

**Successful Biopharmaceutical
Firms in California: A Multiple
Case Study Analysis of Leadership
Qualities and Practices**



Biopharmaceutics



An industry overview and review
of study importance.

Biopharmaceutics



What is the biopharmaceutical industry?

- Subdivision within biotechnology focusing on drug discovery and production
- A resource intensive, research and innovation driven industry
- Average time to develop a drug is 10-15 years₁
- In 2016, biopharmaceutical companies invested about \$90 billion in the United States₂

1. Biopharmaceutical Research & Development: The Process Behind New Medicines (2015) PhRMA.

http://phrma-docs.phrma.org/sites/default/files/pdf/rd_brochure_022307.pdf

2. Centers for Disease Control and Prevention (2016) Health, United States, 2015. Hyattsville: U.S. Department of Health and Human Services. <http://www.cdc.gov/nchs/data/hus/hus15.pdf>

Biopharmaceutics



Why further research in the biopharmaceutical industry?

- Annual growth rate of 12 percent₁
- Along with growth comes complexity₂
 - Competition
 - Affordability
 - Efficiency
- Leaders create organizational structure

1. 2018 BIOPHARMACEUTICAL RESEARCH INDUSTRY PROFILE AND TOOLKIT. (n.d.). Retrieved from <https://www.phrma.org/industryprofile/2018/>

2. Rapid growth in biopharma: Challenges and opportunities. (n.d.). Retrieved from <https://www.mckinsey.com/industries/pharmaceuticals-and-medical-products/our-insights/rapid-growth-in-biopharma>

Current Knowledge



A review of literature significant to the study.

Leadership in Context



Why does leadership matter?

- Dynamic nature
- Balanced autonomy₁
 - Freedom to set own agenda
 - Freedom to engage a problem
- Transformational Leadership is a dominating trait

1. Judge, W., Fryxell, G., Dooley, R. (1997) The New Task of R&D Management: Creating Goal-Directed Communities for Innovation. Retrieved from <https://journals.sagepub.com/doi/abs/10.2307/41165899?journalCode=cmra>

Transformational Leadership



Part I

- Idealized Influence
 - Leader's ability to act as role model and create unity (charisma)
 - Values and priorities
- Inspirational Motivation
 - Capacity to create a sense of vision and enthusiasm
 - Optimism
- “Leaders are only as powerful as the ideas they can communicate”¹

1. Bennis, W. G., & Nanus, B. (1997). *Leaders: Strategies for taking charge* (2nd ed.). New York: Harper Business.

Transformational Leadership



Part II

- Individualized Consideration
 - Individualized behaviors based on associates
 - Promoting self-development
- Intellectual Stimulation
 - Encouraging non conventional ways of thinking or solutions
 - Vision and goals

Transactional Leadership



- Contingent Reward
 - Rewarding associates that meet goals
- Management-by-exception
 - Goals are rewarded
 - Significant deviations from ideal are punished
- Laissez-Faire
 - Letting associates take their own course

Big Question



As the biopharmaceutical industry grows, what specific leadership styles and behaviors do leaders practice within successful firms?

Hypothesis



Leaders within successful firms will display higher transformational tendencies, while expressing a balanced yet lenient workplace autonomy.

Methods



How the research was conducted.

Methods



Sample

- Successful biopharmaceutical firm
 - Received over \$100 Million in investments
 - Operational
 - Have achieved any stage level of advancements in clinical trials
- Firms where three or more employees responded
 - Group leader, or person of influence

Methods



Quantitative Data

- Available financial data
- Multifactor Leadership (MLQ) Questionnaire
- Survey
 - Length of employment
 - Employee change

Qualitative Data

- Demographical Data
- Significance of interview style survey questions
 - Leadership styles/tendencies
 - Unique perspective within firm
 - Specific actions and attitudes towards situations

Results



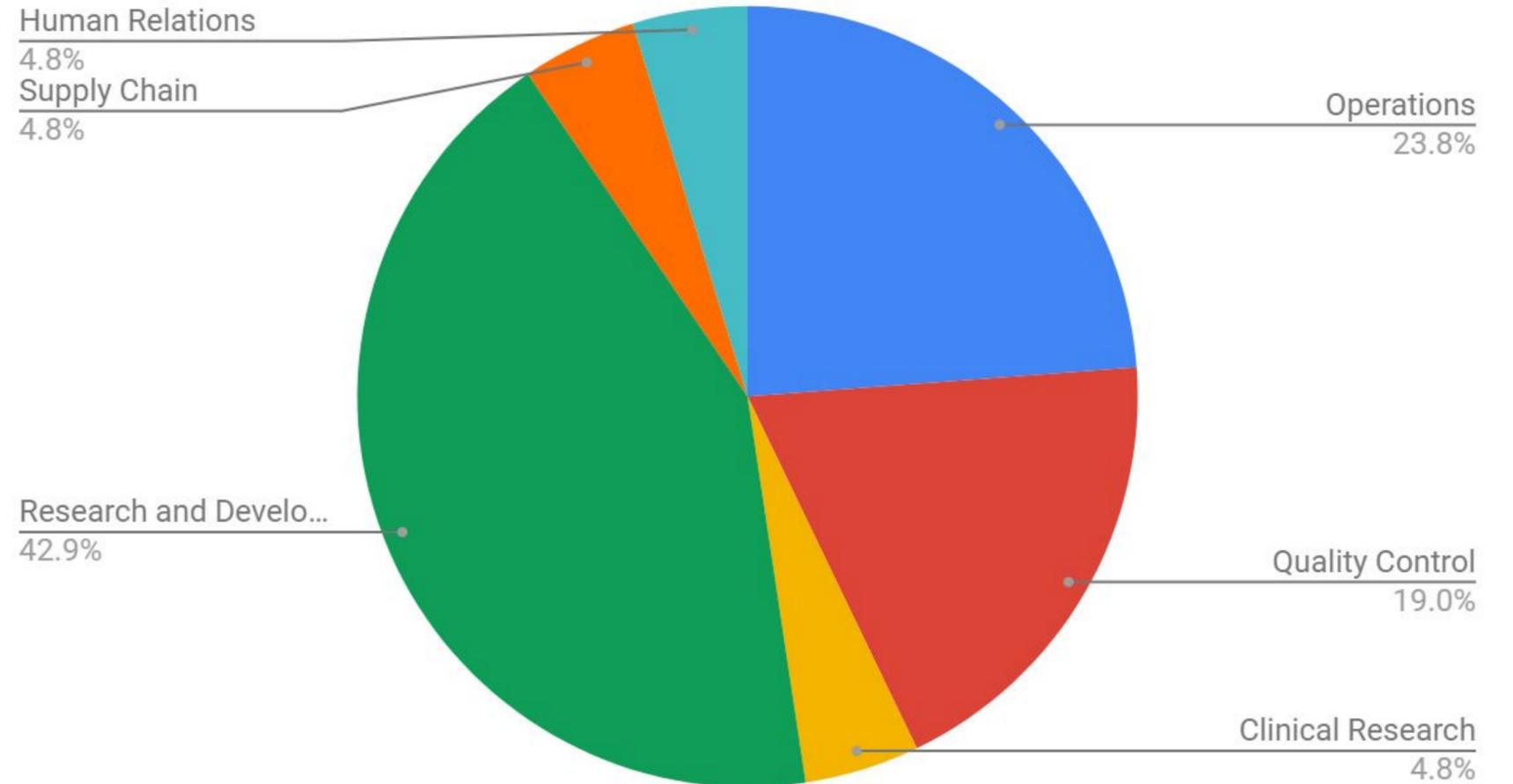
Qualitative and quantitative data.

Sample



- 19 included participants (1 omitted)
 - Firm A: 9
 - Firm B: 6
 - Firm C: 4
 - Firm D: 1
- Participants consisted of directors, senior managers, and vice presidents

Count



Firm Overview



Firm A

- Has been in operation for 39 years
- One of the first biotechnology companies that pioneered using living cells to make biologic medicines
- Bone health, cardiovascular, oncology, inflammation and neuroscience related products
- Top seven drugs all generate over one billion in revenue

Firm Overview



Firm B

- Has been in operation for one year
- Manufacturing CAR-T cancer cell therapy treatments
- Experienced industry professionals
- Able to purchase a product asset and get it into clinical trials within one year
- Corporate culture is described as collaborative and intense

Firm Overview

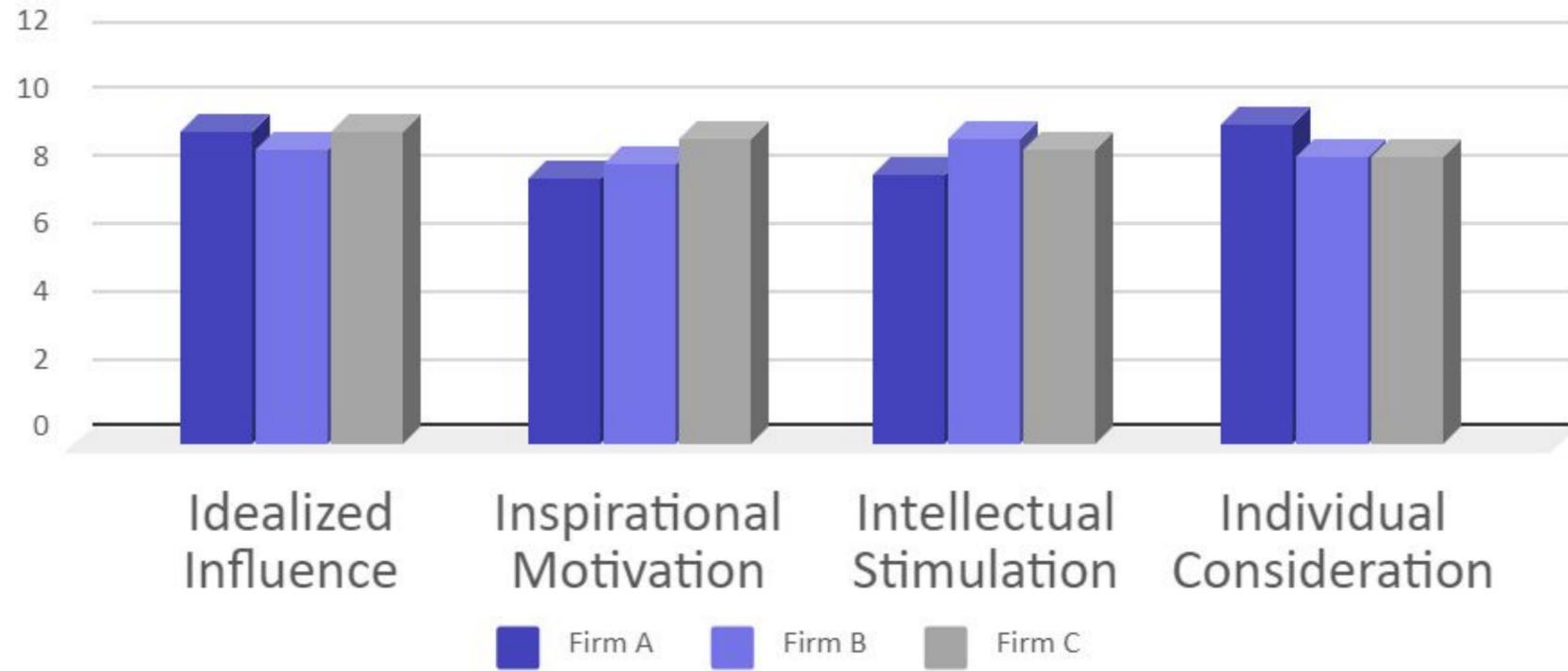


Firm C

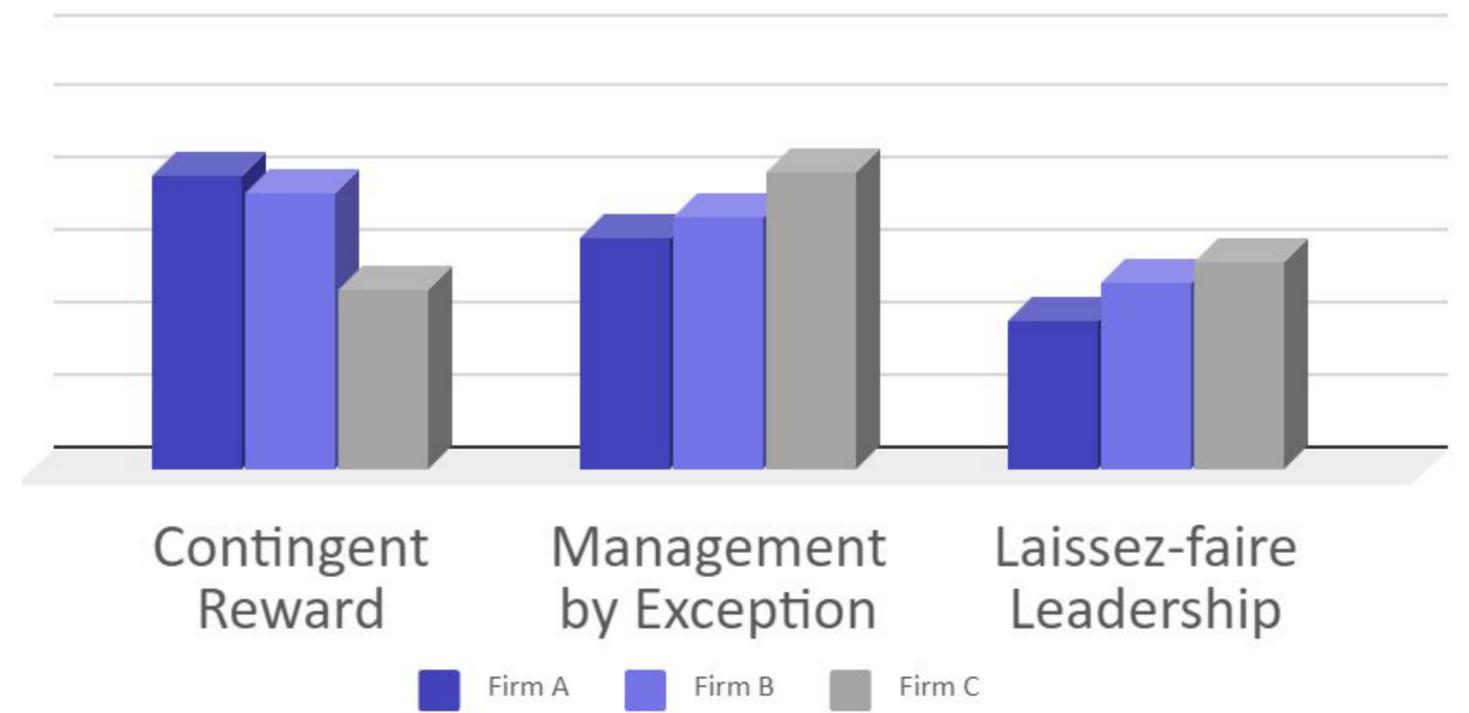
- Has been in operation for approximately 3.5 years
- Founded and staffed by successful industry professionals
- Publicly traded company
- Three products in various clinical stages in the areas of inflammation and immunology, with one of these products close to entering Phase 3 clinical trials
- Corporate culture is described as casual yet science-driven

Transformational and Transactional Leadership Factors (firm comparison)

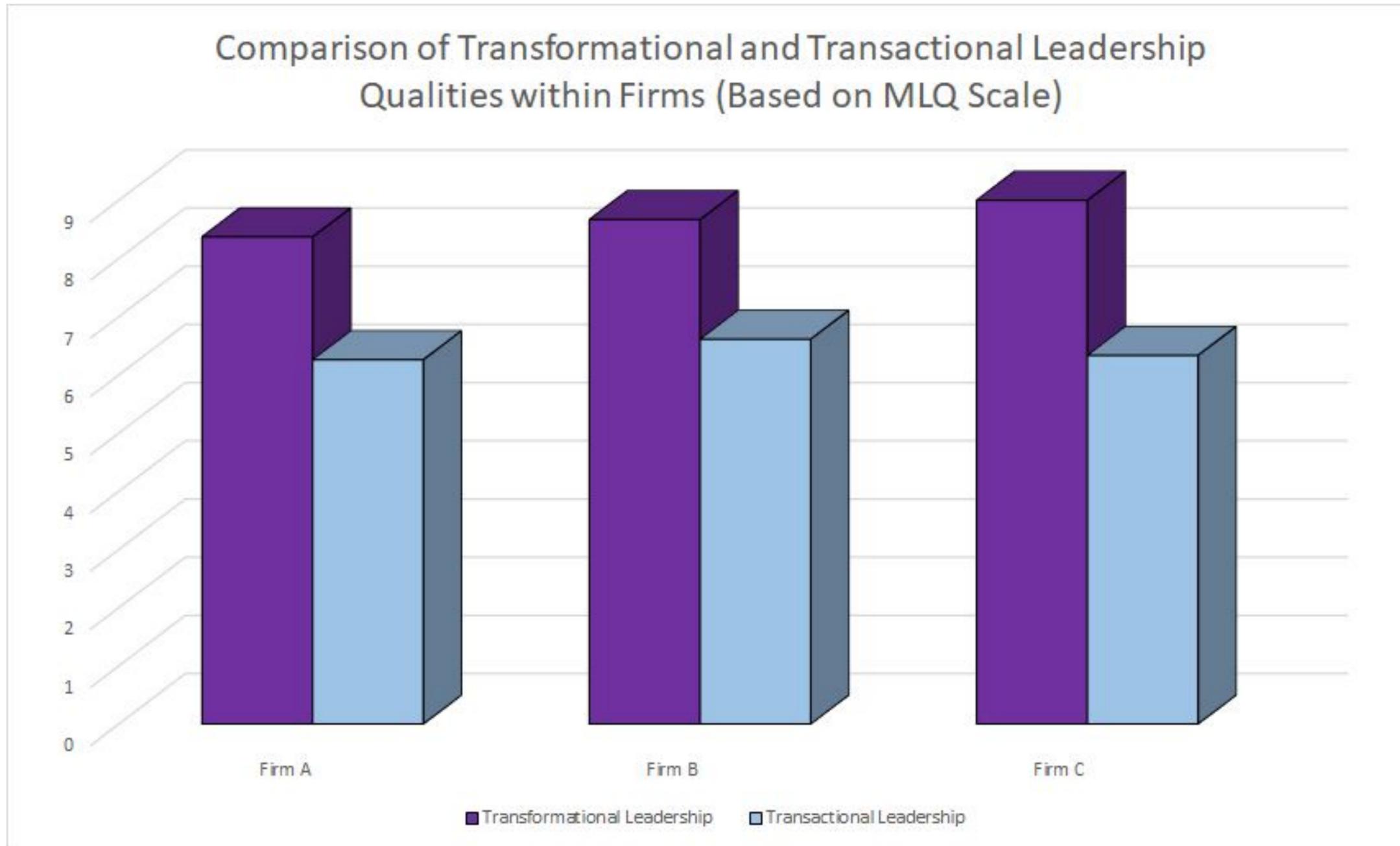
Comparison of Transformational Factors by Firm



Comparison of Transactional Factors by Firm



Complete Visual of Transformational and Transactional Data by Firm



Quantitative Firm Data

Firm (Transformational leadership score):	A (8.37)	B (8.66)	C (9)
Firm age (months):	468	12	42
Average length of employment (months):	126.44	8.43	27
Employee Change (%):	-15.73	228.87	292.71
Funding over lifetime (millions):	N/A	120	114
Has had formal leadership training (%):	88.89	100	50.00

Question & Answer



Since the time you first began your current position at your company, how have your leadership styles/strategies differed from the previous management's?

- Firm A: “...more focused on the **career development of my staff** and to enhance the **visibility of their contributions** to the company.”
 - “I felt I owned the **responsibility for my staff' development**. I push them as much as possible. Now I let my staff hold **responsibility** of their growth, and match the best opportunity for them.”
- Firm B: No significant responses.
- Firm C: “In terms of management/leadership style, I've always been **casual, laid back, and flexible** in my dealings with my colleagues. I value **personal relationships** and use those relationships **to achieve desired performance**.”
 - More **collaborative** and **decisive**. The team is very focused on the **end result**. We move quickly and thoughtfully.

Question & Answer



What do you as an individual do to make your team the most productive?

- Firm A: “Find what **motivates** them, **challenge** them, **recognize** them.”
 - “Have **1:1** meetings to **listen to concerns** and **set expectations**.”
- Firm B: “Be prepared when **leading discussions** requiring **team decision**; show **respect and appreciation** for individual and team support.”
 - **Support them**. I'm here to provide guidance, ensure consistency of process as appropriate and to be encouraging in **their goals** and **personal development**.”
- Firm C: “**Lead by example** and be objective, practical and empathetic.”
 - “I value **personal relationships** with **open lines of communication**. We set high standards, expect involvement/engagement from our partners, and try our best to have some fun in the process.”

Question & Answer



How have you and your team specifically, contributed to the growth/scalability of your business since the time you first took your position?

- Firm A: “Our department has been **dramatically downsized** over the past years due in part to its **high productivity**.”
 - “Expansion of outsourcing/team based in India. **Strategic decision to terminate** research project with convincing data.”
- Firm B: “We've established the **foundational processes** by which to run our area of responsibility, and established forward looking plans to be ready for **future goals/objectives**.”
- Firm C: “Ability to produce safe, **effective product** for clinical supply has been key to the success of the company. For small businesses, a delay in supply can sink the company.”

Conclusion



Discussion and Future Research

- Transformational traits are more common than transactional traits
- Balanced autonomy
- Apply same principles to greater sample size

Limitations



- Sample size
- Unhomogenised survey population
- Unique nature of firms
 - Varying ages
 - Differing stages of drug development
 - Differing areas of specialty

References



1. Biopharmaceutical Research & Development: The Process Behind New Medicines (2015) PhRMA.
http://phrma-docs.phrma.org/sites/default/files/pdf/rd_brochure_022307.pdf
2. Centers for Disease Control and Prevention (2016) Health, United States, 2015. Hyattsville: U.S. Department of Health and Human Services.
<http://www.cdc.gov/nchs/data/hus/hus15.pdf>
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<https://www.mckinsey.com/industries/pharmaceuticals-and-medical-products/our-insights/rapid-growth-in-biopharma>
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<https://journals.sagepub.com/doi/abs/10.2307/41165899?journalCode=cmra>
6. Bennis, W. G., & Nanus, B. (1997). Leaders: Strategies for taking charge (2nd ed.). New York: Harper Business.