Improving Firm Competitiveness in the NYS Food & Beverage Manufacturing Industry

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New York Food and Beverage Manufacturing Study
Presented to Upstate-Niagara Board of Directors
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Ithaca, NY

http://agribusiness.aem.cornell.edu/foodmanuf.html

Cornell Program on Agribusiness and Economic Development

Goals and Objectives

- Provide an economic analysis and assessment of the food and beverage manufacturing industry in New York Stae, disaggregated by important manufacturing sectors.
- Identify strategic opportunities and barriers to growth and improved firm performance.
- Develop prioritized recommendations for firms and public policy to improve the competitiveness and business climate for food manufacturing in New York

Study Timeline and Tools

- Project Period: 10/2007 – 09/2010
- Tools & Methods:
  - Advisory Council
  - Secondary Data Analysis, Primary Data Analysis
  - Industry Focus Groups
  - Growth Modeling & Firm Clustering (grad student)

- Extension & Outreach:
  - Industry/Association Presentations
  - Comprehensive final report delivery, Industry Fact Sheets
  - Project Web Site
  - Academic Articles and Presentations
  - Project-Ending Symposium

Advisory Council

- **Beverages, Juices, & Sauces:**
  - **James Finkle**, Constellation Brands
  - **James Trezise**, NY Wine & Grape Foundation
  - **David Skinner**, Clinton's Ditch Cooperative
  - **Brent Roagie**, National Grape/Welchs
- **Fruits, Vegetables, & Snacks:**
  - **Dennis Beedham**, Allens Inc.
  - **Jim Kloman**, Frito Lay
  - **Lyle Merle**, Merle Maple Farm
- **Dairy:**
  - **Raymond Dyke**, Agri-Mark
  - **Kim Pickard-Dudley**, Upstate Niagara Cooperative
  - **Jeff Sokal**, Steuben Foods
- **Meat Products:**
  - **Chris and Bernadette Wilson**, Wilson Beef Farms
- **Seafood:**
  - **Roger Tollefsen**, NY Seafood Council
- **Grain Milling:**
  - **Francois LaChance**, Star of the West Milling Co.
- **Agencies:**
  - **Susan Noble**, Cornell Agriculture and Food Technology Park
  - **Stephen McGrattan**, NYS Department of Ag and Markets
  - **Michael Morse**, Empire State Development
  - **Julie Suarez**, New York Farm Bureau and NY Food Policy Council
  - **Jennifer Drumluk**, Corporate Relations, CALS, Cornell University

Some Motivation…

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Adding Up Ag-Based Industry Contributions to the NYS Economy				
Year	Sector	Output ($M)	Employment	Value-Added ($M)
1998	Farm	3,291	59,541	1,323
2006	Farm	3,732	52,165	1,592
	% Change	13.4%	-12.4%	20.3%
1998	Ag Services	1,381	81,464	1,008
2006	Ag Services	1,683	39,392	1,010
	% Change	21.9%	-51.6%	0.2%
1998	Ag Manuf.	12,076	52,500	5,654
2006	Ag Manuf.	24,169	52,333	6,248
	% Change	100.1%	-0.3%	10.5%
1998	Ag Wholesale	64,329	71,381	43,744
2006	Ag Wholesale	53,434	74,407	36,335
	% Change	-16.9%	4.2%	-16.9%
1998	Ag Retail	26,882	197,145	25,269
2006	Ag Retail	35,579	208,035	22,415
	% Change	32.4%	5.5%	-11.3%
1998	Food Service	18,414	404,753	10,710
2006	Food Service	28,088	487,227	17,943
	% Change	52.5%	20.4%	67.5%
1998	Total	126,373	866,784	87,708
2006	Total	146,684	913,559	85,542
	% Change	16.1%	5.4%	-2.5%

Sources: BEA, CBP, MIG.
$ are nominal million.
Employers only.

Some Motivation…

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2006	Total	146,684	913,559	85,542
	% Change	16.1%	5.4%	-2.5%

Year	Sector	Output ($M)	Employment	Value-Added ($M)
1998	State Totals	1,105,069	10,102,502	689,906
2006	State Totals	1,669,158	10,690,700	1,034,087
	% Change	51.0%	5.8%	49.9%
1998	Ag-Based Share	11.4%	8.6%	12.7%
2006	Ag-Based Share	8.8%	8.5%	8.3%

Sources: BEA, CBP, MIG.
$ are nominal million.
Employers only.

Some Motivation…

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Adding Up Ag-Based Industry Contributions to the NYS Economy				
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1998	Ag Manuf.	12,076	52,500	5,654
2006	Ag Manuf.	24,169	52,333	6,248
	% Change	100.1%	-0.3%	10.5%

Year	Sector	Output ($M)	Employment	Value-Added ($M)
1998	Other NY Mfg	174,939	885,615	74,003
2006	Other NY Mfg	205,203	532,960	62,022
		17.3%	-39.8%	-16.2%

Year	Sector	Output ($M)	Employment	Value-Added ($M)
1998	US Food and Bev	490,659	1,711,648	120,141
2006	US Food and Bev	740,330	1,676,545	149,486
		50.9%	-2.1%	24.4%

Sources: BEA, CBP, MIG.
$ are nominal million.
Employers only.

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Plant Enumeration and Survey

Firm Establishment Survey

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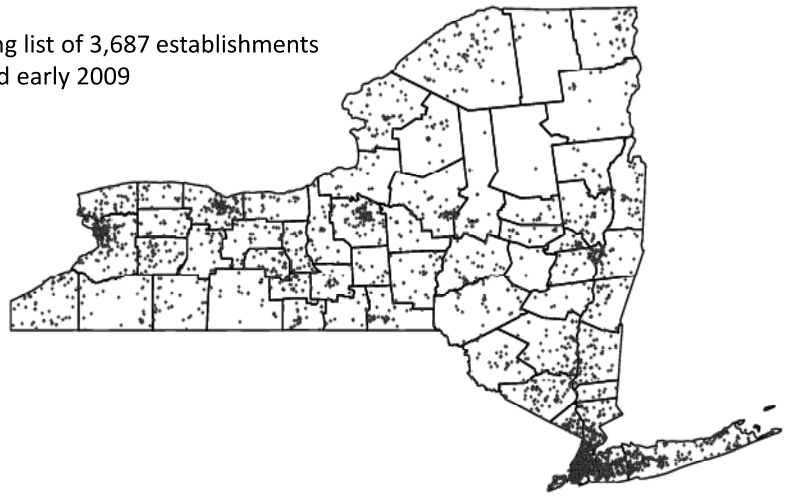
• Mailing list of 3,687 establishments
• mailed early 2009



Firm Establishment Survey

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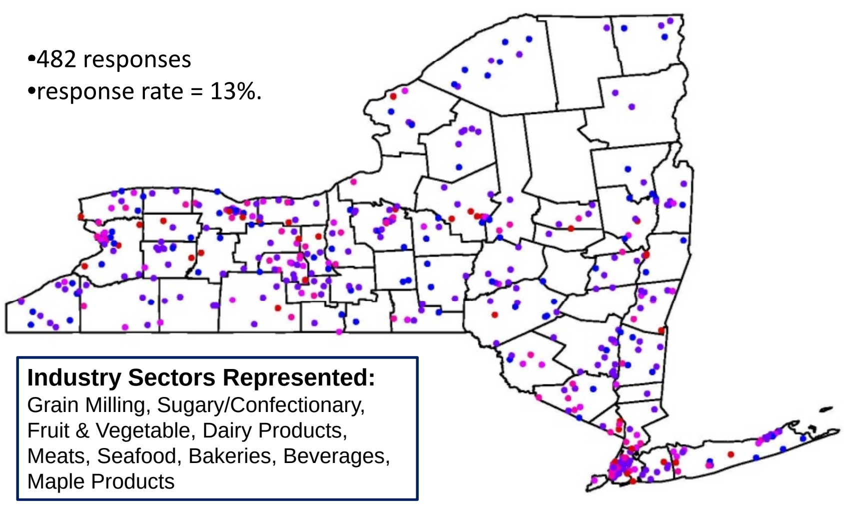
•482 responses
•response rate = 13%.



Industry Sectors Represented:
Grain Milling, Sugary/Confectionary, Fruit & Vegetable, Dairy Products, Meats, Seafood, Bakeries, Beverages, Maple Products

Responses by Industry Category

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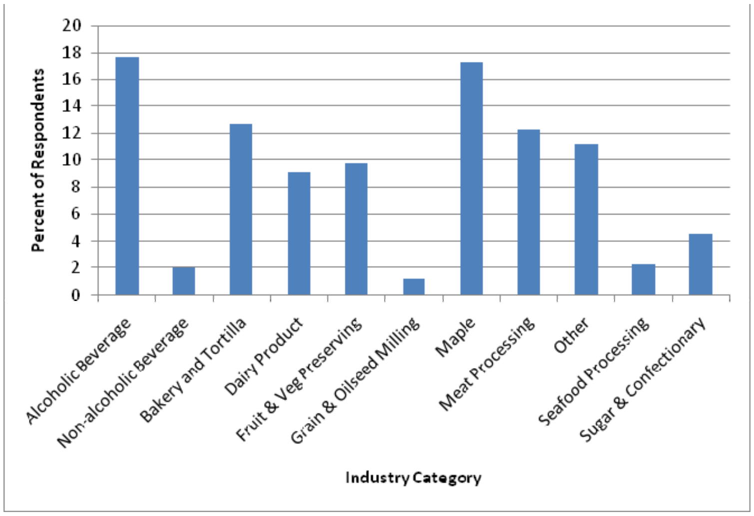

Downstate and Upstate Establishments

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- Downstate:
  - 20.7% of resp.
  - 45% were Bakeries + Other Processors
  - 55.6% think it is great place for bus.
- Upstate:
  - 79.3% of resp.
  - 41.1% were Maple + Alc. Beverages
  - 37.3% think it is great place for bus.

Respondents' Customers, by % of Sales

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Customer Type	% of Sales
Wholesalers	22.9
Retailers	21.3
Foodservice	10.1
Consumers	38.4
Processors	5.9
Other	1.6

Dairy and Non-Alc Bev sell over 60% of their sales to retailers/wholesalers, more than any other industry

- Just over 60% of Maple and 60% of Alc-Bev sales are direct to consumer.
- 54% of sales of Small firms are to consumers.

Inputs and Outflows

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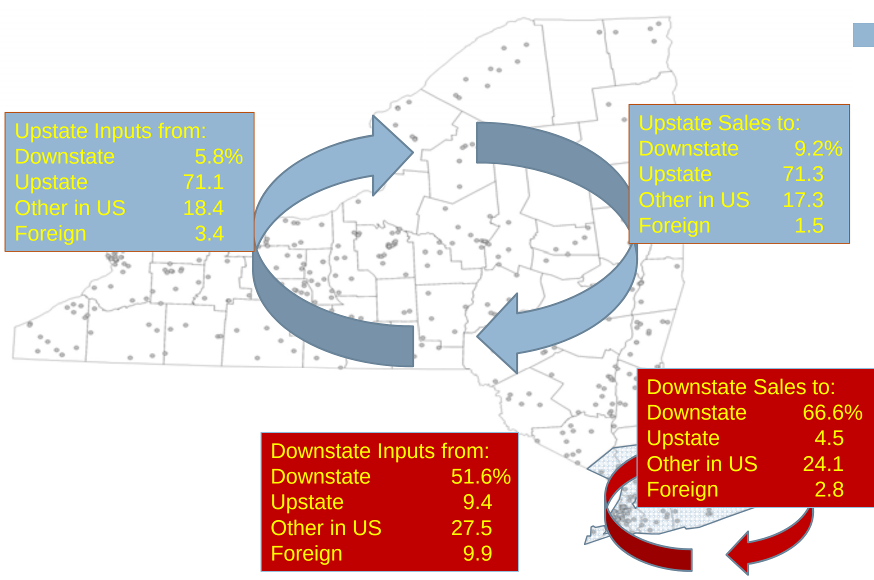

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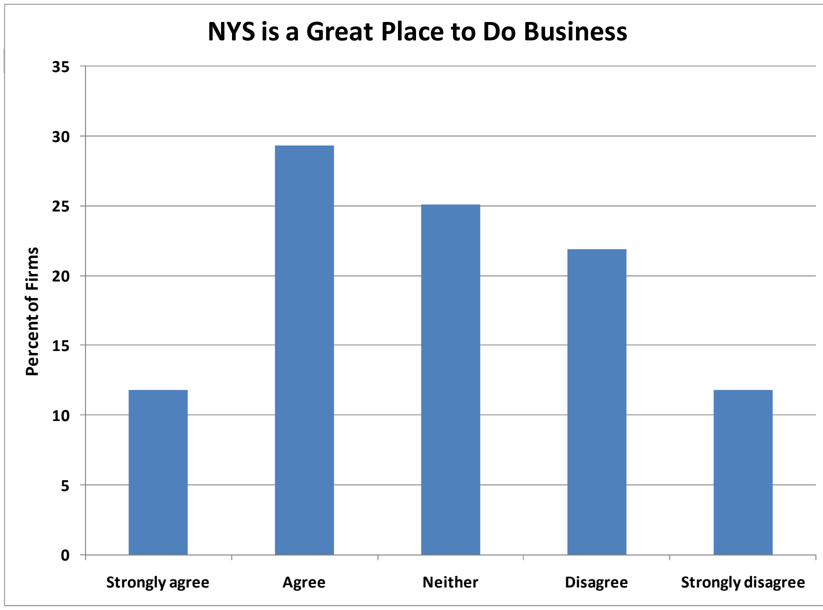
Doing Biz in NYS and Firm Retention



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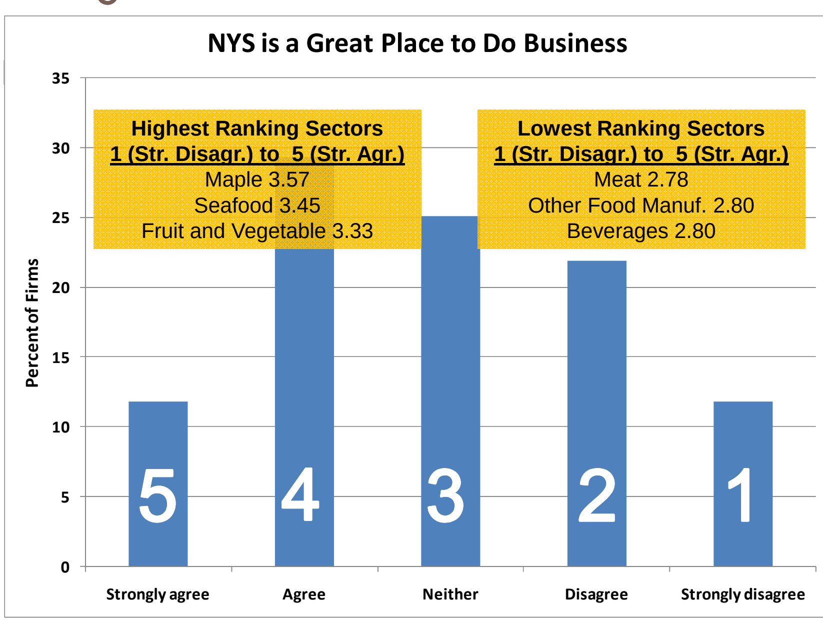
Doing Biz in NYS and Firm Retention



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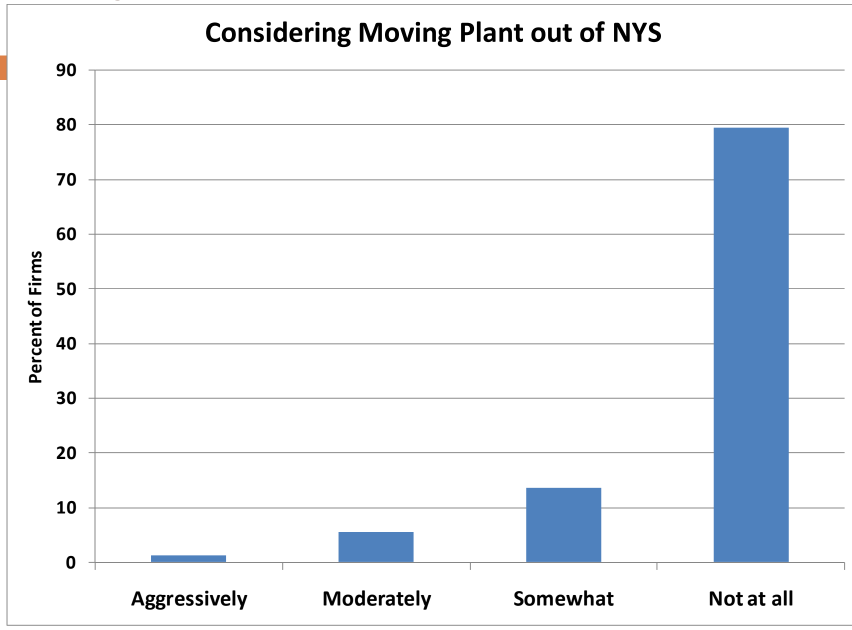

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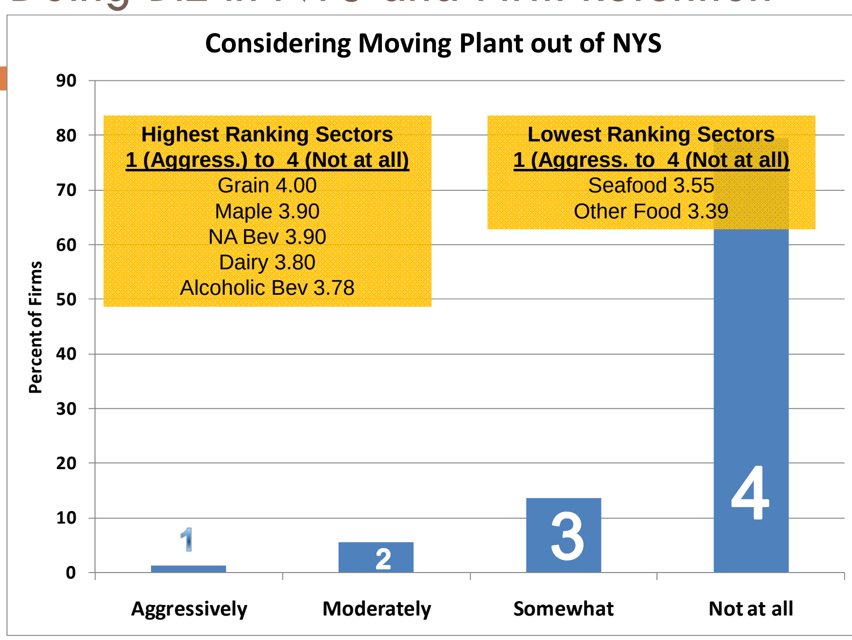

Doing Biz in NYS and Firm Retention

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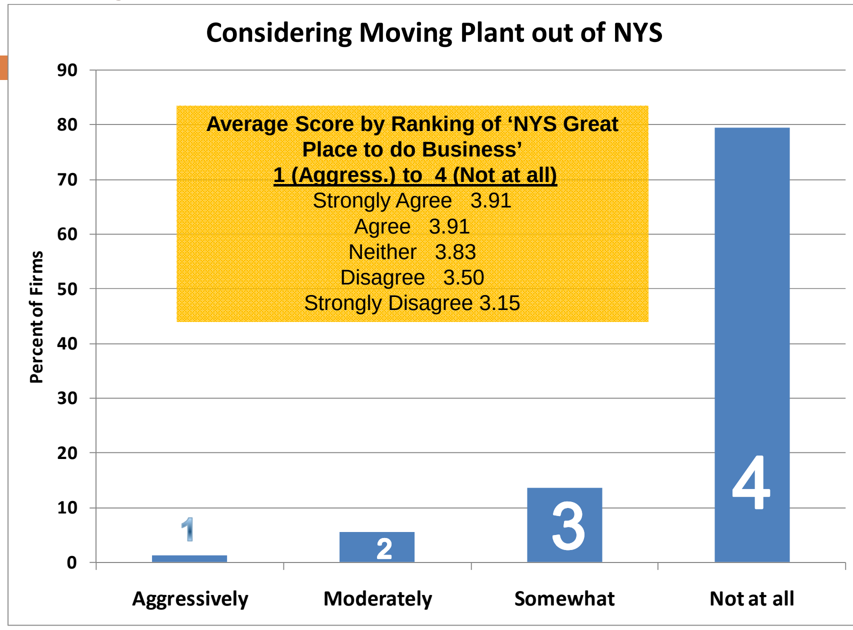

Average revenue growth – past 3 years

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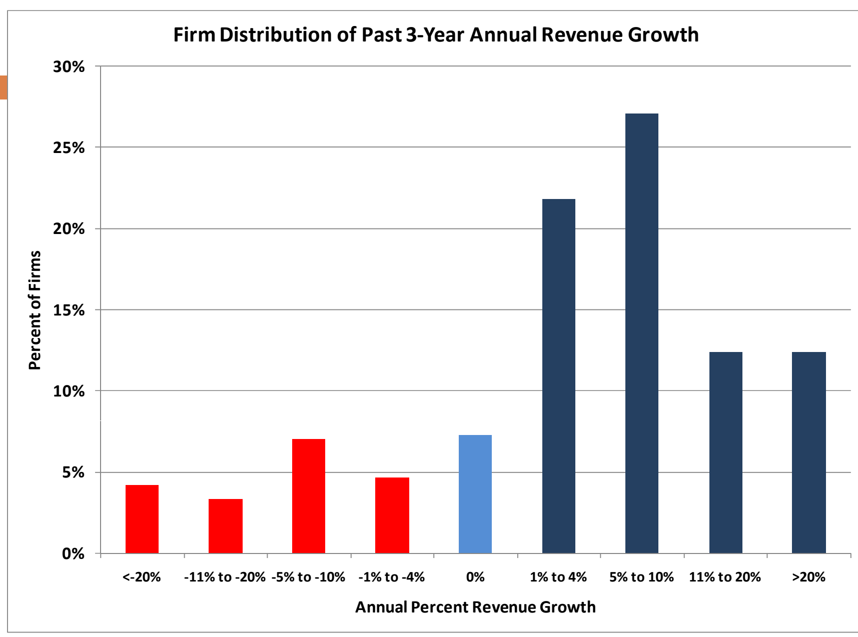

Future (3 yrs) revenue growth summary

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Sector Rankings on 3 Year Growth Projections			
Rank	Revenue	Employees	Capital Spending
1	OtherF	OtherF	Dairy
2	F & V	Alc Bev	OtherF
3	Alc Bev	Dairy	F & V
4	Seafood	Grain	Alc Bev
5	Maple	Bakery	Grain
6	Dairy	F & V	Bakery
7	Bakery	Sugar	Maple
8	Sugar	Seafood	Seafood
9	Meat	Meat	Sugar
10	Grain	NonAlc Bev	Meat
11	NonAlc Bev	Maple	NonAlc Bev

Other Foods (specialty) showed consistently stronger growth expectations, followed the Dairy, Alc Bev, and Fruit and Vegetable sectors. Sectors ranking at the bottom included the Meat and NonAlc Bev sectors.

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Barriers, Opportunities, & Strategies

1. Business Environment Factors Assessment (survey)
2. Collaborative Strategies (survey)
3. Beneficial Programs (survey)
4. Focus Groups: Watkins Glen, Batavia, Manhattan, Cicero

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Table X. Summary of Business Environment Factors on Firm Performance, All Firms.

Business Factor	Code	Factor	Mean Score	Std. Err.	% Top Two
Proximity to customer markets	v	1	3.83	0.05	65.88
Quality of communication infrastructure	b	1	3.80	0.05	63.24
Region's overall quality of life	k	1	3.70	0.04	58.39
Quality of state college and univ. R/O/A	l	4	3.87	0.04	57.18
State branding, promo., & marketing campaigns	q	4	3.68	0.04	51.16
Proximity of input suppliers	w	1	3.54	0.05	49.78
Quality of transportation infrastructure	a	1	3.58	0.05	47.45
Availability of trucking services	t	1	3.54	0.04	44.47
Regional or local branding activities	r	4	3.59	0.04	43.62
Availability of product distribution services	u	1	3.50	0.04	39.78
Level of state initiatives and growth incentives	c	2	3.24	0.06	38.98
State support for energy efficiency & renewables	e	2	3.37	0.05	35.95
Availability of alliances & collab. with other firms	s	4	3.48	0.04	35.89
Availability of workers with skills required	m	5	3.23	0.05	35.02
State support for improved envtl. practices	d	2	3.21	0.04	28.22
Availability of mgt. and other professional staff	n	5	3.23	0.05	27.82
Availability of workforce training	p	5	3.13	0.04	21.74
Labor force wage rates	o	3	2.87	0.04	16.10
Cost of living for employees	j	3	2.66	0.05	15.40
Ability to enter into public-private partnerships	f	2	3.18	0.04	14.89
State and local govtl. regulations and permitting proc.	i	3	2.47	0.05	13.29
Other costs of doing business	h	3	2.17	0.05	10.38
State-level costs of doing business (WC, taxes)	g	3	1.98	0.05	8.86

Likert Scale: 1- Very Harmful, 2 - Harmful, 3 - Neither Harmful or Beneficial, 4 - Beneficial, 5 - Very Beneficial

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Table X. Summary of Business Environment Factors on Firm Performance, All Firms.

Business Factor	Code	Factor	Mean Score	Std. Err.	% Top Two
Proximity to customer markets	v	1	3.83	0.05	65.88
Quality of communication infrastructure	[illegible]	[illegible]	3.80	0.05	63.24
Region's overall quality of life	[illegible]	[illegible]	3.70	0.04	58.39
Quality of state college and univ. R/O/A	[illegible]	[illegible]	3.87	0.04	57.18
State branding, promo., & marketing campaigns	[illegible]	[illegible]	3.68	0.04	51.16
Proximity of input suppliers	[illegible]	[illegible]	3.54	0.05	49.78
Quality of transportation infrastructure	[illegible]	[illegible]	3.58	0.05	47.45
Availability of trucking services	[illegible]	[illegible]	3.54	0.04	44.47
Regional or local branding activities	[illegible]	[illegible]	3.59	[illegible]	[illegible]
Availability of product distribution services	[illegible]	[illegible]	3.50	[illegible]	[illegible]
Level of state initiatives and growth incentives	[illegible]	[illegible]	3.24	[illegible]	[illegible]
State support for energy efficiency & renewables	[illegible]	[illegible]	3.37	[illegible]	[illegible]
Availability of alliances & collab. with other firms	[illegible]	[illegible]	3.48	[illegible]	[illegible]
Availability of workers with skills required	[illegible]	[illegible]	3.23	[illegible]	[illegible]
State support for improved envtl. practices	d	2	3.21	[illegible]	[illegible]
Availability of mgt. and other professional staff	n	5	3.23	[illegible]	[illegible]
Availability of workforce training	p	5	3.13	[illegible]	[illegible]
Labor force wage rates	o	3	2.87	[illegible]	[illegible]
Cost of living for employees	j	3	2.66	[illegible]	[illegible]
Ability to enter into public-private partnerships	f	2	3.18	[illegible]	[illegible]
State and local govtl. regulations and permitting proc.	i	3	2.47	[illegible]	[illegible]
Other costs of doing business	h	3	2.17	[illegible]	[illegible]
State-level costs of doing business (WC, taxes)	g	3	1.98	[illegible]	8.86

Opportunities fully exploited?

Barriers being effectively addressed?

Likert Scale: 1- Very Harmful, 2 - Harmful, 3 - Neither Harmful or Beneficial, 4 - Beneficial, 5 - Very Beneficial

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Table X. Factor Interpretation and Composite Factor Scores, All Firms.

Code	Variable Description	Variable Score	Factor Description	Factor Score
l	Quality of state college and univ. R/O/A	3.87	Cooperative Marketing and Technical Assistance	3.65
q	State branding, promo., & marketing campaigns	3.68		
r	Regional or local branding activities	3.59		
s	Availability of alliances & collab. with other firms	3.48		
a	Quality of transportation infrastructure	3.58	Infrastructure and Market Access	3.64
b	Quality of communication infrastructure	3.80		
k	Region's overall quality of life	3.70		
t	Availability of trucking services	3.54		
u	Availability of product distribution services	3.50		
v	Proximity to customer markets	3.83		
w	Proximity of input suppliers	3.54		
c	Level of state initiatives and growth incentives	3.24	State Business Incentive Programs	3.25
d	State support for improved envtl. practices	3.21		
e	State support for energy efficiency & renewables	3.37		
f	Ability to enter into public-private partnerships	3.18		
m	Availability of workers with skills required	3.23	Workforce Availability and Development	3.20
n	Availability of mgt. and other professional staff	3.23		
p	Availability of workforce training	3.13		
g	State-level costs of doing business (WC, taxes)	1.98	State Business Costs and Regulation	2.43
h	Other costs of doing business	2.17		
i	State and local govtl. regulations and permitting proc.	2.47		
j	Cost of living for employees	2.66		
o	Labor force wage rates	2.87		

Likert Scale: 1- Very Harmful, 2 - Harmful, 3 - Neither Harmful or Beneficial, 4 - Beneficial, 5 - Very Beneficial

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Table X. Factor Interpretation and Composite Factor Scores, All Firms.

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c	Level of state initiatives and growth incentives	3.24	State Business Incentive Programs	3.25
d	State support for improved envtl. practices	3.21		
e		3.37		
f		3.18		
m				
n				
p				
g				
h				
i				
j		2.66		
o	Labor force wage rates	2.87		

Effects vary considerably by sector.

F&V, Alc Bev, Maple: +Cooperative Marketing and Technical Assistance

Seafood: +Infrastructure and Market Access , -Business Incentive Programs.

Other Food, NA Bev +Workforce Availability and Development.

Effects vary considerably by plant size.

Non-employee firms: +Cooperative Marketing and Technical Assistance

Large firms: +Infrastructure and Market Access, +Business Incentive Programs, +Workforce Availability and Development

Mid-size firms: -State Business Costs and Regulations

Likert Scale: 1- Very Harmful, 2 - Harmful, 3 - Neither Harmful or Beneficial, 4 - Beneficial, 5 - Very Beneficial

Firm Collaborative Activities

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Table X. Utilization and value of collaborative activities and alliances with other firms, by firm size.

	All Firms		By Firm Size (Employees): None		1 to 9		10 to 50		> 50	
Activity	Utilized %	Value [0,3]	Utilized %	Value [0,3]	Utilized %	Value [0,3]	Utilized %	Value [0,3]	Utilized %	Value [0,3]
Marketing & Promotion	33.4	2.72	37.2	2.98	38.6	2.80	28.7	2.53	17.0	2.48
Legislative Affairs	18.1	2.52	16.7	2.63	18.2	2.44	15.6	2.55	24.5	2.61
Group Purchasing	17.0	2.29	7.7	2.28	18.8	2.31	17.2	2.17	18.9	2.49
Distribution/Transportation	14.4	2.47	2.6	2.30	16.8	2.37	13.9	2.60	20.8	2.67
Shared Services	10.0	2.20	7.7	2.25	12.7	2.11	7.4	2.21	11.3	2.31
Workforce Development	9.0	2.17	1.3	1.90	11.1	2.05	4.1	2.25	22.6	2.70

Smaller firms rely more on *Marketing & Promotion*, while large firms concentrate on *Workforce Development*, *Legislative Affairs*, and *Distribution.* Mid-size firms value *Distribution* relatively high, but is utilized less than expected.

How can smaller firms develop better collaborative distribution strategies?

How can large firms better access and develop an adequate workforce?

Examples of Effective State Programs or Initiatives:

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"What do you feel are the most effective programs or initiatives in NYS that improve the competitiveness of your business?"

Cooperative Marketing & Technical Assistance

State Business Incentive Programs

Stated Programs	Number of Respondents	Specific Examples
Pride of New York	52	
Cornell	50	Extension; Food Venture Center; Enology & Viticulture
Wine associations	34	NYW&GF; LI; regional wine trails
Empire Zones	30	
Maple Associations	21	NY Maple Assoc.; Maple Weekend
Loan, grant, credit programs	17	SARE; Economic Development;
Energy programs	16	Power for Jobs, NYSERDA grants; ECSP NYC energy program
Ag & Mkts	9	
Small bus.Devel Centers; Ec Dev.	7	county and state development; Industrial Development Agency; Small Business Assoc
Farmers markets	6	
Tourism	5	

Regional Focus Groups

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Prioritized Barriers (1 not impt – 5 very impt)

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Taxes
Ins. Costs
Lic. Reg's
Health Regs
S/R Labor
Input Supply
Energy Costs

High state taxes/fees overall - prop. Tax, income, workers comp., shrinking tax base, non-competitive with OOS plants	4.75
Disproportionate increasing insurance Costs; liability, product liability, health	4.57
Increasing state licensing fees/inspection fees & state business taxes	4.16
Potential labor regulations regarding overtime, minimum wage	4.14
Avail. & retention of younger, entry-level laborers; poor work ethic, incl. labor reg's (ext. unemp ben) w/less incentive to stay employed, new generation 'expectations'	3.80
Ban of trans-fats in foods not packaged (bakery) - targeted regulation relation to nutrition and health	3.60
Raw material supply availability	3.50
High energy & utility costs, incl. costs to install new equip addressing efficiencies, multiple sellers/options	3.25
State regulations outdated, inconsistent appn., incl. workers comp costs and process	3.19
Unreasonable agency reporting req'ts/licensing, duplicative, time consuming	3.17
Inability to recruit adequate labor force due to cost of living, etc.	3.00
Limited Sales Outlets within State, shrinking markets/customers	2.98
Lack of incentive programs for estab. firms (not start-ups)	2.69
Bank financing is becoming more restrictive	2.57
Poorly trained agency employees (inspection)	2.55
Lack of distribution/aggregation infrastr. for small firms	2.51
Old plant location problems with lim. Access to distn (RR, HW), energy (NG)	2.14
Slow reg. approval process to renew. energy dev. for producing own power (wind)	2.14
Difficulty working with labor unions	2.14
Cost of shipping and other costs out of state prices out of market	2.14
Skilled labor moving out of the state	1.29
Migrant labor rules over-burdensome	1.29

Prioritized Opportunities (1 not impt – 5 very impt)

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New Products – local, healthy, information

Supply Chain

Inc. PC Demand

Sector Partnering

Energy Prodn.

Univ. Collabs

Direct Mktg

Growing demand for local, green, environmentally-friendly products	4.13
Growing demand for functional foods, foods promoting healthy lifestyle	3.93
Supply chain innovations with distributors, etc.	3.75
Trends in consumer demand for heritage, ethnic foods	3.67
Growth opportunities in current product line, expandable pc consumption	3.55
Sector Partnering, across products, retail events, transportation/delivery	3.45
East coast momentum of food, gourmet location, chefs	3.43
Own energy production	3.25
New product development, new products demanded by consumers	3.15
Expanded industry-university collaborations	3.05
Farmers' markets growing in number throughout the State	3.00
An available skilled labor force to recruit/retain	2.83
Advantge of export demand opportunity	2.71
Distant market opportunities with new distribution technologies	2.71
Proximity to large populations, east coast	2.50
Market potential in NYC (retail, wholesale)	2.33
Farmers' markets in NYC	1.68

Prioritized Strategies – Firm Level

(1 not impt – 5 very impt)

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Utilize service agency vendors more for mulitple services and training (safety, medical, HR, payroll, staffing)	3.83
Stronger industry association activities for consumer education and product promotion, loyalty programs	3.74
Cross-industry and cross-commodity promotions and special events	3.30
Attendance at trade shows, food shows, etc. for S/D firm connections	3.29
Own/group energy production	3.25
Develop firm networks for operational activites (distribution, bulk buying/shipping, waste mgt)	3.21
Industry check-off programs to fund research and promotion	2.82
Industry investment/grants for workforce development training programs	2.79
Sharing financial information to establish industry benchmarks	2.68
Shared use/community kitchens for small processors	1.50

Prioritized Strategies – Policy

(1 not impt – 5 very impt)

33

Priotritize improvement in f&b mfg	4.25
Address overall NYS fiscal problem	4.25
Comprehensive regulatory review - mult. Agency reporting, inspections, licensing fees/rates, business taxes	4.08
State promo/adv of local-ism, sustain., health, public awareness;	3.86
Increase College/University technical assistance & research programs (energy sav/choices)	3.36
ESD prg expansion with Minority of women-owned businesses for food and bev. Mfg.	3.29
Institutional/school curricula dev. And food service for "local" products	3.14
More focus on job retention programs rather than job creation programs	3.04
Export assistance programs	3.00
Increase CCE Economic Development staff and programs	2.98
Renew and expand Emipre Zones (or similar program?)	2.83
Chamber of Commerce (networking, cross promoting assistance)	2.83
Increase funding or change operations for Pride of New York	2.25

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Growth and Firm Clustering

Recall…

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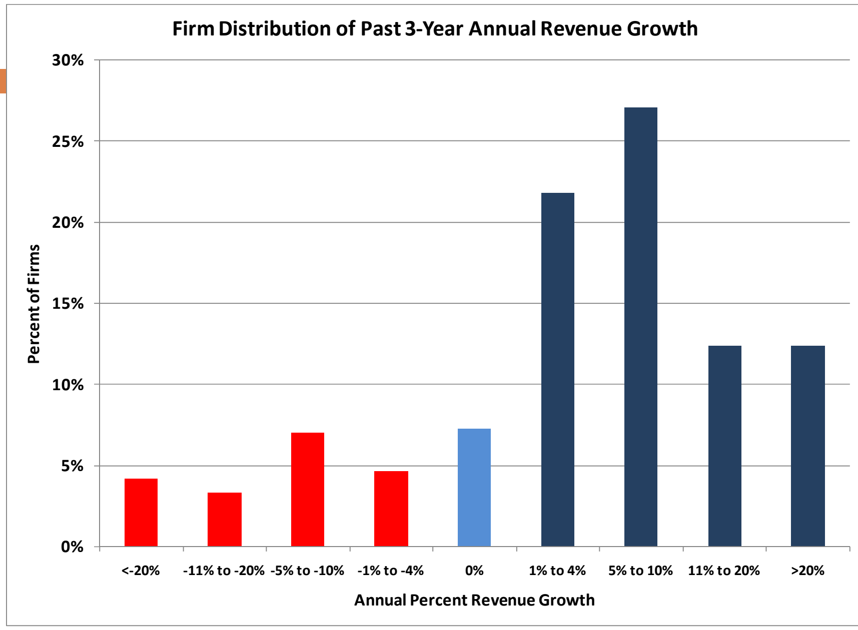

Modeling Drivers of Firm Growth (in process)

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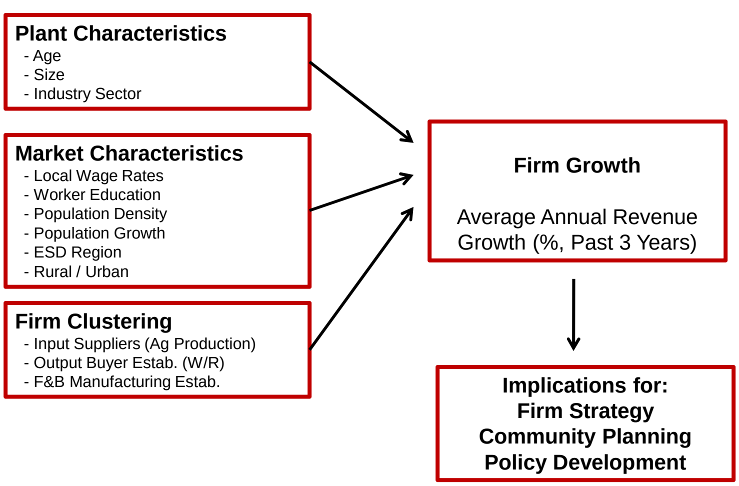

Comments or Questions?

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http://agribusiness.aem.cornell.edu/foodmanuf.html