Talent Investments Pay Off

White Paper | Cigna Realizes Return on Investment from Tuition Benefits

Lumina™ FOUNDATION

Contents

Project in Brief

Situation	Challenge	Study Question	Result
From 2012 to 2014, Cigna Corporation (Cigna) provided employees millions of dollars in tuition assistance through its Educational Reimbursement Program (ERP).	While Cigna HR leadership intuitively knew that ERP was a good benefit to offer employees, Cigna had not quantified the value of ERP for the business or its employees.	What is the value of ERP to Cigna's business and its employees?	From 2012 to 2014, ERP resulted in 129% ROI as a result of avoided talent management costs. Employees who took advantage of ERP achieved 43% higher incremental wage gains.

Introduction

Despite a return of unemployment rates to pre-recession levels, a skills mismatch remains between employers' critical, in-demand skills and the availability of those skills in workers. This is a threat to U.S. competitiveness, which the Harvard Business School defines as, "the extent that companies operating in the country can both win in global markets and lift the living standards of the average American."[1] If U.S. employers can't find that talent locally that they need to compete, some look abroad to fill skill gaps. However, other employers are looking at the employees they already have, and they're finding a workforce ready to develop the in-demand skills that their employer will need in the future while continuing to contribute to the employer's success today.

High-quality learning is a pathway to increase both employers' ability to compete and employees' access to career opportunity and higher wages. To help fill talent and skill gaps, U.S. employers spend approximately $177B annually on formal training and talent development.[2] On average, 10% of an employer's learning and development (L&D) spend is on tuition assistance to provide access to postsecondary degrees and credentials to improve knowledge and skills.[3] However, tuition assistance programs have long been treated mainly as benefit programs and outside the corporation's L&D portfolio or talent strategy. As a result, only ~2-5% of organizations have evaluated the return on investment (ROI) they receive from tuition assistance programs.[4] [5] C-suite leaders need to see ROI. According to a 2010 ROI Institute survey of 96 Fortune 500 CEOs, 92 respondents stated they are interested in understanding the investments and impact of their company's L&D initiatives.

> *"…The demand for talent is rising rapidly across the nation. [These strategies] clearly help their own employees, many of whom attended college but have nothing to show for it because they dropped out or stopped out. They help themselves as a business by educating some portion of their own future leadership ranks. And they help the communities where they operate."*
>
> *- Jamie Merisotis, Lumina Foundation CEO*

In response, Lumina Foundation, an independent, private foundation focused on higher education attainment, commissioned a series of objective, third-party studies to uncover the value of tuition

[1] Mills, Karen G. "Growth & Shared Prosperity." *Harvard Business School* (2015). Web. 2016.
[2] Carnevale, Anthony P., Jeff Strohl, & Artem Gulish. "College Is Just the Beginning." *Georgetown University* (2015). Web. 2016.
[3] Miller, Laurie. "2014 State of the Industry Report: Spending on Employee Training Remains a Priority." *Association for Talent Development* (2014). Web. 2016.
[4] Robbins, McLean. "Straight A's for tuition benefits." *Employee Benefit News* (2008, Vol 22, Issue 14, p62). Web. 2016.
[5] Mathis, Robert, and John Jackson. Human Resource Management, Thirteenth Edition (2010, p453) Web. 2016.

assistance by quantifying the ROI of major employers' tuition assistance programs. Lumina engaged global consulting services provider, Accenture, to facilitate the studies, and Cigna, a global health service leader, volunteered its Education Reimbursement Program (ERP) as one of the first programs evaluated.

The employer ROI studies will begin to explore, validate, or disprove the following research hypotheses:

- Tuition assistance is a powerful and profitable tool for businesses, leading to improved talent management outcomes and reduced and/or avoided costs
- Tuition assistance and other higher education attainment programs can and should be viewed as strategic talent and employee engagement investments by businesses
- Through rigorous analysis, companies can better understand the value of education programming, leading to improved investment outcomes
- HR and talent leaders, as more evidence accrues, should feel more confident in advocating for and expanding education and training programs for employees

In addition to exploring these hypotheses, the project aims to develop a repeatable approach and statistical methodology to measure ROI. This work builds upon previous private and public ROI evaluation approaches while aiming to:

- Build a replicable, robust evaluation framework, approach and statistical methodology for ROI measurement
- Provide objective analysis of tuition assistance programs, using company-specific data wherever possible and conservative estimates when using third-party benchmarks
- Provide comprehensive study of both the investment costs and the business returns or losses to employers offering the program
- Isolate the effects of program participation by applying statistical analyses to identify and isolate out the effect of other influential variables influencing the results

This paper describes findings from the Cigna ERP ROI study, including details on the calculation approach and quantitative results. In addition, it includes supplemental qualitative findings and a framework to assess Cigna's ROI measurement maturity.

Cigna's Education Reimbursement Program

Cigna is a global health service leader with FY14 revenues of $35B, dedicated to helping people improve their health, well-being, and sense of security. In the U.S., the Cigna workforce is comprised of approximately 31,000 employees that mainly hold four job functions: Business Operations, Medical Management, Information Technology, and Sales.

> *"Our Leadership team intuitively knew that ERP was a good benefit, but we could never prove that it was a valuable business investment. We were delighted that the proof was there in the ROI study. Now, we can be bolder and more strategic in our focus."*
> *– Karen Kocher, Cigna Chief Learning Officer*

The ROI study analyzed ERP from 2012 to 2014. During that time period, ERP supported over 2,200 unique employee participants, resulting in a 3-year utilization rate of 5.8%.[6] During that time period, Cigna's ERP reimbursed employees' tuition expenses of up to $8,000 for graduate courses and $5,250 for undergraduate courses or certificates each year. Cigna also reimbursed eligible application, registration, examination, and graduation fees. Cigna's employees could pursue any course

[6] Calculated from the total number of U.S. workers employed during that time period – approximately 37,000.

of study and could take advantage of negotiated tuition discounts at select local and national education institutions.

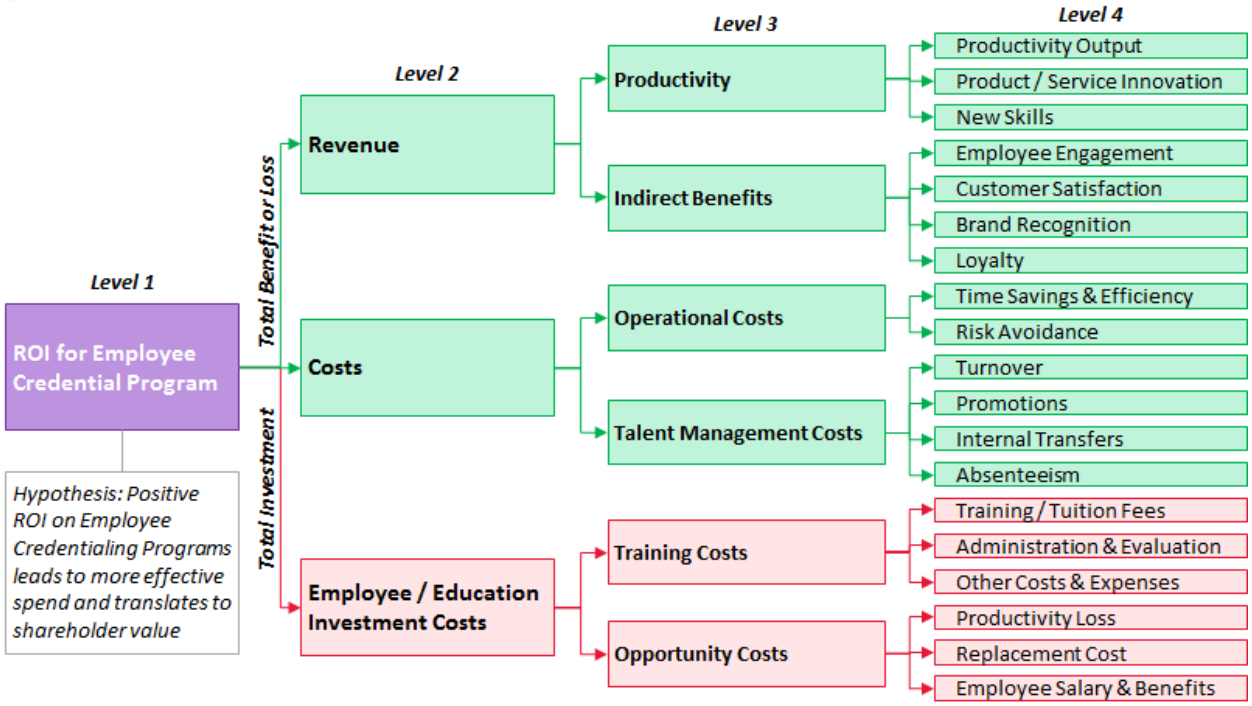
During the study period, most ERP participants pursued an associate, bachelor's, or master's degree, while a minority pursued a certification.[7] Gen X employees (born from 1965 to 1982) comprised the majority of all participants. Women were more likely to take advantage of ERP than men and accounted for 77% of ERP participants.

ROI Study Methodology

In advance of the Cigna ERP study, Accenture developed a framework to measure the ROI of tuition assistance programs. The goal was to create a rigorous and repeatable methodology that would be highly defensible to business, higher education, and public sector leaders. While existing ROI literature focuses on easily quantifiable business investments – such as research and development, technology, and supply chain – investments into a corporation's workforce are often overlooked. Likewise, there is a vast array of research involving training effectiveness, yet very little focuses on understanding the quantifiable bottom-line impact of investing in a workforce.

Accenture developed a comprehensive ROI methodology to calculate the business value of tuition assistance investments and an ROI Maturity Model to help companies assess, build, and refine their capabilities to support ROI evaluations of tuition assistance programs. These study methodologies were vetted by over 25 leading corporations' HR executives, who comprise the Business Champions, a group of top U.S. employers that represent a wide variety of sectors from agriculture to health care to retail.[8]

Figure 1: ROI Framework



[7] Employee data of ~850 ERP participants was used for the degree analysis, which is not comprehensive of all 2,200 unique ERP participants during the 2012 to 2014 time period.
[8] For a full list of companies involved in the Business Champions, please visit businesschampions.org.

ROI Framework

The ROI framework focuses on measuring the total benefit of the program investment from two perspectives: impacts to revenue factors and cost factors, while taking into account the total investment cost (Figure 1). Within the revenue category, the framework focuses on both direct (e.g., productivity gains) and indirect (e.g., positive brand effects) factors, and within the cost category, it focuses on operational and talent management cost factors. These factors may be influenced by the education program and may result in tangible benefits for the employer.

Within the employee / education investments category, the framework includes a comprehensive view of investment costs that may be associated with offering the training program, including tuition payments and administrative program costs.

ROI Calculation

Relevant revenue and cost factors can be selected and measured based on employer data availability and business goals. After accounting for total investment costs, these three inputs can be used in the ROI calculation (Figure 2):

Figure 2: ROI Calculation

$$\text{ROI \%} = \frac{\text{(Total Benefit – Total Investment)}}{\text{Total Investment}} \text{ X } 100\%$$

ROI Maturity Model

An ROI Maturity Model was developed to help employers understand the maturity of their ROI measurement capabilities, specific to tuition assistance. Based on research, initial ROI studies, and executive-level Business Champions feedback, the team developed the ROI Maturity Model (Figure 3). A company's ROI measurement maturity can be determined based on where it falls across five attributes: Results Transparency, Talent and Skills, Process and Methodology, Data Quality and Data Access.

Figure 3: ROI Maturity Model

	Lagging	Basic	Advanced	Progressive	High Performance
Results Transparency	*Actions actively taken to share ROI results and outcomes with internal and external stakeholders*				
	Rarely measures or shares program cost or benefits information	Program cost or benefit information is measured and shared internally	Program cost and benefit information is measured and shared internally	ROI information is regularly shared internally and externally	ROI measurement is cited in publications; viewed as an ROI champion
Talent and Skills	*Tuition assistance team has strong talent and the right skills to able to effectively perform an ROI analysis*				
	Program team has one of the following skills: reporting, data management, analytics	Program team has one of the following skills: reporting, data management, analytics	Program team has two of the following skills: reporting, data management, analytics	Program team has all of the following skills: reporting, data management, analytics	Program team has of the following skills and deep statistical knowledge: reporting, data mgmt., analytics
Process and Methodology	*An ROI methodology and repeatable process are in place to enable continual measurement of outcomes and results*				
	No clear process to measure or capture ROI; lack of process automation	Ad hoc ROI measurement process; limited process automation	Somewhat defined ROI measurement; partial process automation	Defined ROI methodology and process; complete process automation	Continuous process automation; results used to improve training and outcomes
Data Quality	*Data required for analysis is captured regularly, consistently and on a longitudinal basis*				
	Lack of ability to capture, link, or assess employee training, demographic, or cost data	Limited ability to capture, link, and assess employee training, demographic, and cost data	Partial ability to capture, link, and assess employee training, demographic, and cost data	Advanced ability to capture, link, and assess employee training, demographic, & cost data	Complete ability to capture, link, and assess employee training, demographic, & cost data
Data Access	*Key data is easily accessible and requires minimal effort to retrieve from others within the organization*				
	Lack of ability to access employee training, demographic, or cost data	Limited ability to access employee training, demographic, & cost data	Partial ability to access employee training, demographic, & cost data	Advanced ability to access employee training, demographic, & cost data	Complete ability to access employee training, demographic, & cost data

Value

ROI Maturity Level

Cigna's ERP ROI Study Experience

Lumina Foundation partnered with Accenture to conduct ROI studies on Cigna's ERP. The ROI study followed a four step process:

1: Select Benefits Measures → **2: Collect and Prepare Data** → **3: Complete Data Analysis and Calculations** → **4: Finalize Results and Assess Maturity**

1: Select Benefits Measures

Employers can use the ROI framework to explore potential revenue and cost factors, then select factors to measure based on data availability and business goals. Cigna desired to assess impacts to both revenue and cost factors in comparison to ERP's total investment. However, due to the variety of performance metrics across its diverse workforce, the team was unable to identify a revenue factor for which data was accessible for the entire ERP participant population. Therefore, the analysis focused on the findings associated with cost factors, or more specifically, on how ERP helps Cigna avoid talent management costs.

Cigna selected the measures of promotions, transfers, and turnover, with the hypotheses that employee participation in ERP would result in higher rates or promotions, transfers, and retention. In addition, Cigna identified the investment costs associated with offering and administering ERP, including: tuition reimbursements, third-party service provider costs, and administrative salary costs for ERP support personnel.

2: Collect and Prepare Data

Once the benefit factors and cost elements were identified, Cigna extracted HR data, collecting approximately 4,400 employee records for both employees who took advantage of ERP and employees who did not participate from 2012 to 2014. Cigna also produced aggregate data for over 31,000 employees to serve as a basis for comparison. In addition to the personnel data, the team gathered ERP cost and policy information (Appendix Figure A). The team also captured leadership and employee perspectives on ERP through employee interviews and a survey, to help put the analysis in context. The Accenture team conducted ten interviews with leadership, ERP participants, and non-participants. In addition, they facilitated a survey with 200+ employee respondents to understand employee perceptions, attitudes, and perceived outcomes of ERP.

ROI Methodology Guiding Principles

The goal of the ROI study methodology is to create and use calculations that result in statistically valid, defensible results. To achieve that goal, the team followed the following guiding principles:

1. Use the employers own data, whenever available.
2. Apply multiple statistical techniques, such as clustering for segmentation, logistic regression for variable selection and additional manual validity checks, while keeping business objectives in mind.
3. When employer data is unavailable, follow a conservative assumptions approach by using well-known benchmarks.

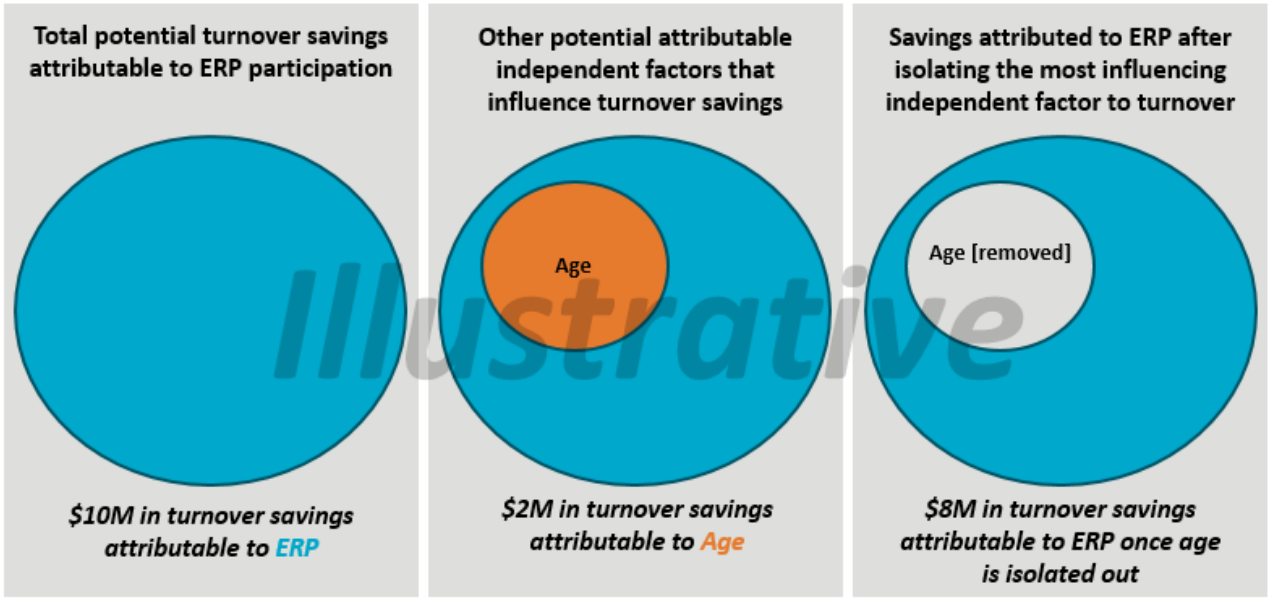
3: Complete Data Analysis and Calculations

The ROI methodology segments the employee population into two groups – ERP participants and non-participants – to determine the differences between them across each of the selected factors.

To calculate the benefit or loss from a selected factor, the team used logistic regression, discriminant analysis, and segmentation to identify and isolate out the effects of the next-most influential independent variable, besides ERP participation, that impacts the results. The team used P-statics at 95% confidence interval and chi square by degrees of freedom to determine the relative importance of the variables and concordance for model validity (Appendix Figure B).

Based on these results, the team created data clusters to isolate out the influence of the next-most influential variable for each cluster, in order to produce more precise, valid, and defensible results (see Figure 4 for an illustrative view of the clustering process). The clustered results then served as the basis of calculating the total benefits – or losses – attributed to ERP participation for the selected factor.

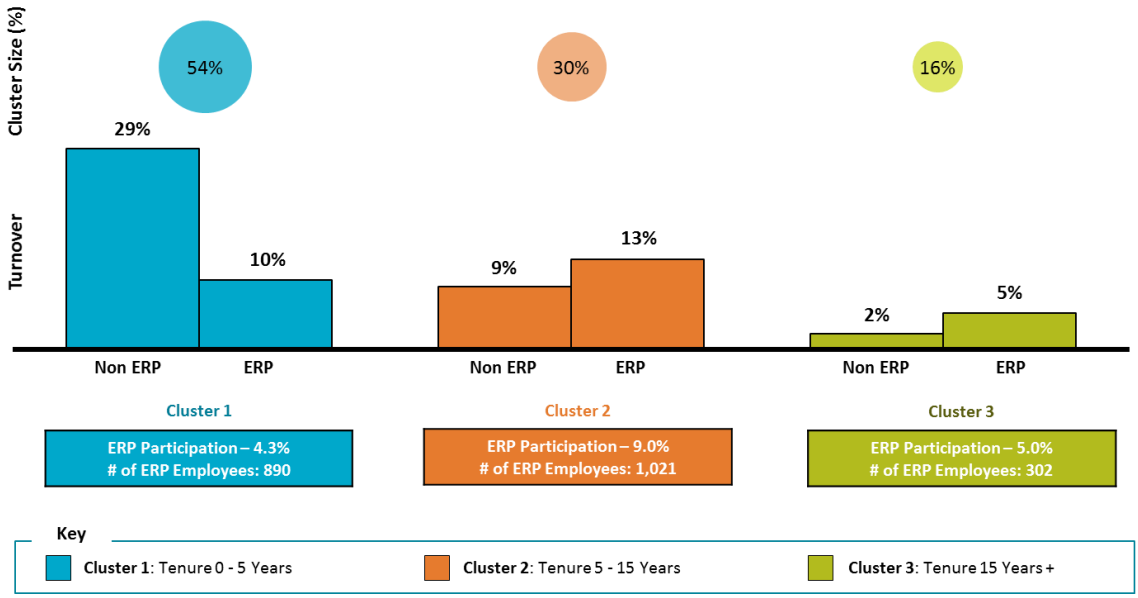
Figure 4: Clustering and Isolation Approach (Illustrative)



Taking the example of turnover, the team assessed turnover for ERP participants and non-participants and found that, apart from ERP participation, the next-most influential variable impacting turnover was an employee's tenure at Cigna (Figure 5). The team then created clusters of ERP participants and non-participants on the basis of their tenure with the company: Cluster 1 included employees with 0-5 years of tenure, Cluster 2 included employees with 5-15 years of tenure, and Cluster 3 included employees with 15 or more years of tenure.

This process represents a more rigorous approach than analyses that either only explore total benefits accrued or do not isolate out the effects of other variables. While it does not eliminate all of the other factors that may come into play in measuring the impact of tuition assistance investments (like self-selection or ambition), it does remove "other" leading factors of influence. This approach reduces the overall ROI but provides a much more accurate picture of the true impact of the education program.

Figure 5: ERP Turnover Cluster Insights (Clustered on Tenure)



ERP participants in Cluster 1 had a turnover rate 19% lower than that of non-participants. In Cluster 2, the turnover rate was 4% higher for ERP participants, and in Cluster 3, the turnover rate was 3% higher for ERP participants, resulting in losses for those two cluster calculations. The same process was applied to the other two factors: promotions and transfers (Appendix Figures C, D, and E).

Once all factors had been clustered and the differences between ERP participants and non-participants were defined, the percent difference within each cluster was used to calculate the total benefit / loss for that cluster. Then all of a factor's cluster benefits / losses were summed to determine the total benefit / loss for that factor due to ERP participation. The benefit amount for each of the factors – promotions, transfers, and turnover – was calculated by determining the cost savings associated with not having to replace an employee externally. Detailed calculations and key assumptions are in Figure 6.[9]

Figure 6: Calculations and Assumptions

Measures	Turnover	Promotions	Transfers
ROI Measurement	**Employee Replacement Cost**: Total cost of recruiting, interviewing, and onboarding an employee, and lost productivity costs, including open position costs and time needed for employee to be fully productive		
Calculations	• **Employees Retained due to ERP** = [Non ERP Turnover Rate (%) – ERP Turnover Rate (%)] * Number of ERP Participants • **ERP Cost Savings** = Employees Retained due to ERP * Employee Replacement Cost	• **Employees Promoted due to ERP** = [ERP Promotion Rate (%) – Non ERP Promotion Rate (%)] * Number of ERP Participants • **ERP Cost Savings** = Employees Promoted due to ERP * (External Employee Replacement Cost – Internal Employee Replacement Cost)	• **Employees Transferred due to ERP** = [ERP Transfer Rate (%) – Non ERP Transfer Rate (%)] * Number of ERP Participants • **ERP Cost Savings** = Employees Transferred due to ERP * (External Employee Replacement Cost – Internal Employee Replacement Cost)
Assumptions	**Employee Replacement Cost**: 1.5x average employee salary	• **External Employee Replacement Cost**: 1.5x average employee salary • **Internal Employee Replacement Cost**: 25% of External Employee Replacement Cost	• **External Employee Replacement Cost**: 1.5x average employee salary • **Internal Employee Replacement Cost**: 25% of External Employee Replacement Cost

4: Finalize Results and Assess Maturity

As a final step, the team summarized all quantitative and qualitative results, including the quantified ROI percentage, supporting calculation details, qualitative employee perspectives on ERP, and employee personas in relation to ERP program usage and perceptions. Additionally, the team assessed the ROI measurement maturity of the organization by applying the ROI Maturity Model based on their knowledge of the organization and its capabilities.

Findings

Cigna's Return on Investment

The ROI study demonstrated that ERP is a valuable business investment – all three factors – promotions, transfers, and turnover – resulted in positive benefits, which translates into quantifiable cost avoidance for Cigna (Figure 7).[10] [11]

From 2012 to 2014, ERP produced an ROI of 129%. In other words, for every dollar invested in ERP, Cigna got back its $1 and avoided an additional $1.29 in talent management costs.

Figure 7: Quantitative Benefits

Benefit Measure	*Hypothesis*	*Results Observed*
Promotions	ERP participants achieve more promotions than non-participants, resulting in lower cost to fill	✓ **+10%** more likely to be promoted
Transfers	ERP participants achieve more internal transfers than non-participants, resulting in lower cost to fill	✓ **+7.5%** more likely to receive a transfer
Turnover	ERP participants are retained more than non-participants, resulting in reduced turnover costs	✓ **+8%** more likely to be retained

Employee's Perspectives on ERP Value

The team explored the employee's perspective of ERP through 10 interviews and a survey, which captured over 200 employee responses (Figure 8).

Overall, employees had positive views of ERP and believed it resulted in improved career opportunities and outcomes, which aligned well with the quantitative results the team discovered through the analysis. Employees also believed ERP led to increased confidence, motivation, knowledge and skills, recognition and support from managers and colleagues, and personal achievement. However, employee feedback suggested that broadly, during the period of study, Cigna did not utilize ERP as a strategic talent development tool. ERP completion was not consistently linked to Cigna's talent strategy and business

[10] Due to data constraints, clustering was performed at an aggregate level, based on overall data extracted by the HR Analytics team; due to the aggregation of the data, ERP participants were included within the Non ERP sample.
[11] ERP results are based on a sample of ~850 participants, whose results were extrapolated to the 2,213 total ERP participants in the program between 2012 and 2014.

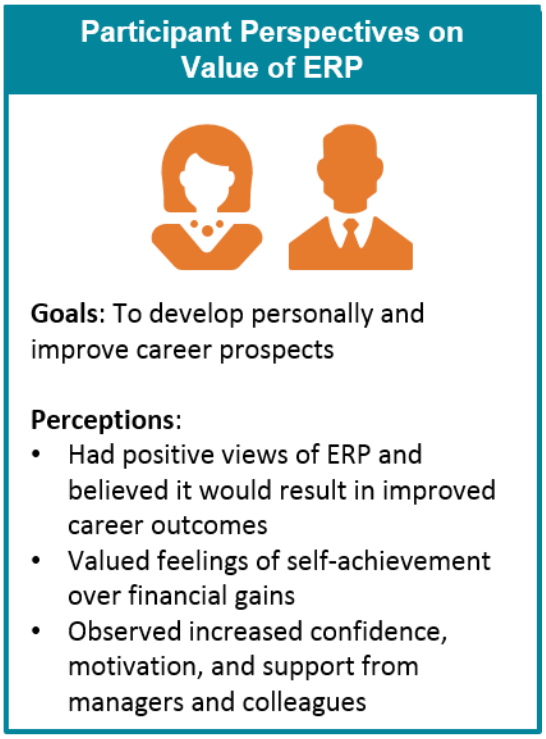
needs; ERP participants would have appreciated greater insights into these needs to more effectively focus their studies.

When examining the benefits of participating in the program, differences between the data and employee attitudes arose. ERP participants did not necessarily believe the program would lead to financial gains; employees participating in the program mainly received increased praise and recognition from family and colleagues and a feeling of self-achievement. However, employees who did not participate in ERP believed the program would increase their job opportunities, financial gains, and skills.

The team used the survey results and interviews to understand aggregate employee goals, attitudes, and perceptions of the program through the creation of personas. Personas are composite portraits designed to represent a group of people who are stakeholders of Cigna's tuition assistance program. Personas are based on employee feedback, which was synthesized and grouped into personas based on themes and trends (see Appendix Figure F for the detailed personas).

In summary, some employees used ERP to gain degrees and further their careers, however, communication about the program could have be heightened and the link between ERP completion and internal opportunities could have been enhanced so that participants would feel that they had a clearer path from their degree to a future career at Cigna.

Figure 8: Employees' Value from ERP



Wage Gains Associated with ERP Participation

To validate and provide support for the employee's opinions and hypotheses about ERP and program participation, the team conducted an analysis of the wage gains made by ERP participants versus non-participants from 2012 to 2014. Employee salary data was used to determine the wages gained over the three years by both participants and non-participants.

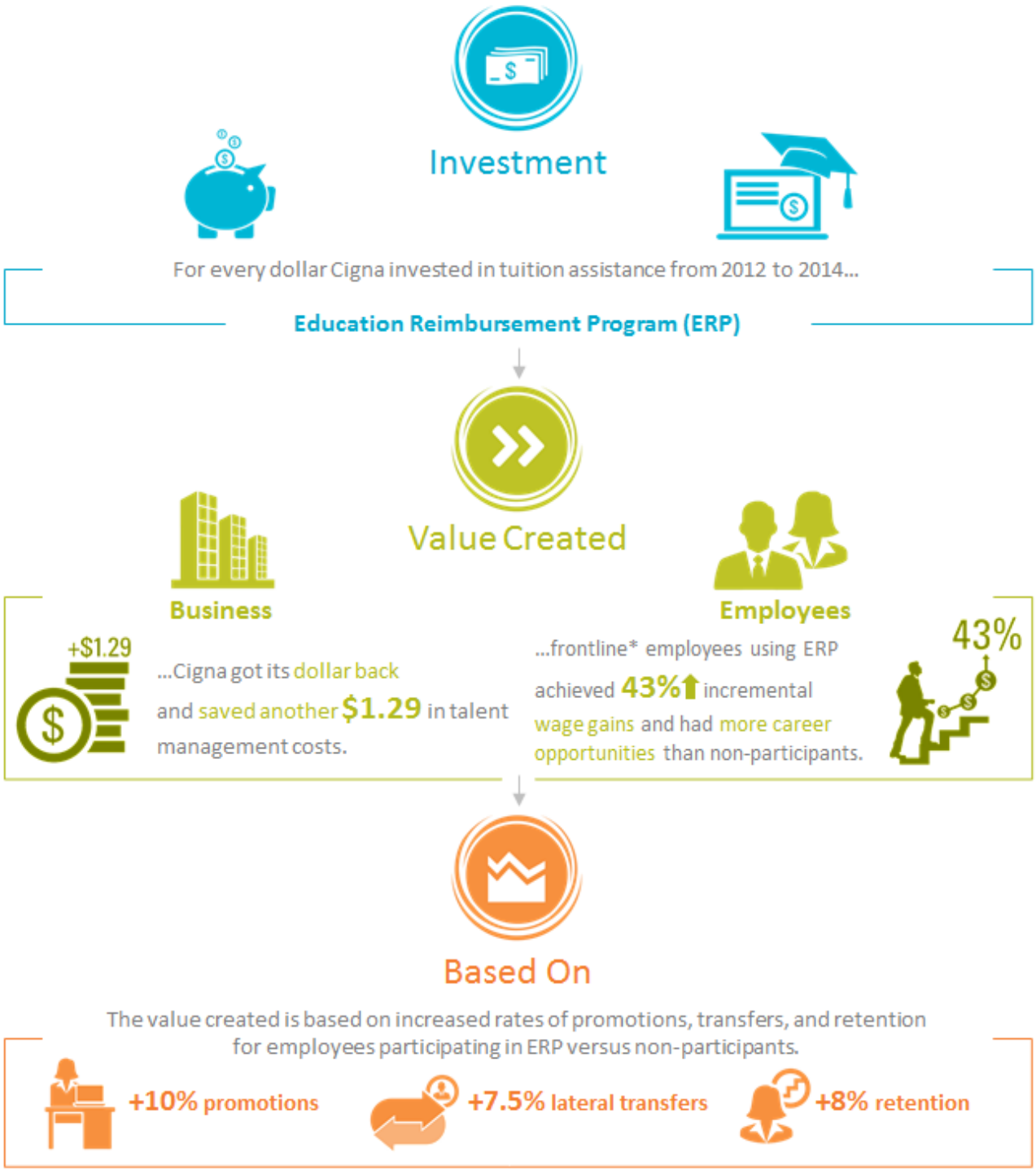
The wage gain analysis revealed that entry-level and mid-management ERP participants received, on average, a 43% incremental wage increase over the three year period as compared to non ERP participants.[12] The gains were most significant for Cigna's entry-level employees whose base salary was approximately $30,000, on average, across the three year period. Entry-level employees taking advantage of ERP netted a 57% incremental wage increase over the three-year period as compared to non ERP participants.[13]

[12] Data used consisted of a sample of 894 ERP participants and 675 non-participants, the analysis was performed at an aggregate level and therefore additional individual salary information was not available.

[13] Data used consisted of a sample of 154 ERP participants and 40 non-participants. Over the three-year period, the incremental wage gain by ERP participants was 57.2% higher than the non-participant gain. The analysis was performed at an aggregate level and therefore additional individual salary information was not available.

Value Created for Cigna and its Employees

The ROI study demonstrated that ERP is a valuable investment for Cigna's business and employees. From 2012 to 2014, ERP produced an ROI of 129%. Employees who took advantage of ERP got promoted and accessed new career opportunities at higher rates than employees who did not participate, and ERP participation was associated with 43% higher incremental wage gains over the three-year period.



*Note: Frontline participant refers to Cigna employees in the entry-level to mid-management bands.

ROI Maturity Assessment

Cigna had a varied ROI measurement maturity level; it had superior HR data quality, but access to the data was indirect, and there was a lack of a standardized ROI measurement process in place to enable future replication and, therefore, continuous improvement of ERP (Figure 9).

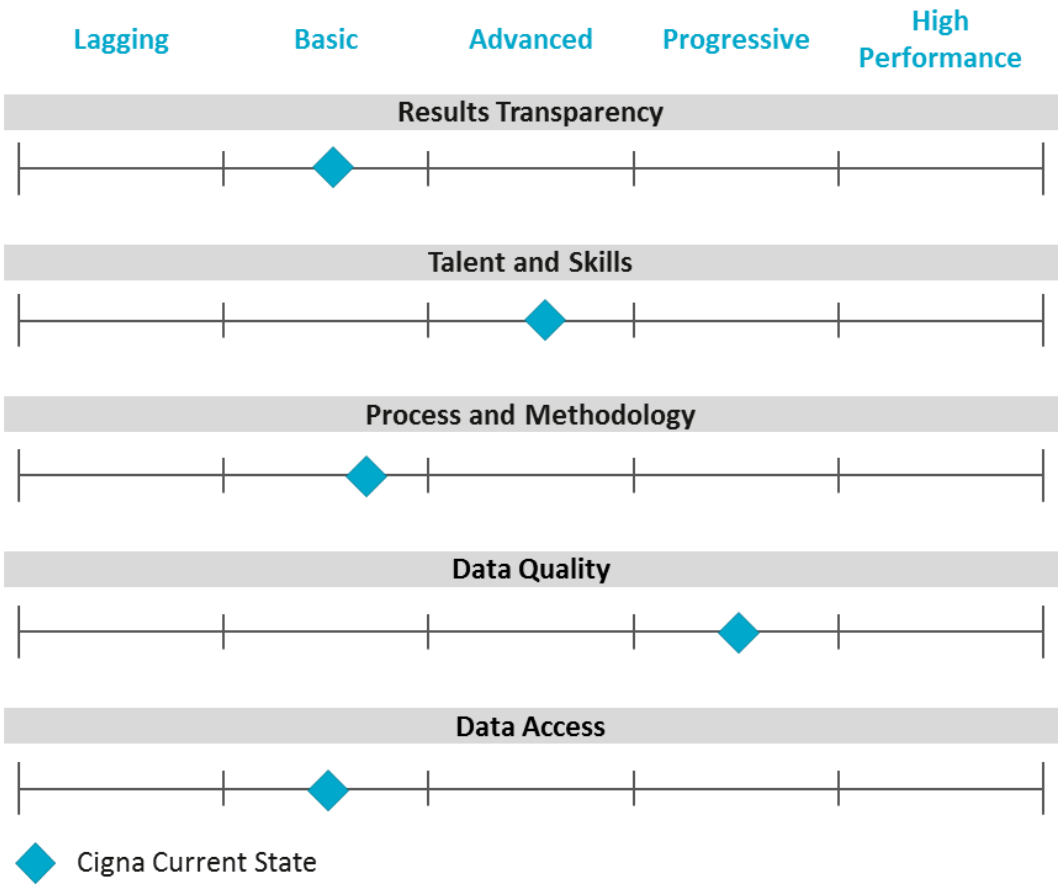
Areas of Strength

- **Data Quality**: High data quality of internal HR systems enabled robust ROI analyses
- **Talent and Skills**: Data management and reporting skills were well utilized
- **Process and Methodology**: Ad-hoc ERP analyses had been conducted in the past

Areas of Opportunity

- **Process and Methodology**: Opportunity to define standards and rigor for baseline investment and benefit measurements associated with ERP; define ROI process for future use
- **Data Access**: Opportunity to design consistent and timely processes to access pertinent HR information
- **Data Access**: Opportunity to designate an ERP-specific HR Reporting contact to enable rapid data access

Figure 9: Cigna ERP ROI Maturity Assessment



Cigna's Action Plan

Recommendations to Improve ERP

Cigna had a successful ERP that realized a positive ROI, and the Accenture and Lumina team offered suggestions for Cigna to continuously improve its ROI through programmatic changes and workforce-specific initiatives.

Now that Cigna has assessed ROI for ERP, it should conduct year-over-year ROI program measurement and seek to expand the ROI calculation to include additional factors, such as productivity or employee engagement. In addition, Cigna has the opportunity to better align ERP investments with its high-priority talent needs to help fill gaps and create strategic talent pipelines. To begin to align Cigna's strategic talent needs with ERP, Cigna should begin systematically tracking the degree / credential fields of study pursued by participants and attainment results, and then provide communications to employees about which degrees and credentials are in high demand so that participants can pursue valued credentials.

Cigna can also increase the use of (and ROI from) ERP by communicating the high promotion and transfer rates of ERP participants to employees. This will help potential participants understand the value of the program and the connection between attainment and potential career opportunities and mobility.

Cigna's Response

Based on this study's results and recommendations, Cigna made immediate programmatic changes to ERP to enhance its tuition benefit program and align it with broader talent strategies. Cigna:

- **Increased financial support** to $10,000 for undergraduate degrees and $12,000 for graduate degrees in strategic fields of study and lowered reimbursement to $4,000 for undergraduate degrees and $6,500 for graduate degrees in non-strategic fields. This will advance Cigna's talent strategy while helping employees develop skills for long-term employability
- **Launched advisory services** to support ERP participants and help them navigate career pathways
- **Eliminated the burden of up-front payment** by working with its education partners to accept payment after each semester when employees can access the reimbursement funds

Cigna expects that these changes will enhance ERP's ROI and support future talent acquisition. To quantify the impact, Cigna plans to reassess the ROI of ERP after the changes have gone into effect.

Conclusion

The Cigna ERP ROI study highlights the strength of tuition assistance programs in helping companies to control their talent management costs and employees to gain valuable knowledge, skills, and credentials to enable them in their future careers. The study also established a strong foundation for a methodology and approach to calculating ROI on tuition assistance programs. This study will serve as a launching point to evaluate ROI with other employers of various sizes across a diverse range of industries, with the ultimate goal of helping businesses unlock the potential value of higher education for their employees. Measuring the ROI of these programs can quantify the programs' value and shift tuition assistance benefits from being a cost-center and employee benefit to being an effective talent development strategy to build a highly effective and skilled workforce that will meet the demands of our changing economy.

About the Organizations

About Lumina Foundation

Lumina Foundation is an independent, private foundation committed to increasing the proportion of Americans with high-quality degrees, certificates and other credentials to 60 percent by 2025. Lumina's outcomes-based approach focuses on helping to design and build an equitable, accessible, equitable, responsive and accountable higher education system while fostering a national sense of urgency for action to achieve Goal 2025. To learn more, visit www.luminafoundation.org.

About Cigna

Cigna Corporation (NYSE: CI) is a global health service company dedicated to helping people improve their health, well-being and sense of security. All products and services are provided exclusively by or through operating subsidiaries of Cigna Corporation, including Connecticut General Life Insurance Company, Cigna Health and Life Insurance Company, Life Insurance Company of North America and Cigna Life Insurance Company of New York. Such products and services include an integrated suite of health services, such as medical, dental, behavioral health, pharmacy, vision, supplemental benefits, and other related products including group life, accident and disability insurance. Cigna maintains sales capability in 30 countries and jurisdictions, and has more than 89 million customer relationships throughout the world. To learn more about Cigna, including links to follow us on Facebook or Twitter, visit www.cigna.com.

About Accenture

Accenture is a leading global professional services company, providing a broad range of services and solutions in strategy, consulting, digital, technology and operations. Combining unmatched experience and specialized skills across more than 40 industries and all business functions – underpinned by the world's largest delivery network – Accenture works at the intersection of business and technology to help clients improve their performance and create sustainable value for their stakeholders. With approximately 373,000 people serving clients in more than 120 countries, Accenture drives innovation to improve the way the world works and lives. Visit us at www.accenture.com.

Appendix

Appendix Figure A: Data Framework

	Grouping	Key Data Elements	Description
Employee Information	**Demographic Information**	• Age • Prior education level • Gender	• Gather generic participant and non-participant demographic information
	Compensation and Job Information	• Base pay • Job function • Job grade	• Understand job specific information necessary for benefit calculations
Program Information	**Employee Program and ERP Information**	• School description • Degree/certification being pursued • Total request amount ➢ Tuition and fees paid to employees • U.S. ERP team cost • Administration & system cost	• Analyze participant and non-participant data, based on ERP participation and degree attainment • Define overall ERP program cost
Benefit-Specific Information	**Turnover**	• Termination date • Termination type (i.e. voluntary vs. involuntary)	• Determine turnover rate between participants and non-participants
	Promotions & Internal Transfers	• Promotion & transfer change in status date • Promotion & transfer reason (action reason)	• Determine promotion rates between participants and non-participants

Appendix Figure B: Variables Selected for Clustering[14]

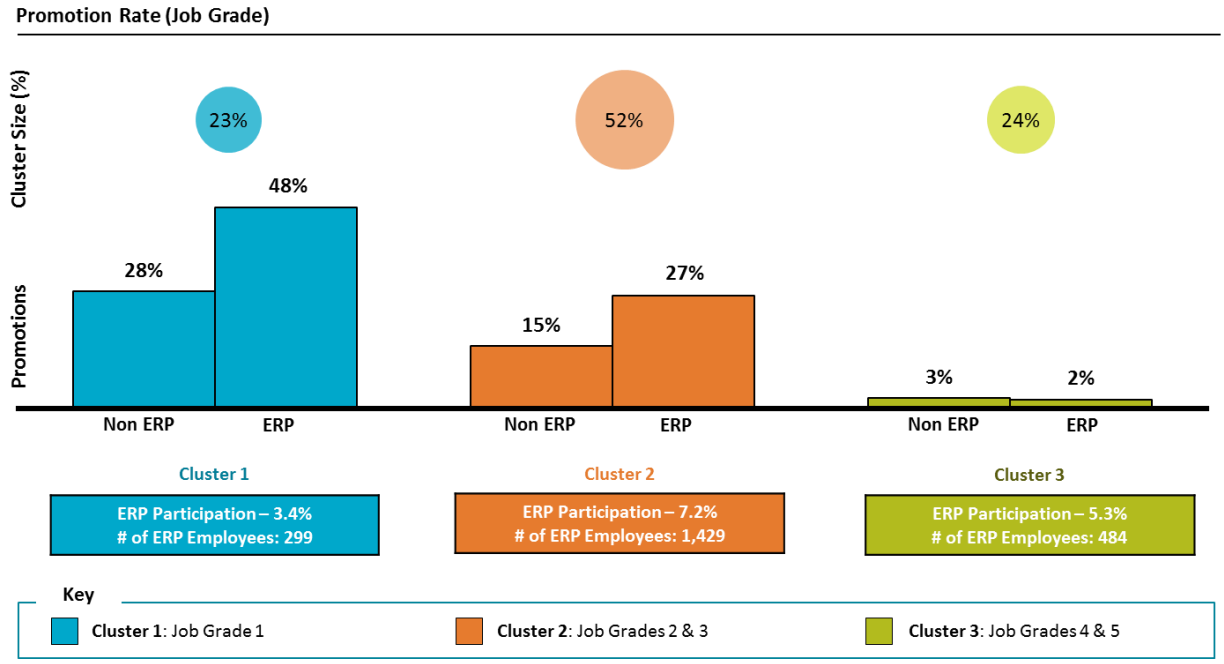
Top Influential Factors on Target Variables					
Promotion		Transfer		Turnover	
Variable	Chi Square divided by Degrees of Freedom[1]	Variable	Chi Square divided by Degrees of Freedom[1]	Variable	Chi Square divided by Degrees of Freedom[1]
Job Grade	97.46	Job Function	63.36	Tenure	18.52
Job Function	48.31	Tenure	45.36	Education at Hire Date	12.41
Education at Hire Date	37.88	Education at Hire Date	26.29	*No other variable could met the 0.05 significance level for entry*	

Key

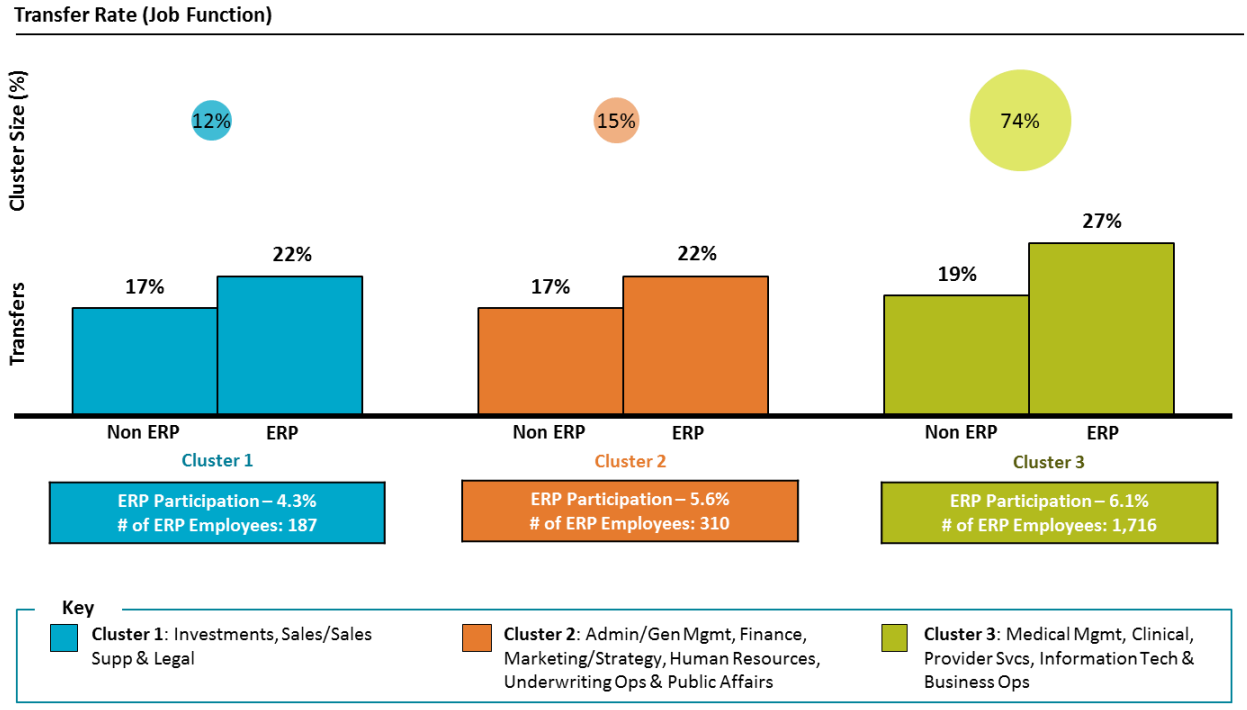
Variable Selected for Clustering

[14] The larger the Chi Square divided by the degrees of freedom value, the more influence the variable has on the target variable.

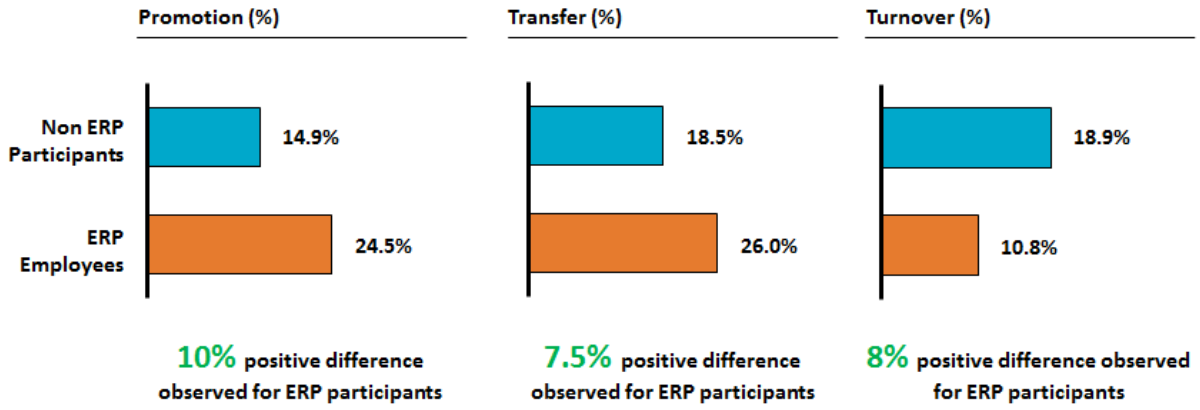
Appendix Figure C: Cluster Results: Promotions



Appendix Figure D: Cluster Results: Transfers



Appendix Figure E: Summary Benefit Findings



U.S. Population	
Non ERP Participants	37,902 (Total Population)
ERP Participants	2,213 (Extrapolated from 850 participants in the sample data)

Appendix Figure F: Employee Personas

Satisfied Participant

Goals: Continue education to increase self-confidence and personal satisfaction at work, become more productive, produce higher quality work, and advance her career.

Attitudes: Believes getting a degree will equate to a promotion and more career opportunities.

Frustrations: The reimbursement process can be difficult (e.g., books and fees not always covered) and communications about the program could be improved.

Time-Constrained Believer

Goals: Would like to enhance his career prospects but is hesitant to participate until he is able to find a way to balance work, life, and additional education.

Attitudes: Believes he would stay with Cigna longer and would get a higher wage after participating.

Frustrations: Scheduling classes around work can be difficult; it would be helpful if his manager would work with him to craft a flexible work/class schedule.

Dissatisfied Visionary

Goals: Use education benefits to help unlock additional career opportunities within the company.

Attitudes: Thinks ERP needs to have a clearer return for participants and alignment to business needs.

Frustrations: ERP participants would benefit from clear communication about ERP, linkages to new/enhanced career paths, and education/career coaching.

Unconvinced Skeptic

Goals: Spend time with his family and attain a degree for personal edification and satisfaction.

Attitudes: ERP can be personally gratifying, but he perceives that there are no real financial benefits, nor does he have enough time to participate.

Frustrations: It is difficult to balance work, family, and education, especially since the U.S. work environment is, in reality, more than 40 hours per week.