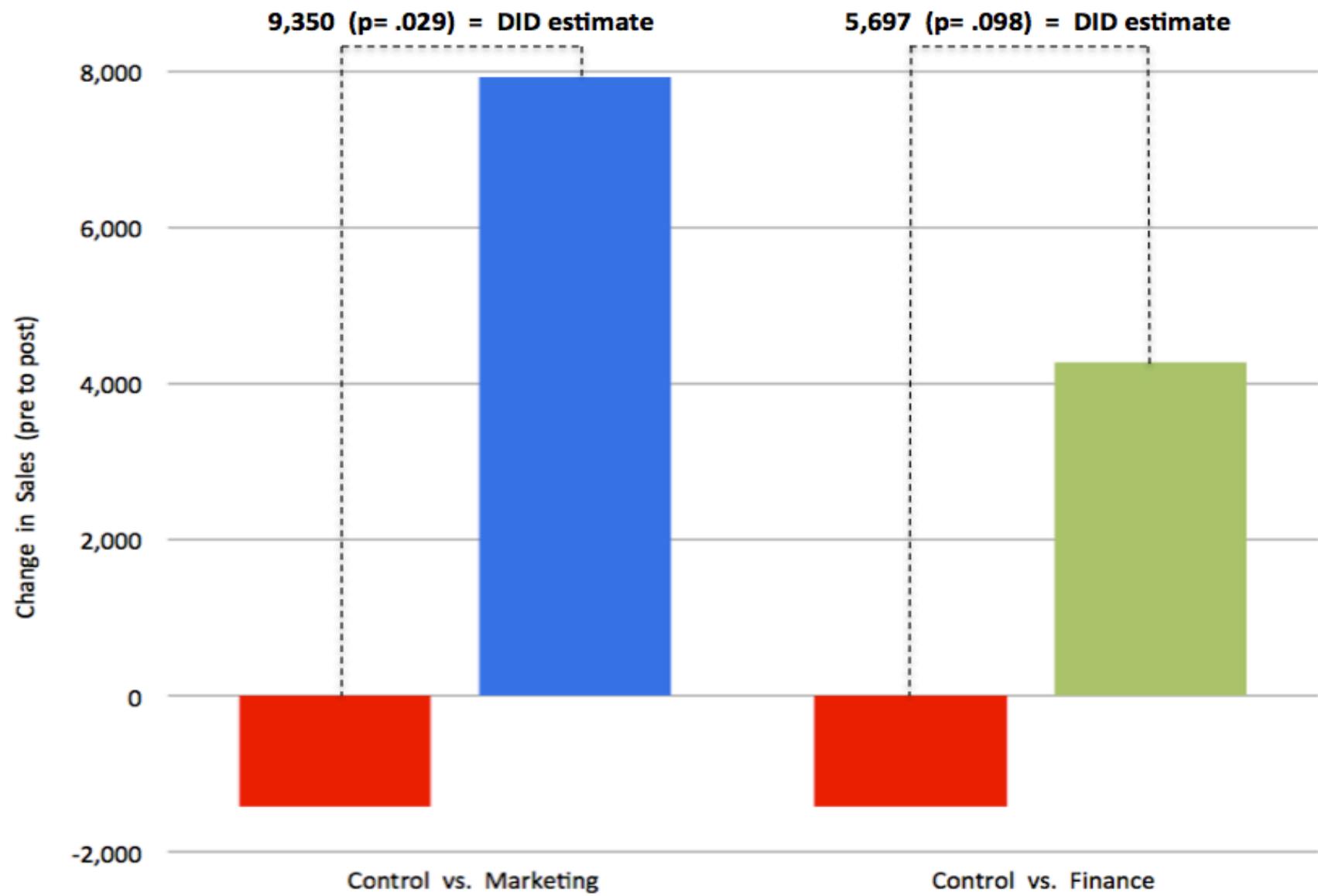


Sales

Marketing: ↑ 69%**

Finance: ↑ 39%*

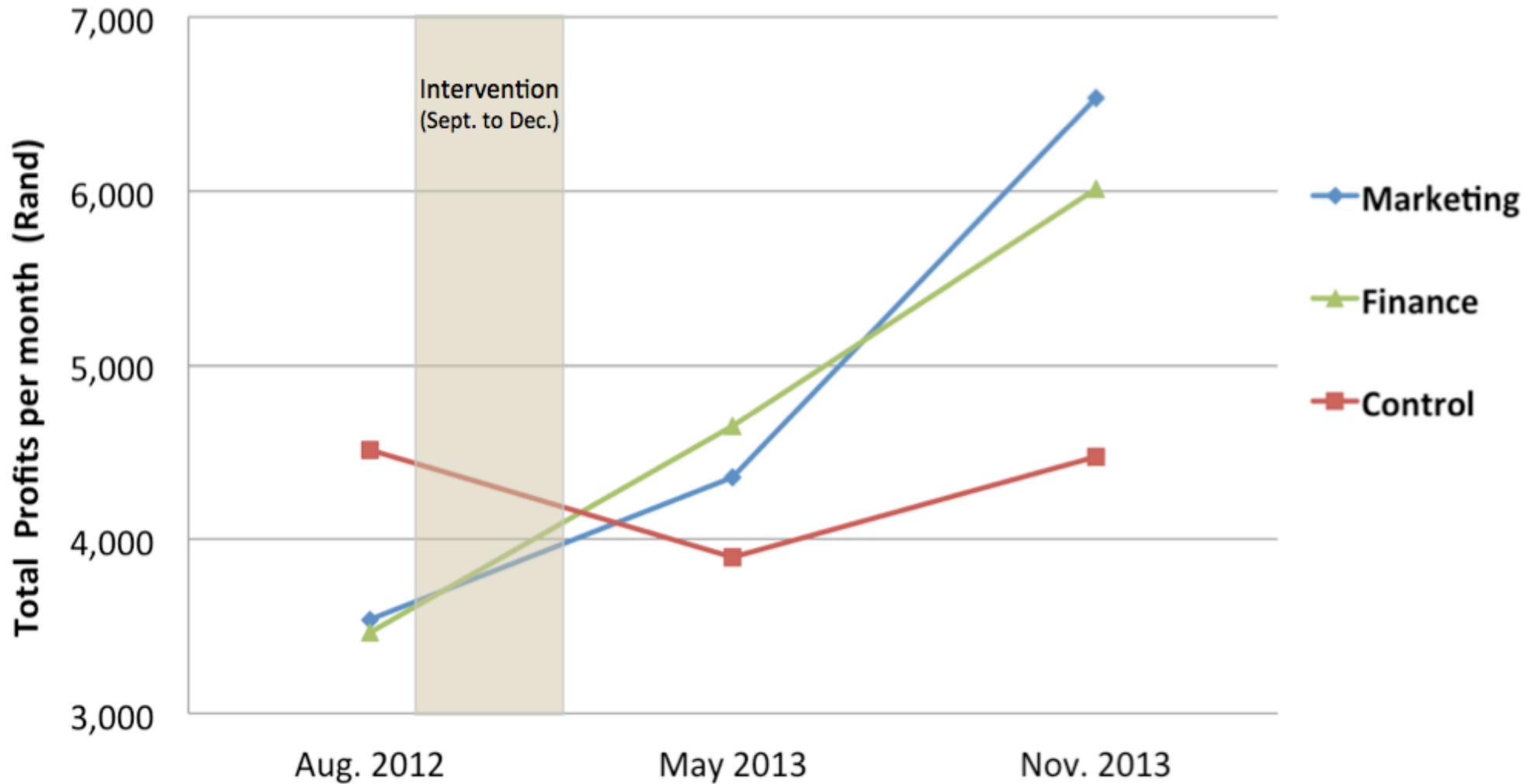


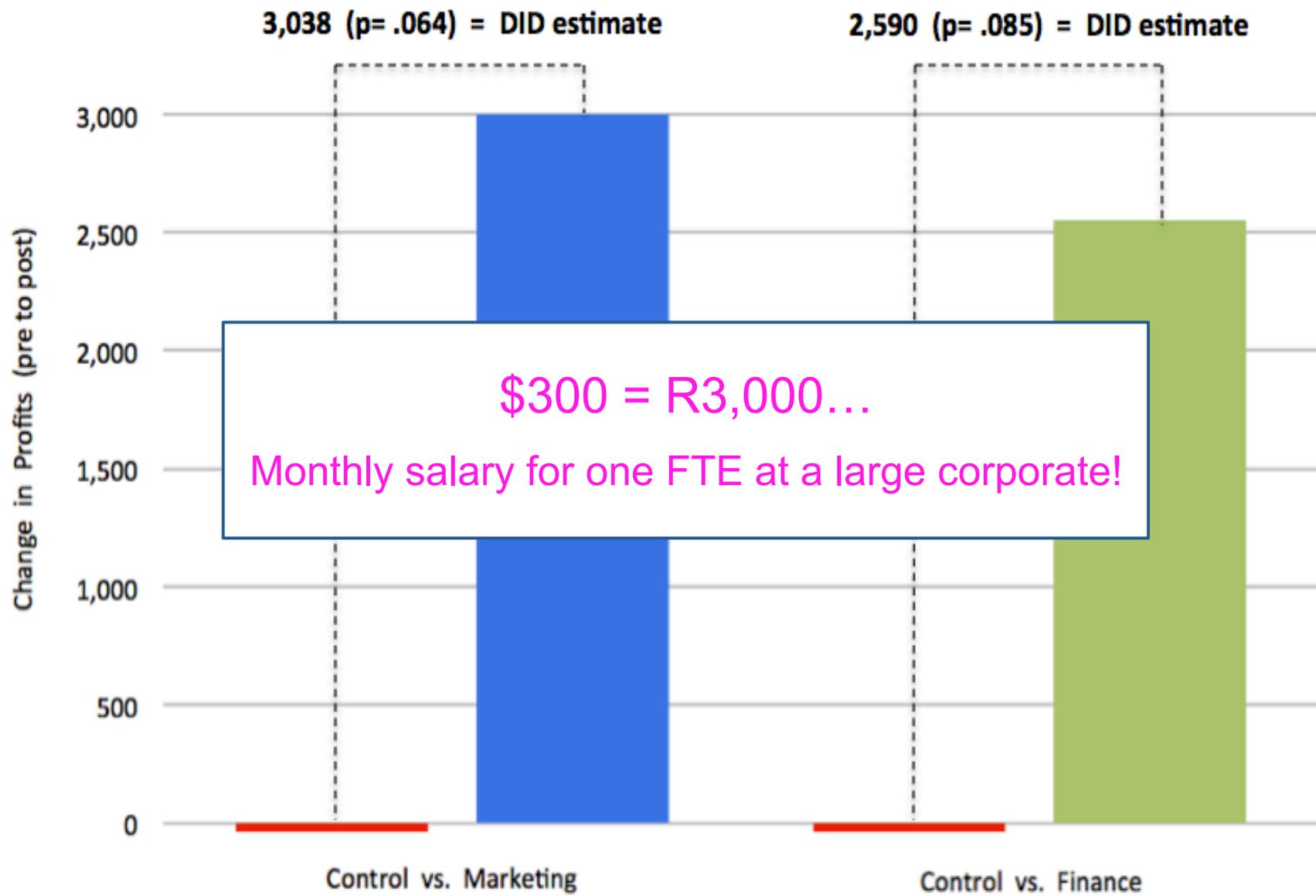


Profits

Marketing: ↑ 86%*

Finance: ↑ 75%*





How: Pathways to Profits

The channel through which a business increases net income.

Two pathways:

i. Growth Focus

- utilization: e.g. changing sales staff incentives
- allocation: e.g. planning product line adjustments

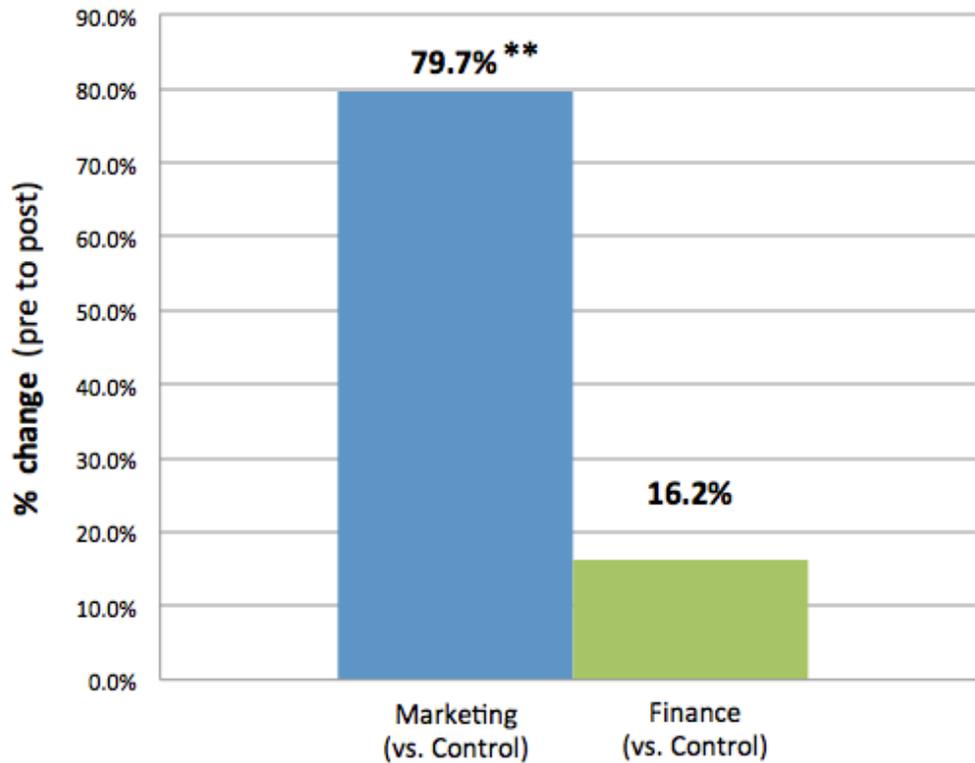
ii. Efficiency Focus

- utilization: e.g. tracking the cost of goods
- allocation: e.g. separating personal-business expenditures

‘Growth’ Policies

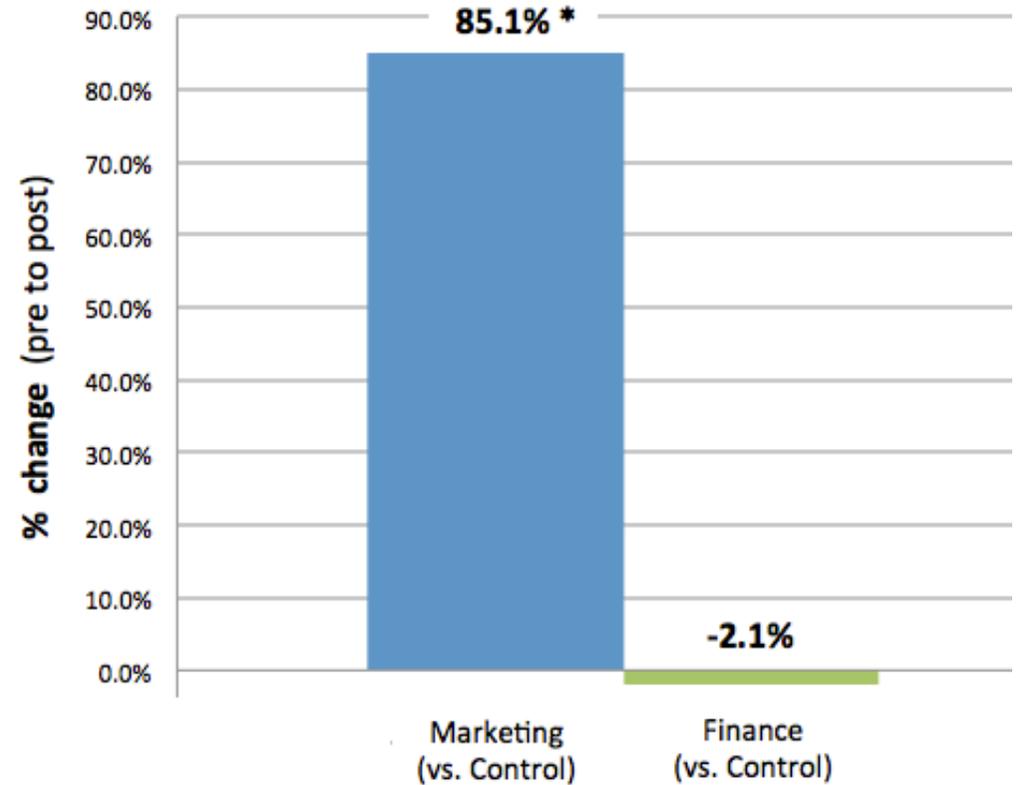
Sales Ratio

(all firms)



Sales Ratio

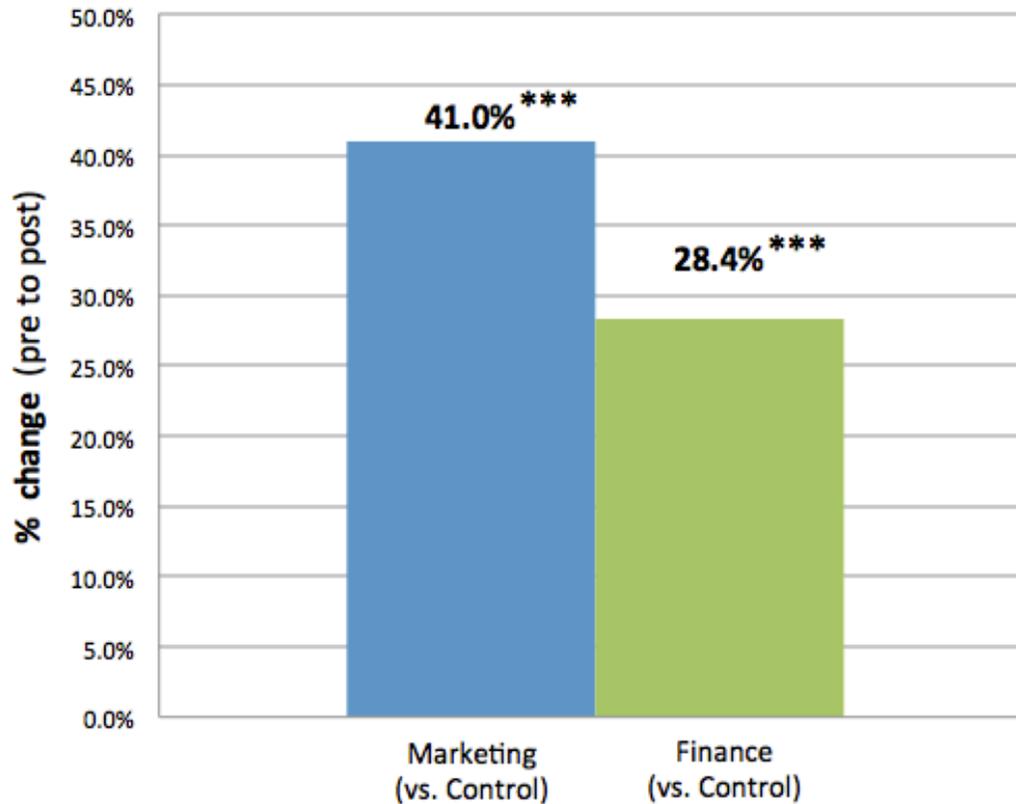
(surviving firms)



$$\frac{(\text{Sales post}) - (\text{Sales pre})}{(\text{Sales pre})} \times [100\%]$$

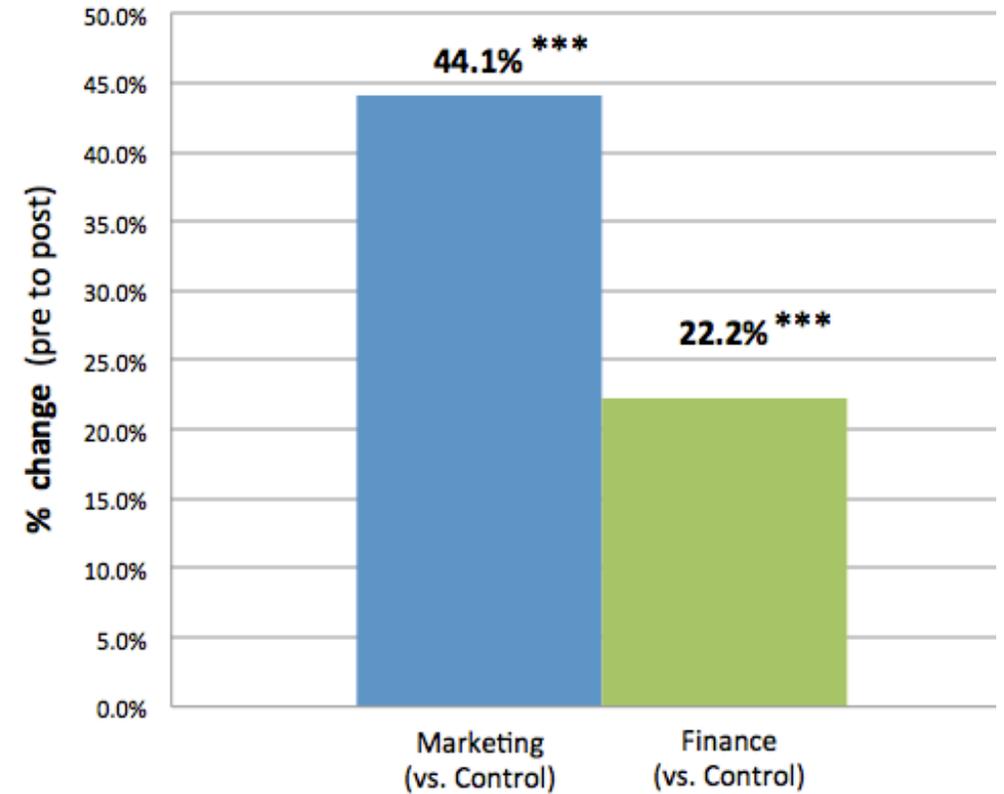
Employment Ratio

(all firms)



Employment Ratio

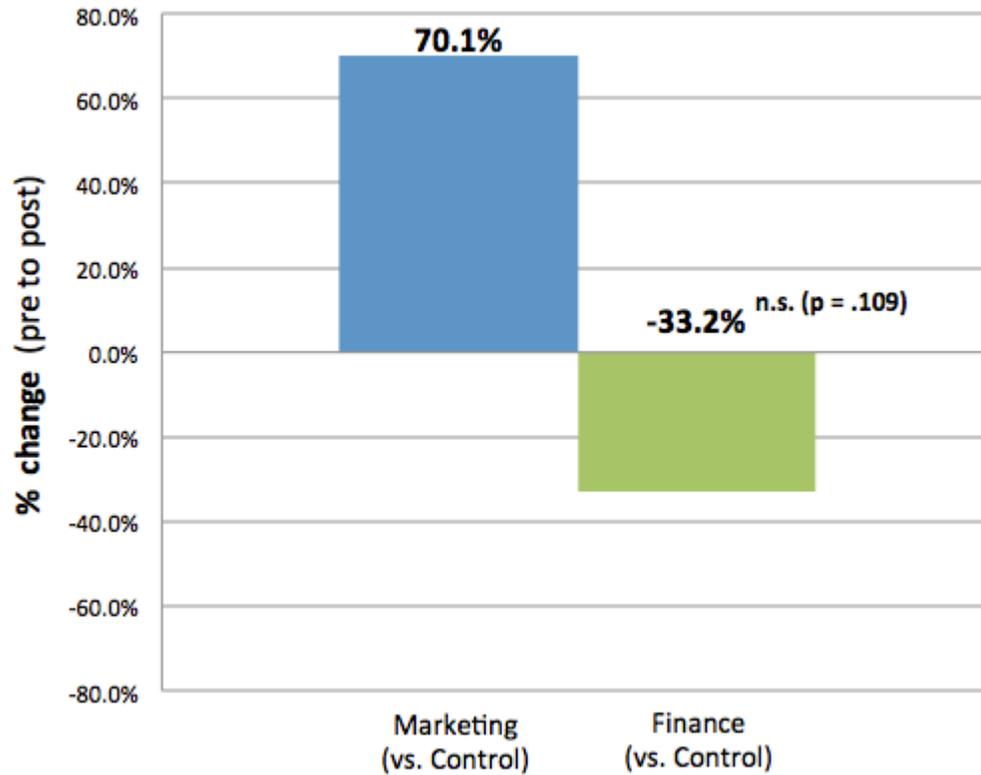
(surviving firms)



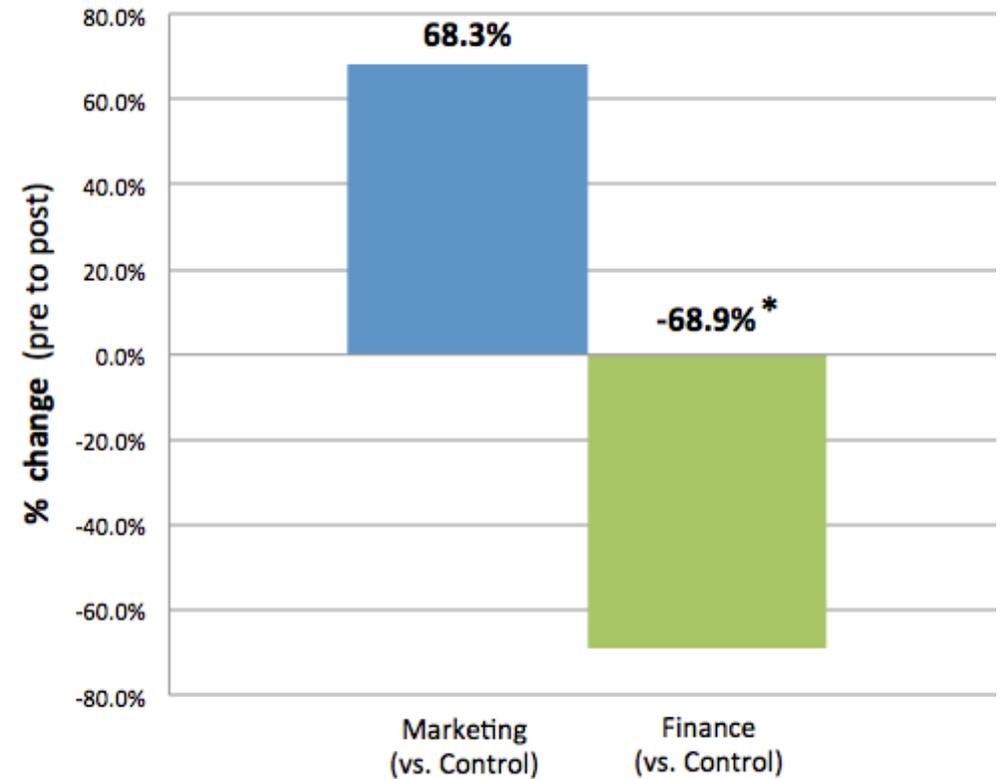
$$\frac{(\text{Employees post}) - (\text{Employees pre})}{(\text{Employees pre})} \times [100\%]$$

‘Efficiency’ Policies

Costs Ratio (all firms)



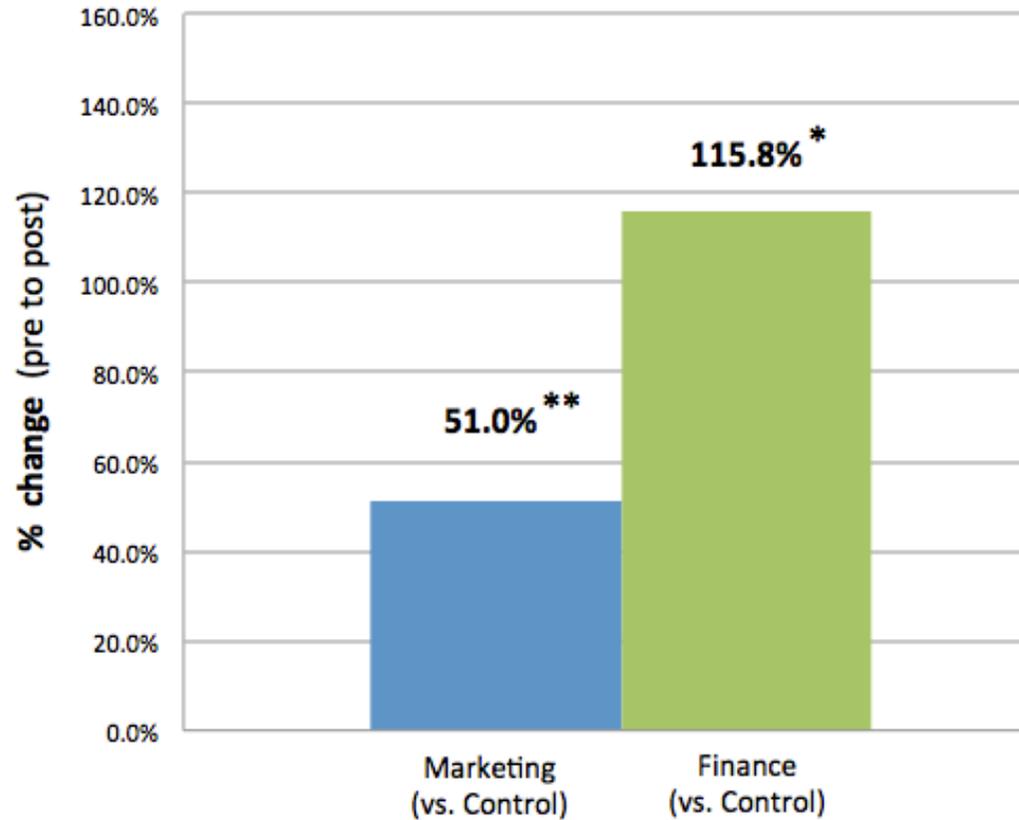
Costs Ratio (surviving firms)



$$\frac{(\text{Costs post}) - (\text{Costs pre})}{(\text{Costs pre})} \times [100\%]$$

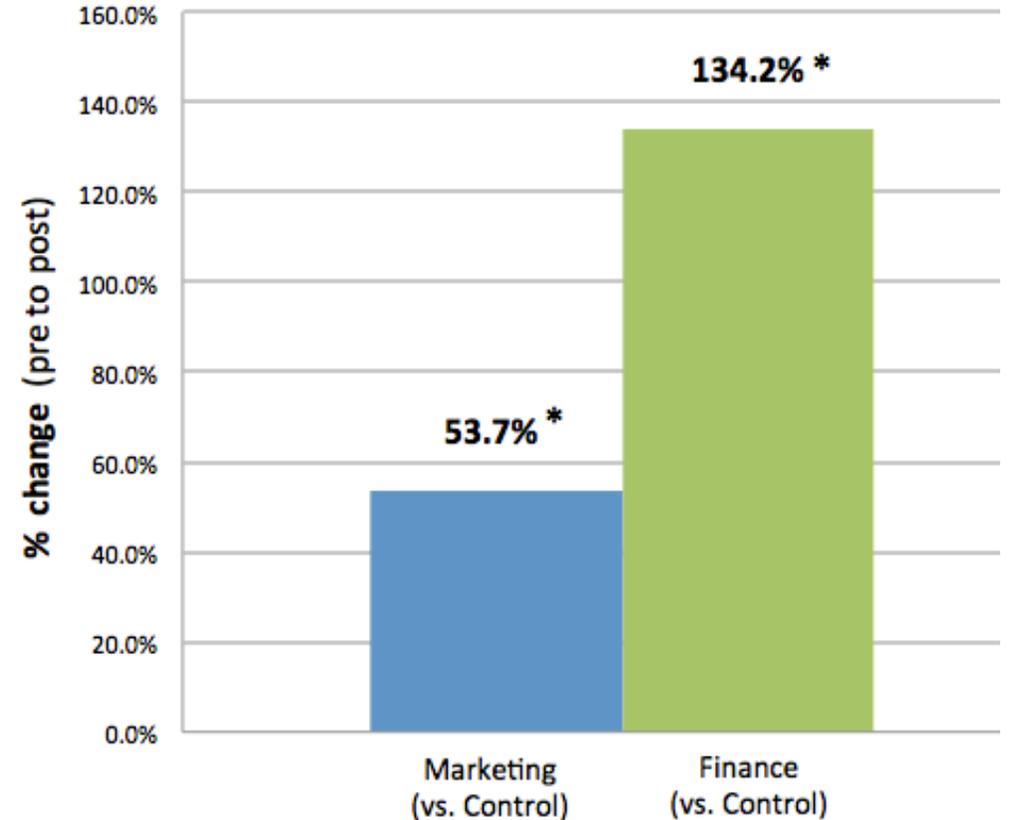
Output-Input Ratio

(all firms)



Output-Input Ratio

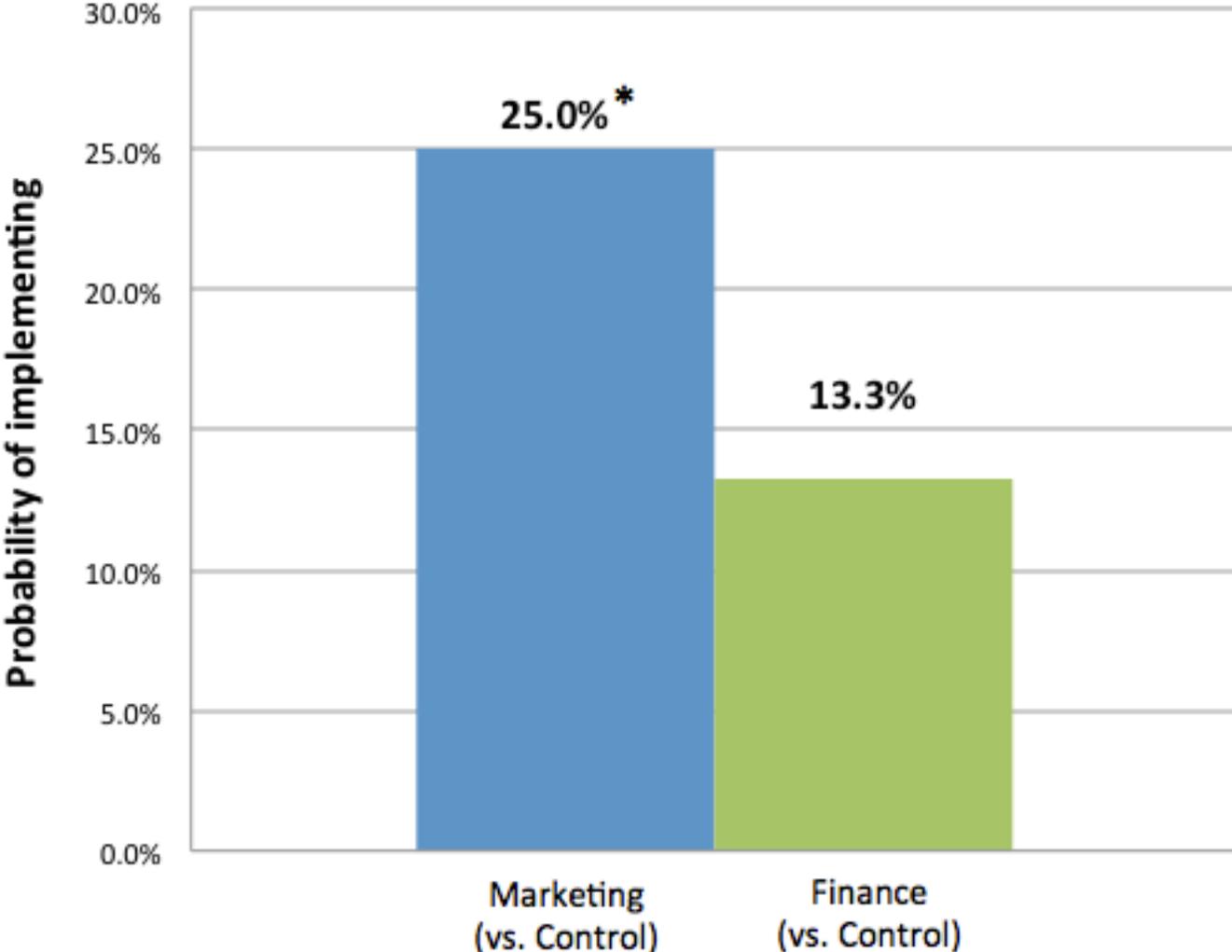
(surviving firms)



$$\frac{(\text{Output-Input post}) - (\text{Output-Input pre})}{(\text{Output-Input pre})} \times [100\%]$$

‘Growth’ Practices

Market Research

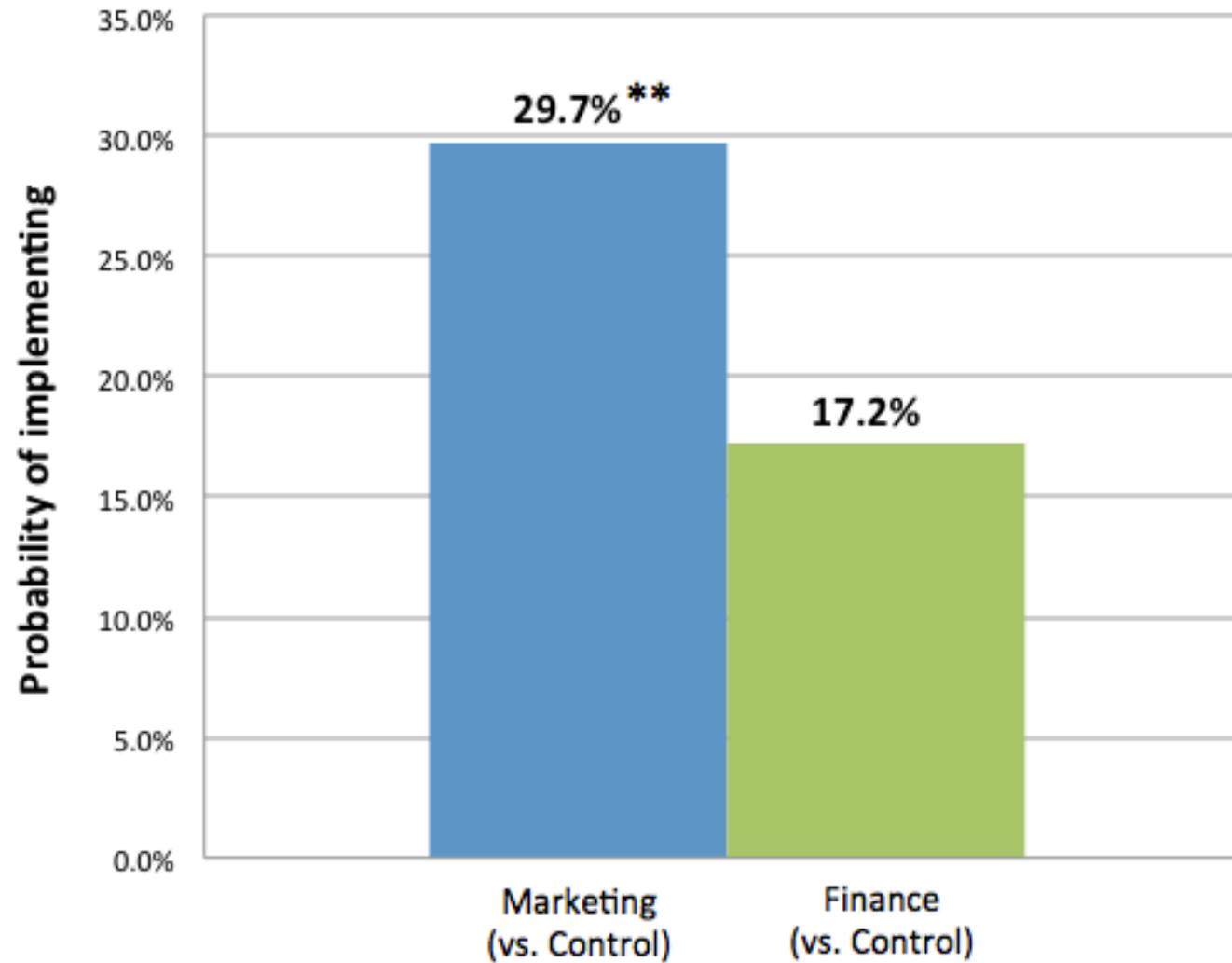


[% implementing >3 of 5 activities]

1) Market Research

	Predicting Profits (OLS results of profits regressed on firm practice variable)	
	F-stat	Coefficient: Firm Practice
Market Research [1=conducted 3 or more; 0=no]	9.87***	3,767.04***
1. Visited a competitor's business (1=yes; 0=no)	3.80*	2,197.68*
2. Discussed products with a supplier (1=yes; 0=no)	13.76***	4,487.46***
3. Asked current customers' preferences (1=yes; 0=no)	2.26	2,260.43
4. Spoke with a former customer (1=yes; 0=no)	0.48	878.71
5. Researched needs of new customers (1=yes; 0=no)	12.13***	4,561.56***

Marketing Tactics

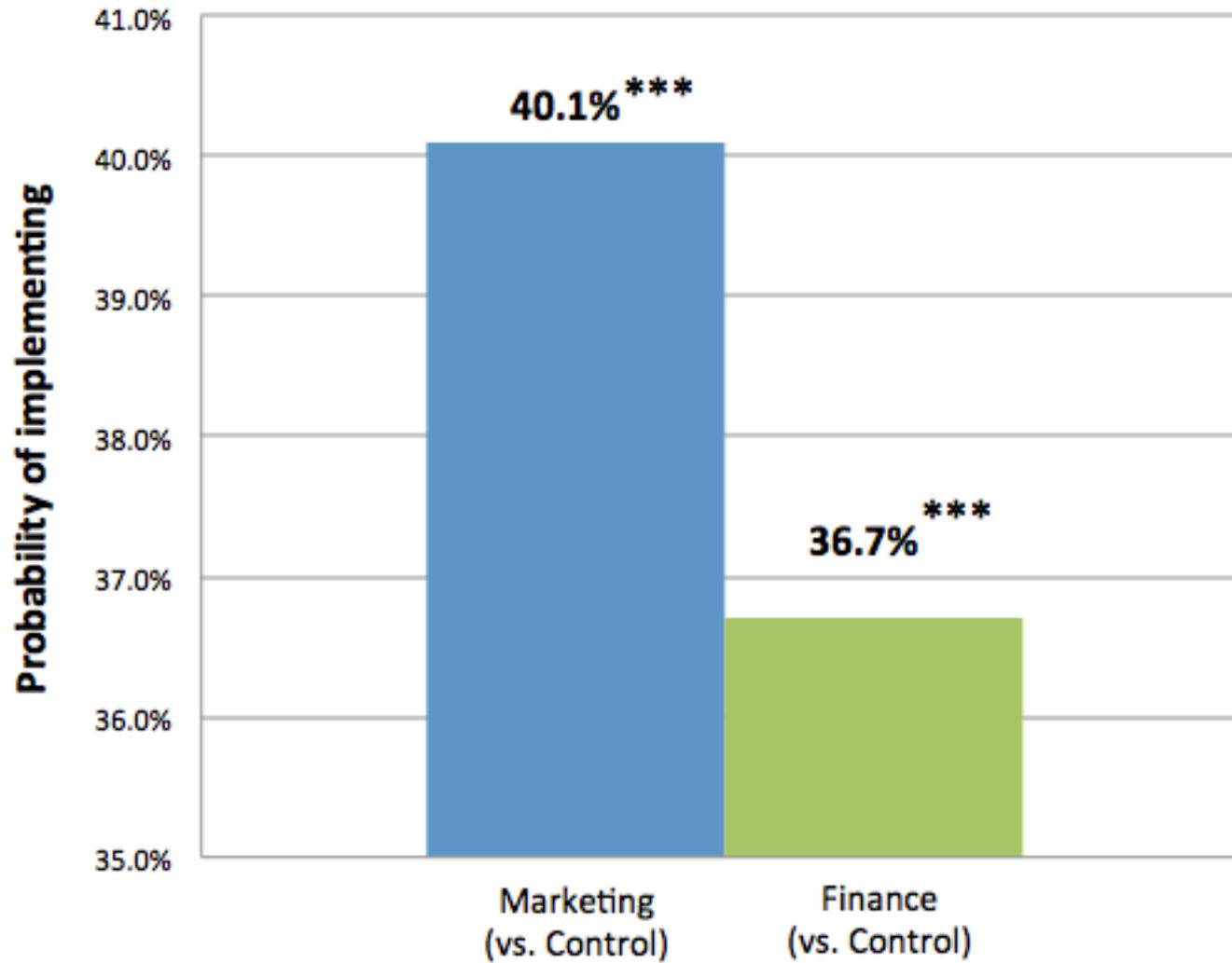


[% implementing >3 of 5 activities]

2) Marketing Tactics

	Predicting Profits (OLS results of profits regressed on firm practice variable)	
	F-stat	Coefficient: Firm Practice
Marketing Tactics [1=conducted 3 or more; 0=no]	12.64***	4,088.61***
1. Improved quality of product/service (1=yes; 0=no)	14.57***	5,184.56***
2. Advertised my business in any form (1=yes; 0=no)	5.23**	2,260.01**
3. Distributed my products differently (1=yes; 0=no)	11.90***	4,685.55***
4. Changed pricing of a product/service (1=yes; 0=no)	3.64*	2,698.51*
5. Developed a new product/service (1=yes; 0=no)	7.20**	3,750.96**

Sales Tactics

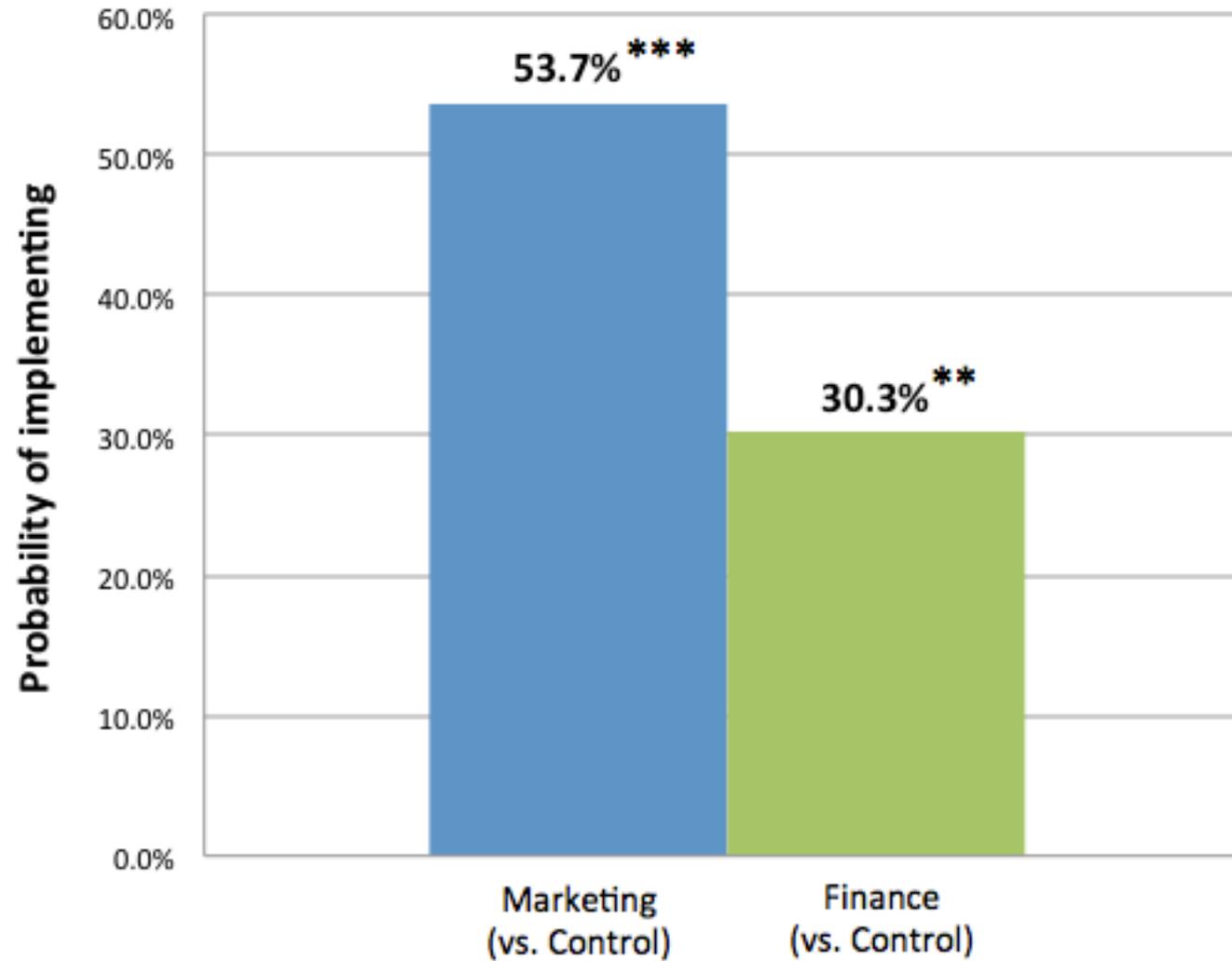


[% implementing >3 of 5 activities]

3) Sales Tactics

	Predicting Profits (OLS results of profits regressed on firm practice variable)	
	F-stat	Coefficient: Firm Practice
Sales Tactics [1=conducted 3 or more; 0=no]	12.81***	4,579.42***
1. Reviewed my business capabilities (1=yes; 0=no)	4.10*	4,375.78*
2. Advised customer on products/services (1=yes; 0=no)	14.54***	5,113.93***
3. Matched a customer's body language (1=yes; 0=no)	17.34***	4,566.89***
4. Ranked a customer's buying criteria (1=yes; 0=no)	1.91	1,909.91
5. Evaluated post-purchase satisfaction (1=yes; 0=no)	10.45***	4582.86***

ALL 15 MARKETING PRACTICES



[% implementing >10 of 15 activities]

ALL 15 MARKETING PRACTICES

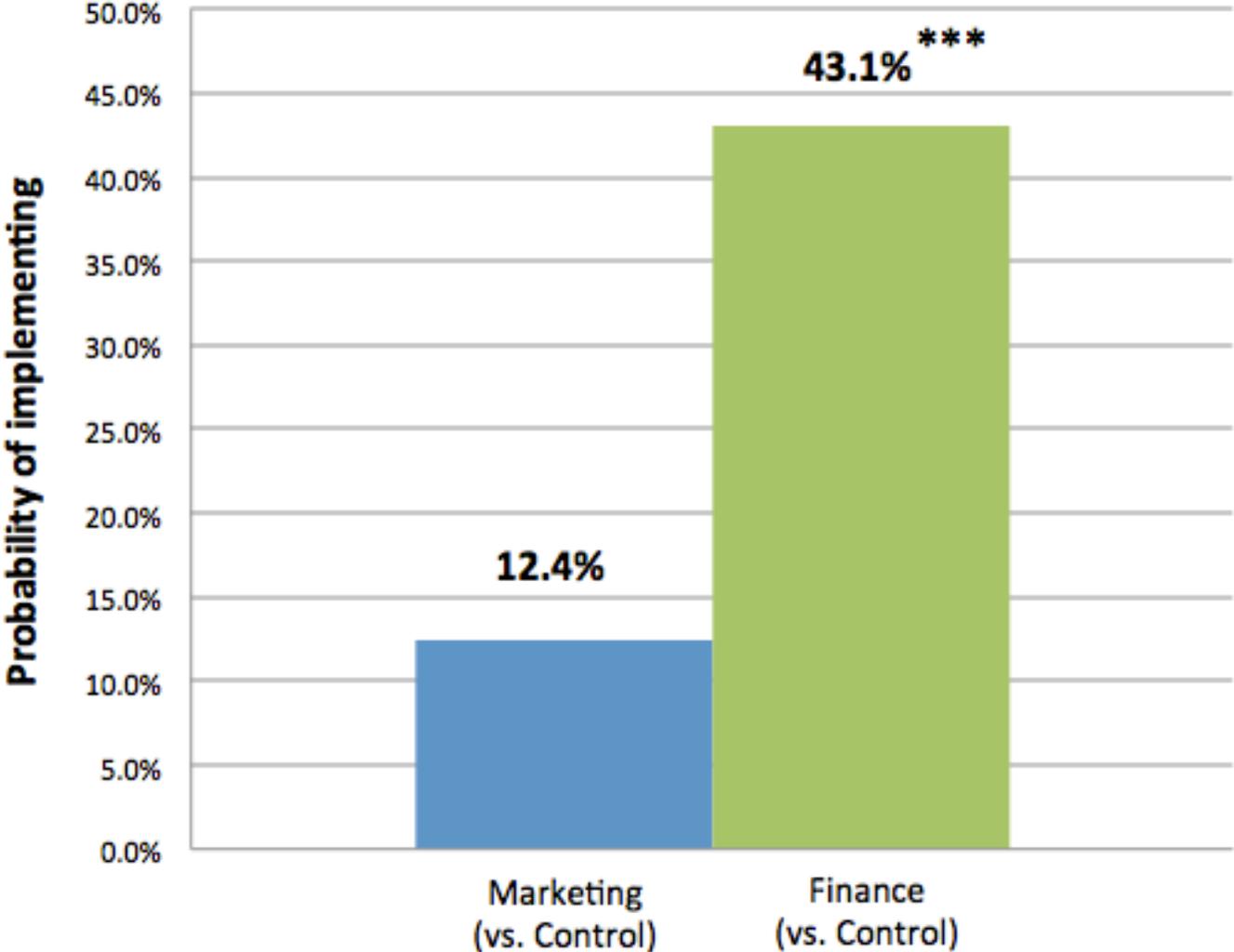
	Predicting Profits (OLS results of profits regressed on firm practice variable)	
	F-stat	Coefficient: Firm Practice
Marketing Overall [1=conducted 10 or more; 0=no]	8.21***	3,812.65***

ALL 15 MARKETING PRACTICES

Mediating Effects (Effect of Marketing/Finance treatment on profits: proportion mediated by firm practice variable)		
Sobel test: Z-stat	Proportion of Effect Mediated	Mediation: Full or Partial
2.696***	54.85***	full
<pre>graph LR; A[Marketing treatment] --> B[Marketing Overall]; A --> C[Profits]; B --> C;</pre>		

‘Efficiency’ Practices

Financial Tracking

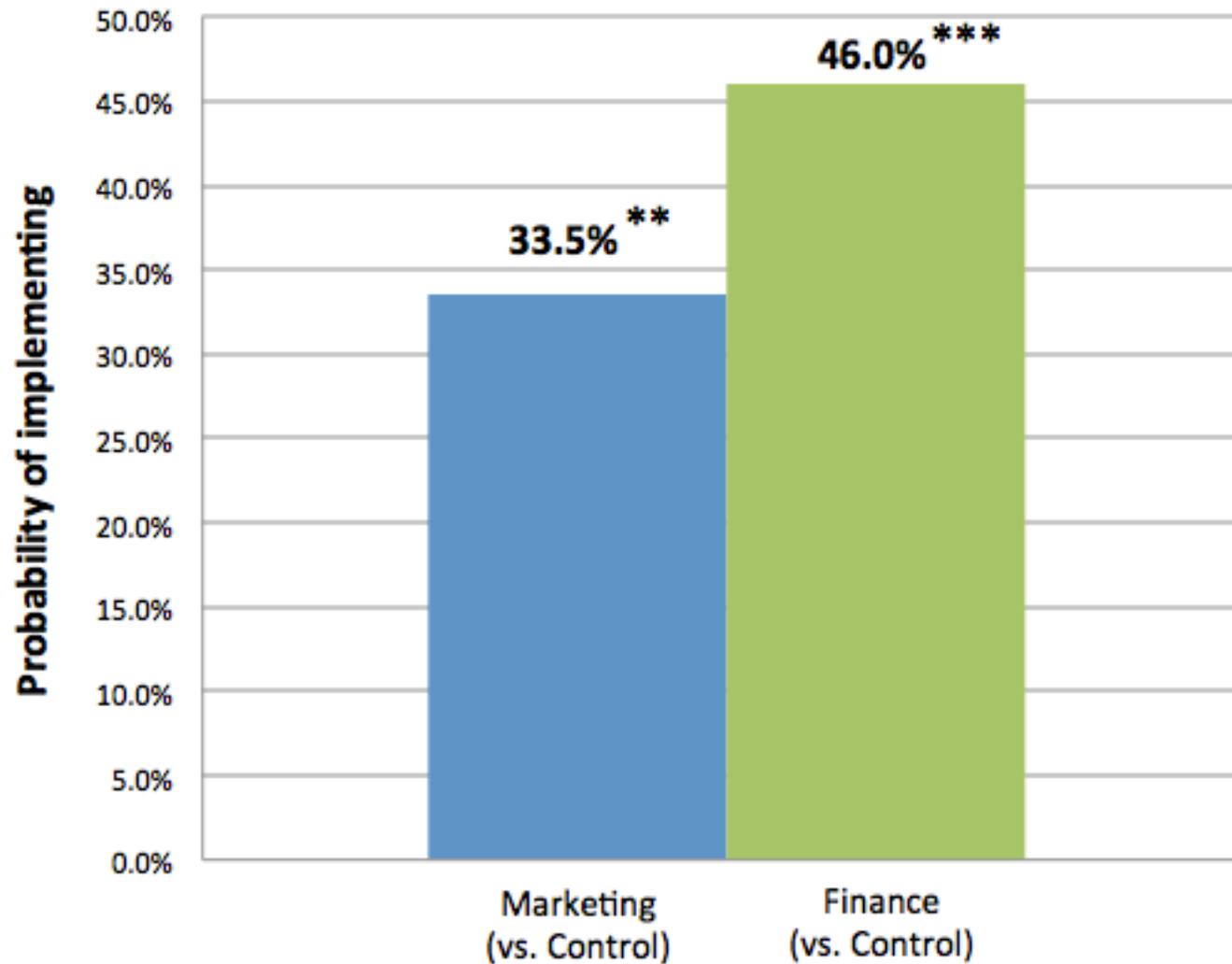


[% implementing >3 of 5 activities]

4) Financial Tracking

	Predicting Profits (OLS results of profits regressed on firm practice variable)	
	F-stat	Coefficient: Firm Practice
Financial Tracking [1=conducted 3 or more; 0=no]	7.48**	4,698.73**
1. Separated business & personal finances (1=yes; 0=no)	17.85***	5,389.86***
2. Created records to track finances (1=yes; 0=no)	8.23***	3,817.39***
3. Recorded total business assets (1=yes; 0=no)	3.93**	2,844.85**
4. Recorded total business liabilities (1=yes; 0=no)	8.85***	4,560.29***
5. Recorded all money in/out of business (1=yes; 0=no)	10.80***	4,121.44***

Financial Analyzing

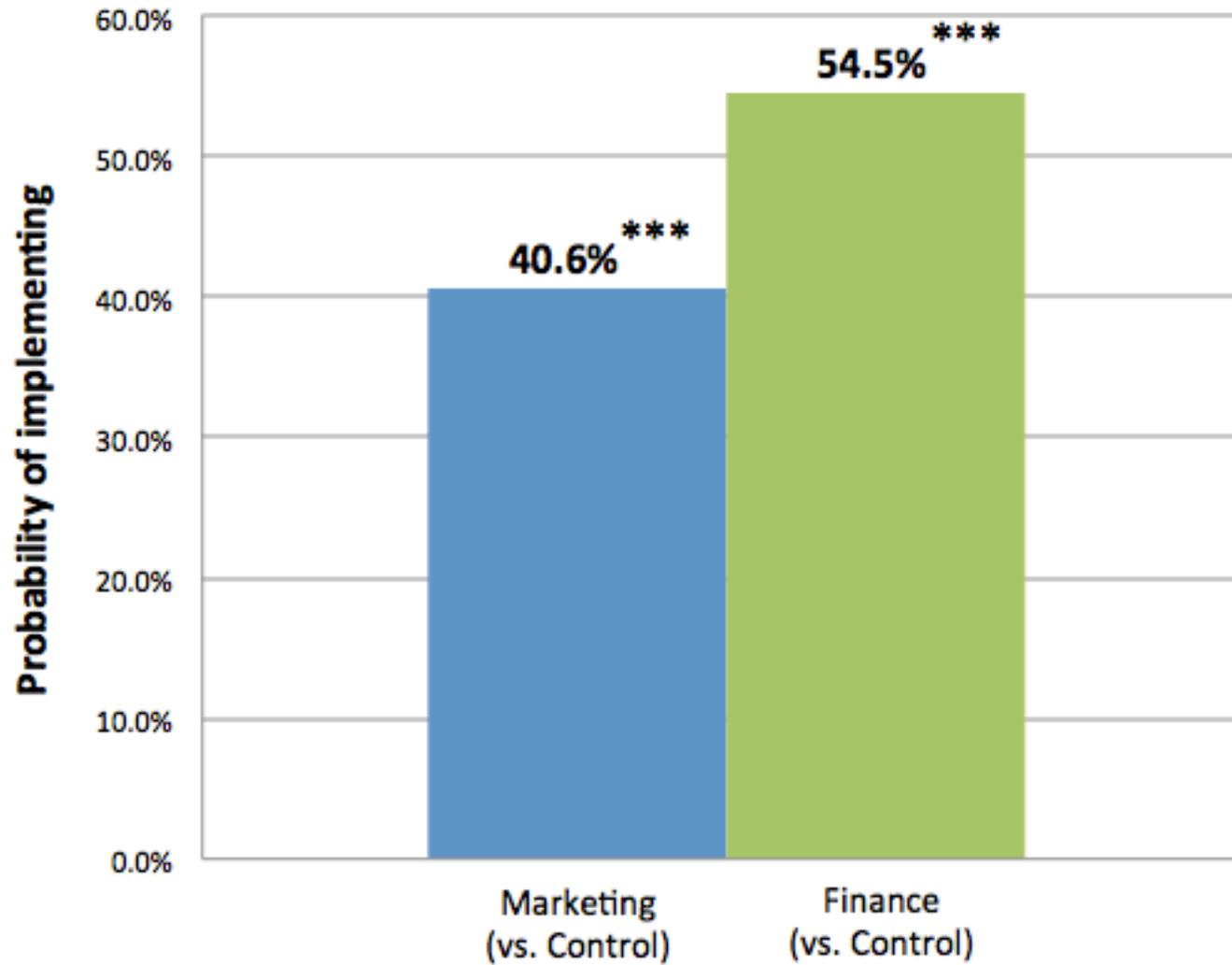


[% implementing >3 of 5 activities]

5) Financial Analyzing

	Predicting Profits (OLS results of profits regressed on firm practice variable)	
	F-stat	Coefficient: Firm Practice
Financial Analyzing [1=conducted 3 or more; 0=no]	6.30**	4,438.49**
1. Assessed cash available in the business (1=yes; 0=no)	3.90**	2,651.65**
2. Used records to check changes in sales (1=yes; 0=no)	2.95*	2,335.90*
3. Identified fixed and variable costs (1=yes; 0=no)	4.64**	2,938.10**
4. Compared performance against targets (1=yes; 0=no)	9.56***	4,166.76***
5. Examined working capital in business (1=yes; 0=no)	11.88***	4,543.09***

Financial Planning

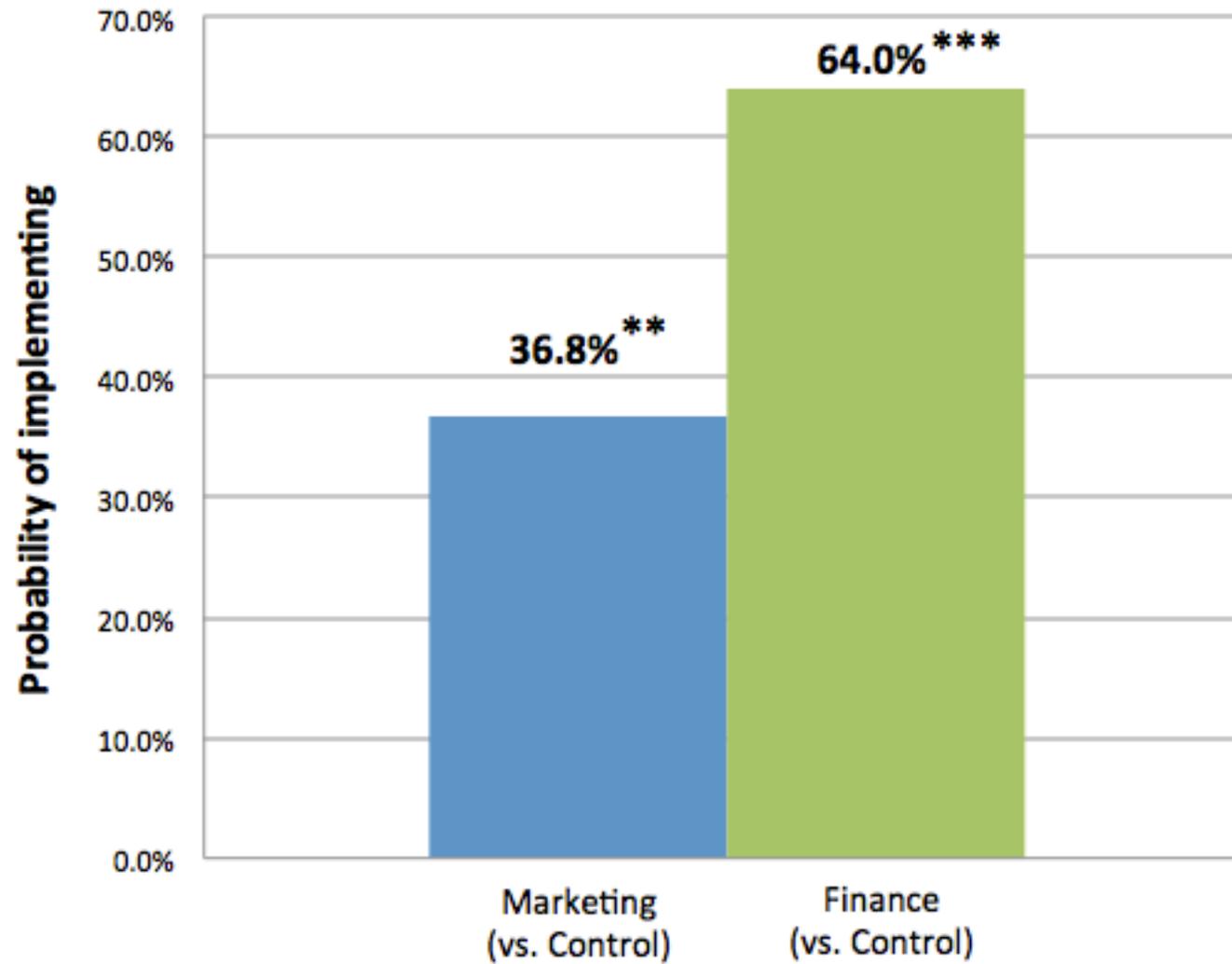


[% implementing >3 of 5 activities]

6) Financial Planning

	Predicting Profits (OLS results of profits regressed on firm practice variable)	
	F-stat	Coefficient: Firm Practice
Financial Planning [1=conducted 3 or more; 0=no]	6.67**	3,979.54**
1. Made a business budget (1=yes; 0=no)	6.49**	3,460.90**
2. Reviewed spending and updated budget (1=yes; 0=no)	4.11**	2,963.27**
3. Made or updated an income statement (1=yes; 0=no)	14.08***	5,958.14***
4. Made or updated a balance sheet (1=yes; 0=no)	7.64***	4,854.64***
5. Forecasted profits to make a decision (1=yes; 0=no)	4.13**	3,088.46**

ALL 15 FINANCE PRACTICES



[% implementing >10 of 15 activities]

ALL 15 FINANCE PRACTICES

	Predicting Profits (OLS results of profits regressed on firm practice variable)	
	F-stat	Coefficient: Firm Practice
Finance Overall [1=conducted 10 or more; 0=no]	5.69**	3,892.35**

ALL 15 FINANCE PRACTICES

Mediating Effects (Effect of Marketing/Finance treatment on profits: proportion mediated by firm practice variable)		
Sobel test: Z-stat	Proportion of Effect Mediated	Mediation: Full or Partial
2.73**	36.48%**	full
<pre>graph LR; A[Finance treatment] --> B[Finance Overall]; B --> C[Profits]; A --> C;</pre>		

Who benefits more: Exposure

*The variety of market contexts
in which a business owner has had experience.*

Marketing training – and inducing a ‘growth focus’ – may increase profits more when owners have been less exposed to different business contexts (ex ante).

- **Shifting Attention:** look outside existing business context.
- **Expanding Associations:** new perspectives on managing customers, distributors, suppliers.

Exposure: composite of 5 items

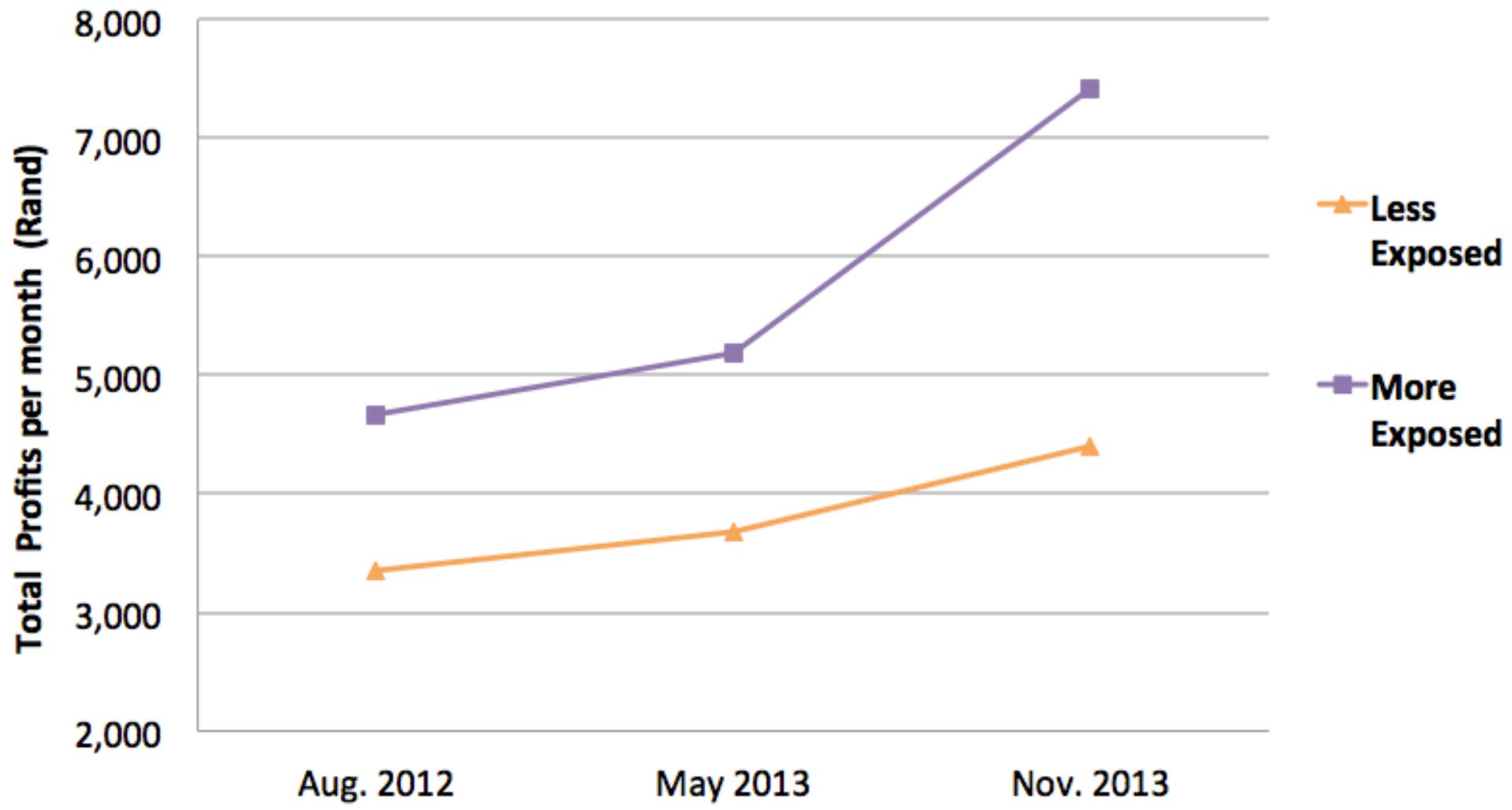
Background factors to proxy for business owner's exposure to different contexts prior to start of training.

- 0 score: if owner was not exposed to any of the background factors.
- 5 score: if owner was exposed to all five factors in her prior background.

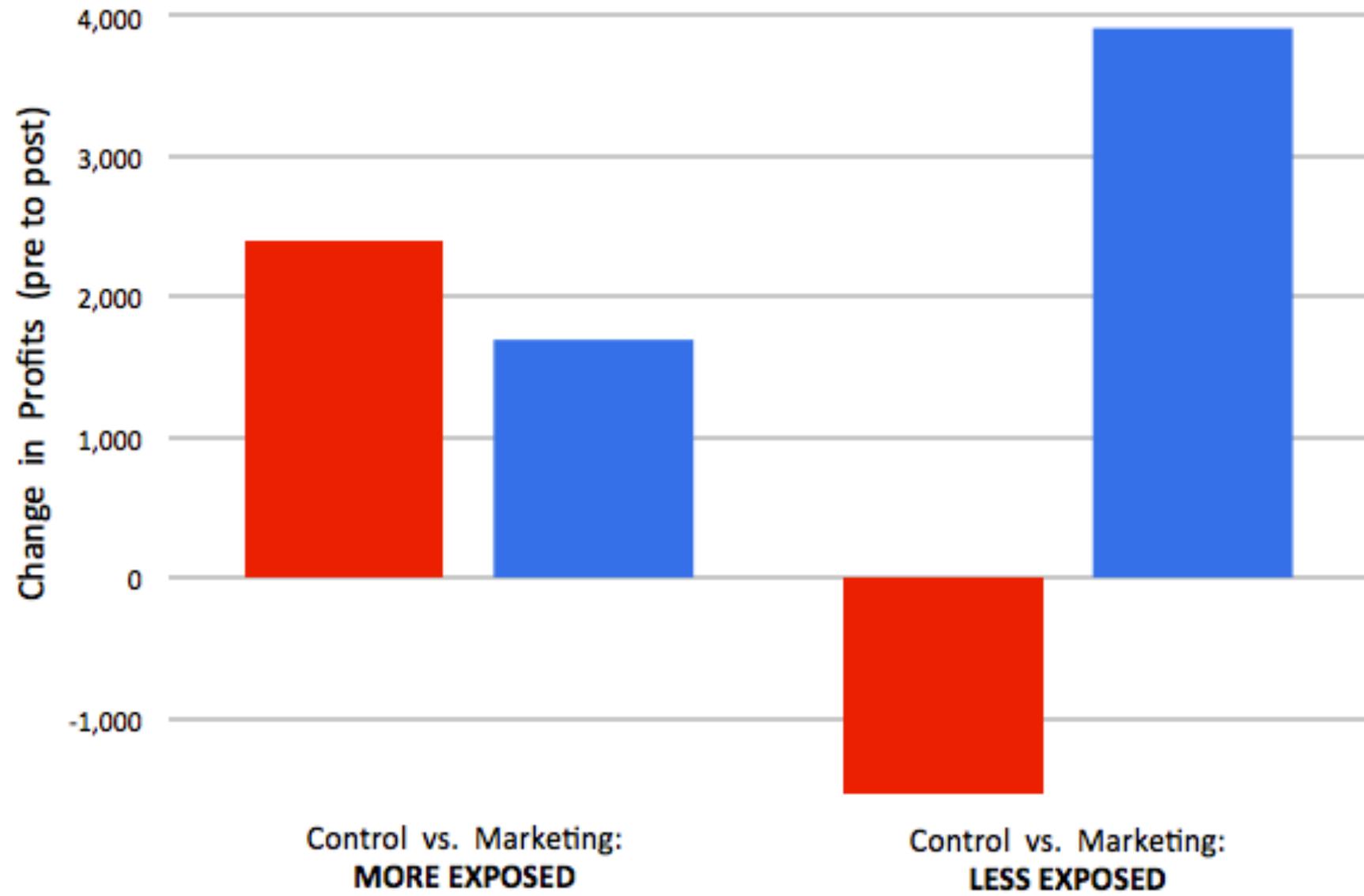
Questions: (1= yes; 0= no)

- 1. Previously held a salaried job in a company with at least 20 different products/ services.*
- 2. Previously held a salaried job in at least five different companies.*
- 3. Previously held a salaried job in a company with at least 50 employees.*
- 4. Lived outside my current state/province for longer than five years.*
- 5. Speak more than two languages fluently.*

Composite Measurement: Low on characteristic if score <2 High on characteristic if score >=2	Exposure: comparing scores on composite 60.0% of sample (n=356) scored <u>low</u> on Characteristic 1			
	Finance group	Marketing group	Control group	Total
0 (low)	41	49	58	148
1 (low)	70	60	78	208
2 (high)	51	48	50	149
3 (high)	23	20	21	64
4 (high)	1	6	13	20
5 (high)	2	2	0	4
Total	188	185	220	593



	Exposure: computing the total effect on profits (if firm owner has characteristic: less exposed)			
	D1	D2	D3	D4
[$\beta_1 + \theta_1$] : Sum of main effect & interaction effect for <u>Finance</u>	2,959.52 (1751.01)	2,959.52 (1773.82)	3,959.70* (1945.01)	3,959.70* (1969.75)
[$\beta_2 + \theta_2$] : Sum of main effect & interaction effect for <u>Marketing</u>	5,449.94** (2595.01)	5,449.94** (2628.81)	7,045.51** (2992.83)	7,045.51** (3030.89)



Who benefits more: Established

The extent to which a business owner has been operating her current business in a more permanent manner.

Finance training – and inducing an ‘efficiency focus’ – may increase profits more when owners have been running established businesses (ex ante).

- **Some Sales:** need to have money coming ‘in’ to business before the owner can learn how to manage it more effectively.
- **Some Scale:** with increased size and structure comes greater potential for improvements in reducing costs, managing inventory/inputs, etc.

Established: composite of 5 items

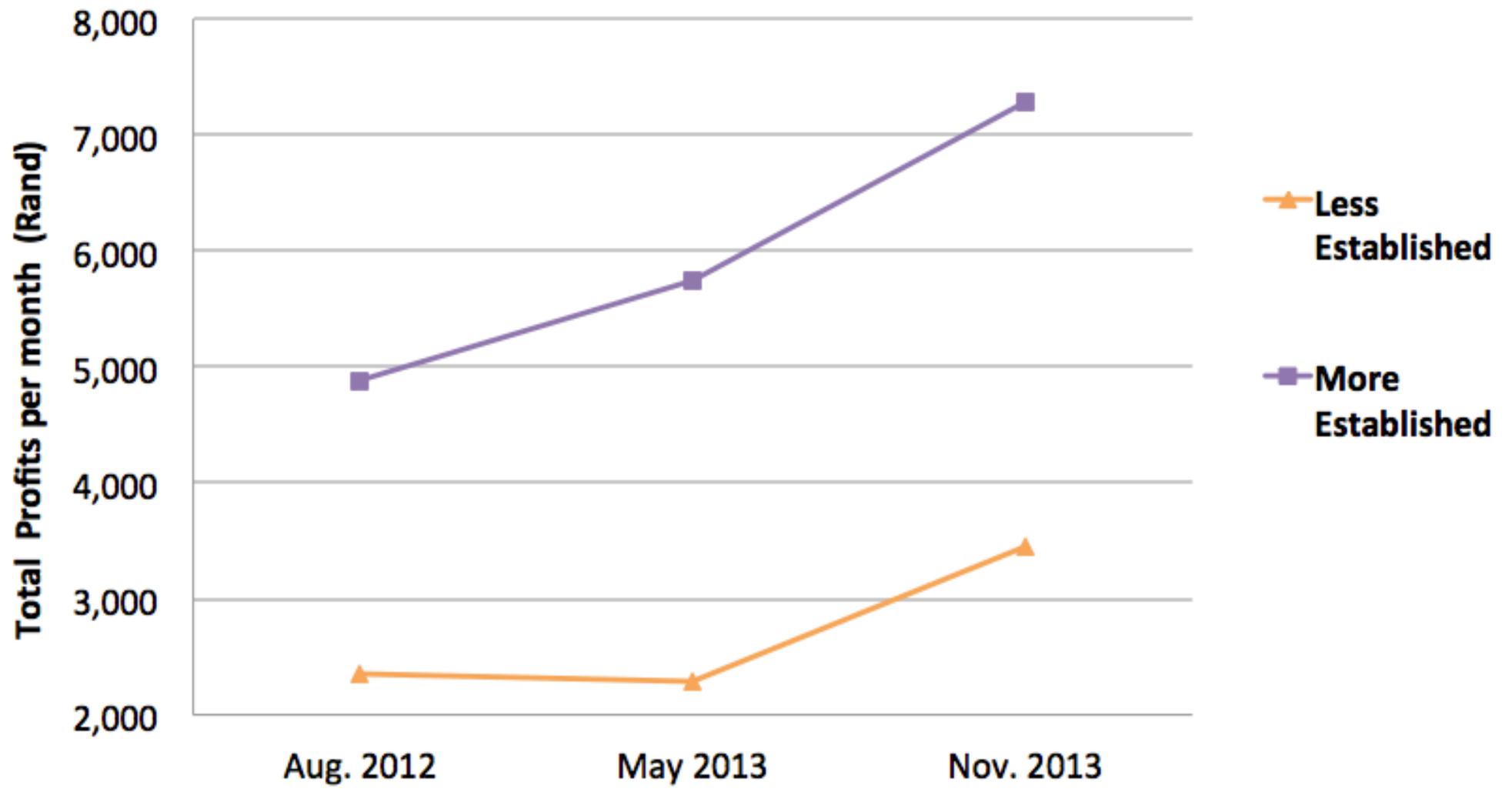
Factors to proxy for extent to which a business was more established prior to start of training (i.e. measured pre-treatment).

- 0 score: if owner was considered less established on all of the firm factors.
- 5 score: if owner was considered more established on all five factors.

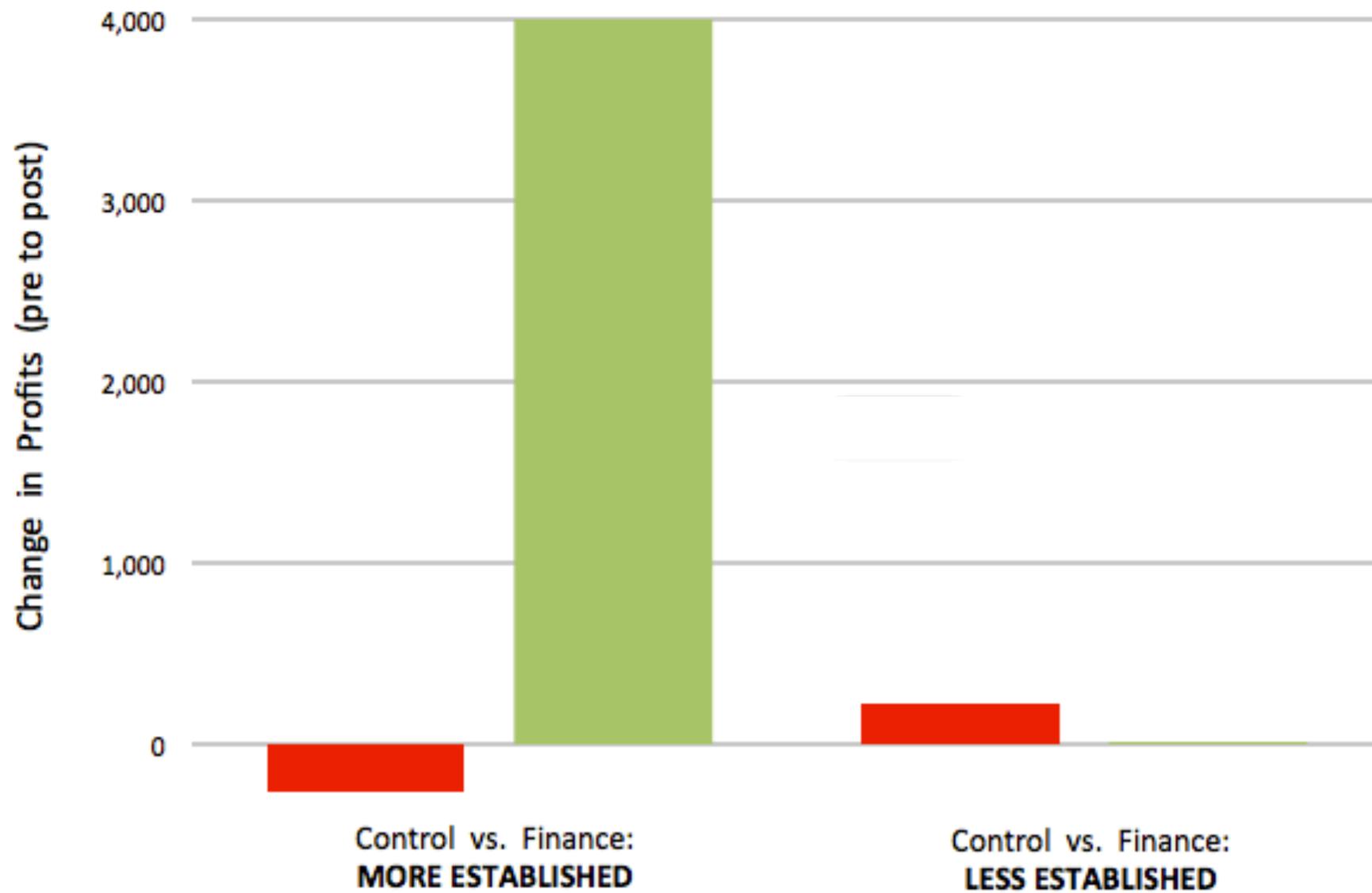
Questions:

1. *Years in Operation* (1= above median; 0 = below).
2. *Capital at Startup* (1= above median; 0 = below).
3. *Structure of Business Location*, which measures the physical size and permanency of the business premises (1= above median; 0 = below).
4. *Firm Size*, as per total paid employees (1= above median; 0 = below).
5. *Registered Business* (1= if participant's business had been formally registered with the government; 0 = if not registered).

Composite Measurement: Low on characteristic if score <2 High on characteristic if score >=2	Established: comparing scores on composite 60.2% of sample (n=357) scored <u>high</u> on Characteristic 2			
	Finance group	Marketing group	Control group	Total
0 (low)	25	26	37	88
1 (low)	47	43	58	148
2 (high)	47	46	50	143
3 (high)	42	41	49	132
4 (high)	20	22	18	60
5 (high)	7	7	8	22
Total	188	185	220	593



	Established: computing the total effect on profits (if firm owner has characteristic: more established)			
	E1	E2	E3	E4
[$\beta_1 + \theta_1$]: Sum of main effect & interaction effect for <u>Finance</u>	5,282.91** (2145.58)	5,172.04** (2229.34)	6,059.40** (2269.90)	5,783.98** (2401.74)
[$\beta_2 + \theta_2$]: Sum of main effect & interaction effect for <u>Marketing</u>	2,720.58 (1658.40)	2,814.96 (1718.13)	3,947.90 (2776.9)	4,102.10 (2897.57)



Implications

- Missing Middle: not just about macro solutions & money
 - business skills training *can* play a central role
- Policy Circles: finance training (alone) doesn't work
 - finance skills: *efficiency* may depend on level of establishment
 - marketing skills: *growth* may depend on prior exposure
- Developing Countries: focus on 'subsistence' firms
 - opportunity for greater impact by screening on growth potential