

Study on the Selection of
Hospital CEOs and Administrators
in Texan Hospitals

Submitted to:
Dr. Charles Knoeber
North Carolina State University
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Written by:
Christopher Erik Nattkemper
North Carolina State University

Introduction

The purpose of this study is an attempt to confirm a hypothesis based on research by Darius Palia, Stacey Kole, and Kenneth Lehn. Their combined research suggests factors that influence the selection of CEOs in different industries.

The effect of government interventions on the demand for better-educated Chief Executive Officers is outlined in Darius Palia's "The Impact of Regulation on CEO Labor Markets." As his primary hypothesis, Palia argues that a better-qualified manager will be more valued, and hence would command a higher rate of compensation from a firm while stressing performance-based pay, because of the competition between an entire market of potential CEOs, such that the best-qualified candidate willing to work for the offered rewards will be given a particular position (165-166). In his paper, Palia compares the CEOs of highly regulated gas and electric utilities to CEOs of relatively unregulated manufacturing firms, and finds that unregulated manufacturing firms show trends employing relatively more often CEOs with educations from top universities for undergraduate, graduate, and post-graduate degrees, while regulated utilities tend to employ graduates from top universities relatively less often (Table 2, 172). Palia has thus provided a basis for defining the quality of the CEO via his or her educational background.

Palia's findings are corroborated with the research of Stacey Kole and Kenneth Lehn. Together, Kole and Lehn examine the relationship between the composition of the leadership of airline firms during periods of time before and after direct competition was allowed between airlines in "Deregulation and the Adaptation of Governance Structure: the Case of the U.S. Airline Industry." As Kole and Lehn note, prior to the Airline Deregulation Act of 1978, the Civil Aeronautics Board (CAB) had placed heavy restrictions on allowable fares for airlines and on entry into the airline industry, hence reducing direct competition on price, although still allowing competition based on quality and variety of services (81-82).

Kole and Lehn's findings support Palia's work in that they show that during the adjustment of airlines to the deregulation, turnover in leadership resulted overall in different educational backgrounds for the CEOs. Following the end of the CAB era, Kole and Lehn find that the structure of the airline industry as a whole came to emphasize a different set of managerial skills, including primarily an increased focus of attention towards the firm's fare structure, its route structure, the fleet composition, reducing labor costs, and recognizing distribution channels, which together had the effect of placing a higher value on the performance of manager (82-84). Concurrent to the higher value of CEOs overall, in reflection of the increased importance of management in the airline industry CEOs received higher compensations in total, while a larger share of the compensation became tied to performance than before (94, 100). Kole and Lehn note that during the CAB era airline CEOs were expected to be highly skilled in political processes so that CEOs could negotiate changes in prices the airline would be allowed to set, in a manner mimicking Palia's findings of regulated utilities. After deregulation, Kole and Lehn found that managers were forced to deal much more closely with workers and respond much more rapidly to changing market conditions (83).

I seek to generalize the theory outlined above. My hypothesis is that factors of competition and size influences the selection of administrators within an industry. To test my hypothesis, I will conduct a study based on hospitals in Texas.

Outlining a Theory of Hospital Management

Hospital health care is a regulated industry. Competition based on price for a given service is usually minimal especially where universal health care systems are implemented. A fixed price results in competition between hospitals for patients on a quality basis instead. However, hospitals that deal with chronic health care issues and/or emergencies will be chosen primarily on the least impact on the patient's life as determined by time spent in travel to the hospital. To illuminate this point, it is difficult to imagine a man with a broken arm traveling an extra hour to go to a slightly better hospital in a neighboring city. Thus, even quality competition will only become significant when there are multiple hospitals offering services to the same region. A hospital can therefore become like a monopoly if it is merely unreasonably far away from its competitors.

Because price is assumed to be held constant across hospitals due to regulation, a hospital's output can be described as $Q(V)$, where Q is the quantity of patient visits and is a function of V , the value of medical services to the patient. I theorize that there is a positive relationship between the change in patient visits and the change in the value of a hospital's services, such that $dQ/dV > 0$.

I propose that the value of services at a particular hospital can be described as $V(S)$, where S is the number of services at a given hospital. This represents the number of unrelated services the hospital provides for cross-selling purposes to patients. For example, the man with the broken arm can learn of dermatology services offered by the hospital. I theorize that there is a positive relationship between the change in the value of a hospital's services and the change in the number of services provided by the hospital, such that $dV/dS > 0$. For simplicity's sake, I will determine the number of services offered by a hospital by the number of separate departments under a given hospital's aegis. For the remainder of this and the next section, I will refer to $V(S)$ as V for simplicity's sake.

Meanwhile, a hospital's costs can be described as $C(Q,V)$, where C is a function of both the quantity of patients serviced and the value of services offered by the hospital. I theorize that economies of scale would result in a positive relationship between costs and the quantity of patients serviced, such that $dC/dQ > 0$ (alternately expressed as the marginal cost of servicing an additional patient). For this relationship, I predict that the rate of change is declining. For example, after significant costs have been incurred increasing the number of beds by 50%, including not only physical construction of the space for the beds themselves but also investing in improved record-keeping database technology, if the number of beds are increased again the database technology does not necessarily need to be upgraded, and therefore the costs of serving more patients does not increase quite as much.

I also predict a positive relationship between costs and the value of services provided, such that $dC/dV > 0$ (alternately expressed as the marginal cost of improving quality), though here I will assume a constant relationship. I make this assumption based on the fact that arguments could be made for an increasing and decreasing relationship. For example, it can be argued that using more expensive cutting-edge equipment and treatments can add little to the ability of a doctor to do his job while costing significantly more. It can also be argued that value improvements in terms of improving a customer service department costs less than its initial formation while providing more services to

the patient. Because these contradictory arguments are difficult to resolve and depends on what an individual patient values, I will assume instead a constant rate for dC/dV .

With set prices regulated by an external government, a function for outputs, and a function for costs, we arrive at an expression for a hospital's profits:

$$\pi = P * Q(V) - C(Q(V))$$

Because price is assumed to be constant, the only way to improve profits is to change the number of patients seen at a hospital, and this can only be done by changing the value of the hospital service to the patient. To maximize profits, the derivatives of both main subfunctions of the profit function must equal, such that:

$$P * (dQ/dV) - ([dC/dQ] / [dQ/dV]) - (dC/dV) = 0$$

or that:

$$(P - [dC/dQ]) * (dQ/dV) - (dC/dV) = 0$$

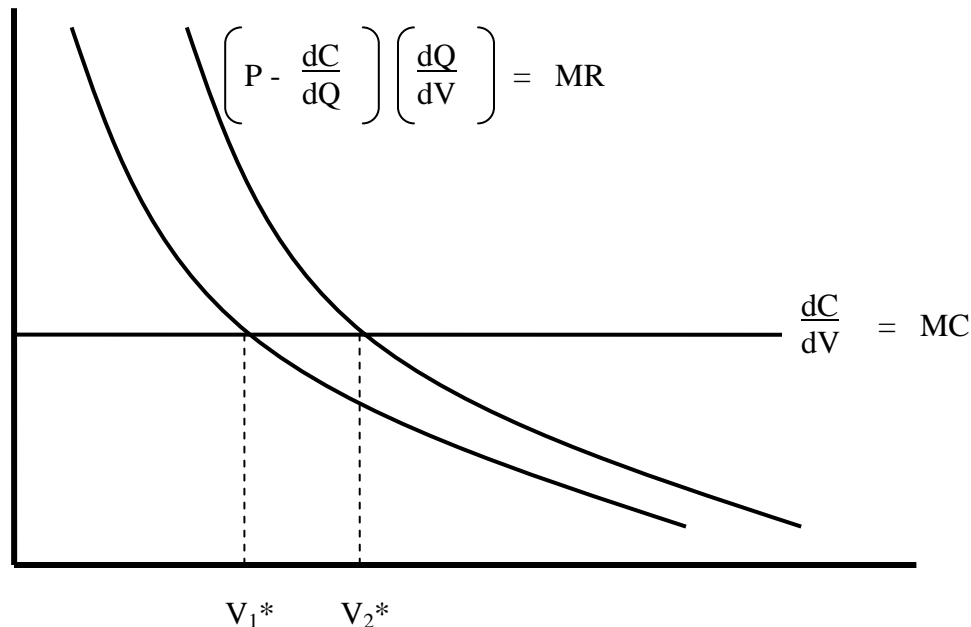
Of this second formula, the term $(P - [dC/dQ]) * (dQ/dV)$ refers to the marginal benefit of an increase in the service's value, while the term $-(dC/dV)$ refers to the marginal cost of an increase in the service's value. Because I assume that dC/dV is constant, the only variations to the formula from value will stem from dQ/dV and dC/dQ ; the change in the number of patients serviced and the value of those services, and in costs and the number of patients serviced, respectively.

I assume that dQ/dV depends on one main market characteristic: the market's elasticity for value. However, there is insufficient literature on determining elasticity in terms of value. Nonetheless, elasticity depends on the number of competitors in the marketplace; fewer competitors means quantity demanded from a given hospital will be less elastic to changes in value; conversely, many competing hospitals means that a slight change in value for a given hospital's services can have large effects on the number of patients a hospital receives. Thus, to predict dQ/dV I will measure competition – R – as the number of rival hospitals in a region, using county lines to define regions. I theorize a negative relationship between the change in number of patients serviced and the value of those services and the change in rival hospitals, such that $d(dQ/dV)/dR < 0$. In other words, the change from a monopoly to a duopoly has a much greater effect on the number of patients seen as it depends on value of services than adding a 15th rival hospital would.

I assume that dC/dQ depends on one primary hospital characteristic: the size of the hospital (I). Two definitions for the hospital's size can be run: the first is the number employees of a hospital (E), but not limited to professionals; and the second is the number of yearly admissions (N). I choose these alternate definitions instead of relying on the number of beds, because different kinds of hospitals have different requirements for inpatient capacity, but a change in the number of employees or the number of admissions can have significant effects on the hospital's administration. Further, I choose to look at all employees rather than focus on doctors alone because some hospitals may make heavy use nursing staff without doctorates with little discernable difference. I theorize that economies of scale will result in a negative relationship between the change in costs of providing medical services and the number of patients serviced and both definitions of the rate of change in staff employed at a hospital, such that $d(dC/dQ)/dI < 0$. In other words, by hiring more employees, the relative costs of seeing each individual

patient doesn't increase as much, since there is less wait for the patient and less stress for the personnel. Alternatively, by increasing the number of patients seen in a hospital facility, the costs associated with seeing an additional patient decrease, because the facilities are already there whether they're used at full capacity or not.

Figure 1



To reiterate: given this framework for understanding the constraints facing hospitals, I have several expectations. First, I expect that an increase in competition will generally lead to an increase in the value of services provided, because value is the primary means of attracting patients and it's easier to attract patients away from rival hospitals than to create new patients from the population. Conversely, I expect hospitals in a regional monopoly to place less emphasis on value, since the effects are smaller. Instead, I expect monopolistic hospitals to focus on reducing costs of providing services. Further, I expect larger hospitals that employ a larger staff to focus on improving value of their services, because to costs of attracting additional patients is not as high as it is in hospitals with smaller staffs.

The Hospital Administration's Influence

The administration of a hospital will reflect it's particular needs. Where good administration is valued, greater compensation will be offered to entice a good administrator into employment. Hospitals that seek to improve the value of services they offer will need the skills of a particularly able administrator, because as described earlier the value of a service depends on the number of total services offered at a hospital and great ability is needed to coordinate between varied and diverse departments of a hospital and keep costs low.

On the labor-side of this narrative, prospective hospital administrators compete for the highest possible compensation. Each administration candidate will attempt to find the best way to demonstrate his or her ability, which I define as A. Those that are most

successful at the demonstration of ability will be selected by a hospital offering a premium for most able administrators.

The effects of these two forces should shift the highest-skilled administrators to positions where their skills are most highly valued. I theorize that larger hospitals (I) and/or those that face high levels of competition (R) will, because they want to maintain high levels of service value (V), employ administrators demonstrating outstanding ability (A), and that as R and E increase, so too does A. To test this theory, I need to define how a prospective administrator will demonstrate his or her skills to a prospective employer. I will use two definitions for the administrator's demonstration of ability: educational background (B) and experience (X).

The reason for defining the demonstration of ability as educational background is two-fold. First, it is possible that an excellent educational institution can impart necessary administrative skills that mediocre universities somehow cannot. Thus, when looking for skilled administrators, a hospital need look no further than to the graduates of a top-rated hospital administration program.

Second, applicants to top-rated programs can be exceptionally talented. The most elite institutions are very selective when choosing between candidates, favoring those who dedicated a significant amount of time to extracurricular activities. This dedication indicates the applicant's value of personal time; lots of activities means a low value on personal time. This self-sacrificing nature is something that hospitals and other employers value; thus, hospitals and other employers rely on the university's selection program instead of conducting their own, which means that hospitals will hire administrators from top-rated universities.

Although this is not directly related to the former two points, it is possible that the location of education is important for making personal contacts. A prospective administrator who knows personally one or more members of the hospital's board of directors can stand a higher chance of being hired by them. Conversely, foreign prospective administrators can be perceived as strange and possibly upsetting to the status quo, and therefore might be avoided. Thus, hospitals can in theory favor graduates from local universities, though this facet might be found regardless of whether a hospital focuses on quality or not. For the purposes of my analysis, however, I cannot make any predictions or tests, since I assume that all hospitals will favor in-state students.

In addition to using educational background as a definition of ability, I will alternatively define ability as the prospective administrator's experience. Working is often valued as a better teacher than anything found in a classroom for a variety of reasons, including opportunities to exercise adaptability, leadership, practical solutions, and creativity. Proof of this can be seen in recommendations for experienced professionals to primarily stress old positions rather than educational degrees earned on resumes.

I will define educational background with a dummy variable. Either the prospective hospital administrator received education at a top-rated university, or he or she did not. If so, I will set $B = 1$; if not, then I will set $B = 0$. I will define working experience as the number of years in the workforce. Any and all work experience is formative and valuable.

Formulating the Analysis

I make four different main hypotheses in the preceding sections which I will repeat here. First, I make the fundamental hypothesis that the value of a service depends on the number of services offered at a hospital, such that $V(S)$. However, I cannot test this hypothesis directly because it is next to impossible to measure value without prices. Instead, I will rely on proxy variables that influence the drive to increase value at a hospital, including both the number of rival hospitals (R) and the size of a hospital (I). Both of these variables should influence the hospital's desire for improved or diminished value.

This second but primary hypothesis is that where the need for increasing the value of services is higher, more capable administrators will be sought, such that as V increases A increases. Because I am using proxies for V , I predict that R and E have a positive and significant correlation with A . If my analysis shows this to be true, then I demonstrate that a hospital administrator's primary ability is to improve the value of a hospital's services by coordinating different departments.

My third hypothesis regards alternative definitions of hospital size. I hypothesize that the hospital's size (I) can be accurately represented by relying on the number of employees (E) and the number of patient visits (N). In running the primary hypothesis, if both E and N have similar correlations with A then I show that both definitions are equally good. If the correlations differ significantly but consistently, then I can determine which is the better definition of size. If the correlations differ haphazardly, then I undermine the likelihood that hospital size is a good predictor for whether or not a hospital will seek to improve the value of its services.

My fourth hypothesis is between the two definitions of ability. I hypothesize that educational background is as important as work experience, such that the correlation between R and E to A is similar between both definitions of A : as educational background (B) and as work experience (X). If my analysis shows this to be true, then I demonstrate the value of a good education. If not, then I diminish the value of a good education, or at least undermine the current ranking schemes of universities.

In other terms, I seek to determine whether the function:

$$f(R, I) = B \text{ or } X, \text{ where } I = E \text{ or } N$$

can be confirmed or disproved.

Data Collection:

The sources for data will be the American Hospital Association Guide for the year 2005. This dataset, which covers the entire United States, includes data regarding the number of hospitals in each county (R), the number of admissions to the hospital in a year (N), and the employed personnel (E). It does not, however, give any information about the hospital's administration, much less the administrator's educational background (B) or his or her work experience (X). Because the sheer amount of data for all hospitals in the United States is staggering, I will instead focus on just one state. I will focus on Texas because it has a good mix of rural areas with enough free space between towns to allow regional monopolies to emerge, while still host to several large metropolitan areas where competition should be fierce. The number of rival hospitals will be taken from the "List of Texas Hospitals by County" published by the Texas Department of State Health Services, Center of Health Statistics for ease of reference. Data will be collected for a random selection of 120 hospitals from the 499 listed Texan hospitals. In order to avoid

problems with outliers, I will use a base-10 logarithm of variables N and E, though because in some counties there are no rival hospitals I cannot use any logarithmic representation for variable R.

Collecting data on hospital administrators will be difficult because there is no centralized directory of administrators for Texas. Administrators will be identified by each individual hospital's website, which are listed in most cases in the 2005 AHA guide, though some website entries are dated. Once the administrator is identified, backgrounds will be inferred primarily from Zoominfo.com, a website that collects data on companies and people from news reports published online. The pertinent background include years of work experience (X) and the college education. Focus will be on the ranking of the university where graduate or post-graduate degrees are earned. Each ranking will be taken from the U.S. News and World Report list of "Best College Rankings, Best Graduate School Rankings, Best Hospitals, and Best Health Insurance Companies", which are based on surveys conducted in 2006. Because relative rankings for each university are only available for the top 25% tier, I will quantify education based on which 25% tier each university belongs to (B).

The results of the collection of data are in Appendix D. Only those hospitals for which data could be found on administrators are included, which are only approximately 20% of the 120 hospitals originally selected for analysis.

Data Analysis and Discussion

From the collected data, I ran a set of 4 regressions including 2 independent variables each. The independent variables include: number of rival hospitals per county (R) and two alternative measurements of hospital size (I); annual admissions of a hospital (N), or employed personnel (E). The alternative dependant variables include years of work experience (X) and ranking of university for graduate education (B).

Appendix A focuses on determining causes for dependant variable X. The first regression on Appendix A uses independent variables R and N. The second regression on Appendix A uses independent variables R and E. Appendix B focuses on determining causes for dependant variable B. The first regression on Appendix B uses independent variables R and N. The second regression on Appendix B uses independent variables R and E. Based on the same data are 2-variable charts and trend lines, all in Appendix C.

The data seems largely inconclusive, and not merely due to the small sample size. The R-Squared values overall suggest a very low reliability in the statistics, which can be confirmed in the provided graphs. The strongest suggestion of correlation is between the number of employees and both measures of CEO ability. There are three possible explanations for the unreliable statistics: that my hypothesis is itself false, that my sample size is too small to lend confidence to my analysis, or that other variables are unaccounted for.

If my hypothesis is doubtful due to the lack of support in the data, this research makes a statement on the work by Palia, Kole, and Lehn. By suggesting that differences within an industry do not significantly affect the selection for CEOs and administrators can make it doubtful that the declared differences between industries or between different times within an industries could be meaningful. However, my hypothesis is based upon the assumption that hospitals are similar to the manufacturing firms and utilities researched by Palia or the airlines researched by Kole and Lehn. My lack of support could show that hospitals are fundamentally different.

Alternatively, my variables may be measured poorly. Years of work experience alone might be a less valuable measurement than a measurement of work experience weighted in favor of administration experience or only of administration experience. Second, the ranking of education into tiers may be misleading; there is little practical difference between a 75th percentile school and a 76th percentile school, though my measurement treats these two schools as different as a 99th percentile school and a 51st percentile school. Further, the method of ranking schools may be objectionable, though U.S. News and World Report's rankings are generally accepted. Further, because some schools are from different categories as determined by the U.S. News and World Report, there is some chance of false measurement. However, most universities are taken from the National University category and most other universities are highly-ranked, such that they would likely be included in the 1st tier anyway.

The sample size problem would be difficult to remedy. First, it is possible that hospitals self-select reporting on CEOs depending on size and services offered. For example, very small hospitals may not have the resources to have a website or have enough impact on the community to merit reporting on the CEO. A second possibility is that some hospitals may be purposely structured such that the CEO is less important. Overall, however, the lack of a directory or other official source listing hospital administrators makes all statistics regarding the hospital administrators themselves suspect.

It is most intriguing, however, to consider that other factors exist in a hospital's selection for CEOs and administrators. First, I might suggest that certain hospitals are more interested in employing a CEO as a link to a network than as actual administrators. In this conception, the CEO is tasked with securing funding for the hospital, in improving the hospital's image, and other factors not strictly market-related. Such hospitals may focus on employing administrators that are educated locally, or may wish to hire from outside in order to broaden the hospital's network. I am unable to determine what factors might influence which hospitals would favor a networking CEO above an administrating CEO.

Another possible unmeasured factor in CEO selection is religion. Many hospitals are funded by a religious foundation. It may be more important to such hospitals to hire administrators that share the foundation's faith. While it would be exceedingly difficult to determine a CEO's beliefs, they could be possibly inferred by the religious status of the educational institution. However, such an investigation is beyond the scope of an economic analysis and suggests a greater focus on sociological causes.

Conclusion:

While the hypothesis that hospital CEOs are selected in terms of educational background (B) or work experience (X) by hospitals as a function of rival hospitals (R) and either annual admissions (N) or employees (E) is not supported by my research, I find other interesting possible avenues of research, including sociological causes for CEO selection such as networking and religion. Despite the lack of evidence in support for Palia, Kole, and Lehn found in my research, it is possible that hospitals are different from other industries.

Sources:

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Appendix A: Work Experience Regression

SUMMARY OUTPUT: Regression of Work Experience as a Function of Competition and Hospital Visits

<i>Regression Statistics</i>	
Multiple R	0.015865802
R Square	0.000251724
Adjusted R Square	-
Standard Error	12.98356423
Observations	16

ANOVA					Significance
	df	SS	MS	F	F
Regression	2	0.551778269	0.275889134	0.001636616	0.998364928
Residual	13	2191.448222	168.5729401		
Total	15	2192			

	Coefficients	Standard Error	t Stat	P-value	Lower 95%	Upper 95%
Intercept	25.97177499	43.5342401	0.596582711	0.561031932	68.07823261	120.0217826
Competition	0.000119958	0.145159538	0.000826386	0.999353186	0.313478158	0.313718073
Log of Visits	0.515754301	11.67134729	0.044189783	0.965424688	24.69865852	25.73016712

SUMMARY OUTPUT: Regression of Work Experience as a Function of Competition and Hospital Employees

<i>Regression Statistics</i>	
Multiple R	0.49264127
R Square	0.24269542
Adjusted R Square	0.126187024
Standard Error	11.30014172
Observations	16

ANOVA					Significance
	df	SS	MS	F	F
Regression	2	531.9883617	265.9941809	2.083072354	0.164156767
Residual	13	1660.011638	127.6932029		
Total	15	2192			

	Coefficients	Standard Error	t Stat	P-value	Lower 95%	Upper 95%
Intercept	24.36946674	25.90831559	0.940604056	0.364058226	80.34097958	31.6020461
Competition	0.203650306	0.14182403	1.435936536	0.174644655	0.510042494	0.102741882
Log of Employees	19.20380077	9.410460934	2.040686519	0.062130728	1.126264037	39.53386557

Appendix B: Graduate Education Regressions

SUMMARY OUTPUT: Regression of Graduate Education as a Function of Competition and Hospital Visits

<i>Regression Statistics</i>	
Multiple R	0.073865395
R Square	0.005456097
Adjusted R Square	-
Standard Error	1.385316348
Observations	18

ANOVA					
	<i>df</i>	<i>SS</i>	<i>MS</i>	<i>F</i>	<i>Significance F</i>
Regression	2	0.157923686	0.078961843	0.041145217	0.95979768
Residual	15	28.78652076	1.919101384		
Total	17	28.94444444			

	<i>Coefficients</i>	<i>Standard Error</i>	<i>t Stat</i>	<i>P-value</i>	<i>Lower 95%</i>	<i>Upper 95%</i>
Intercept	2.320156957	4.057330453	0.571843231	0.575898149	6.327838153	10.96815207
Competition	0.003114313	0.016082972	-0.19364039	0.849055279	0.037394356	0.03116573
Log of Visits	-0.05096243	1.106700203	0.046048993	0.963878681	2.409838065	2.307913204

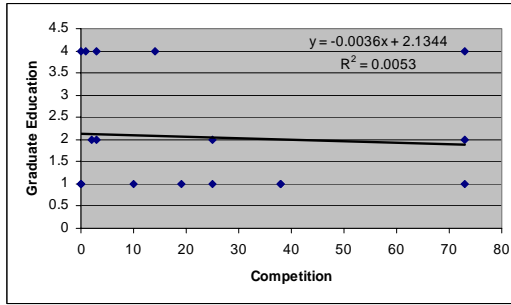
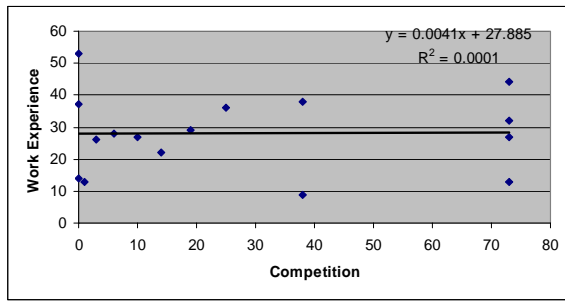
SUMMARY OUTPUT: Regression of Graduate Education as a Function of Competition and Hospital Employees

<i>Regression Statistics</i>	
Multiple R	0.199179924
R Square	0.039672642
Adjusted R Square	-
Standard Error	1.361277387
Observations	18

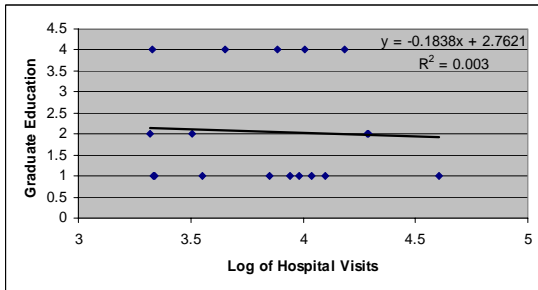
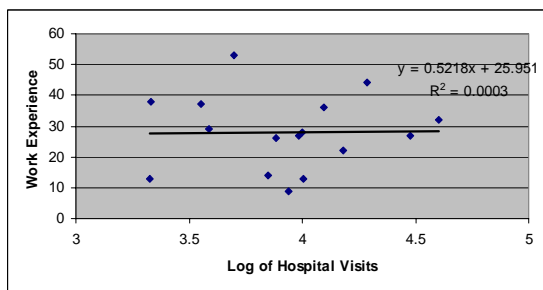
ANOVA					
	<i>df</i>	<i>SS</i>	<i>MS</i>	<i>F</i>	<i>Significance F</i>
Regression	2	1.148302589	0.574151294	0.309836864	0.738150229
Residual	15	27.79614186	1.853076124		
Total	17	28.94444444			

	<i>Coefficients</i>	<i>Standard Error</i>	<i>t Stat</i>	<i>P-value</i>	<i>Lower 95%</i>	<i>Upper 95%</i>
Intercept	4.171204271	2.812212035	1.483246718	0.158714581	1.822883766	10.16529231
Competition	0.007003078	0.019032631	0.367951107	0.718050173	0.033564015	0.047570171
Log of Employees	0.788521022	1.076387846	0.732562176	0.475117836	3.082787396	1.505745351

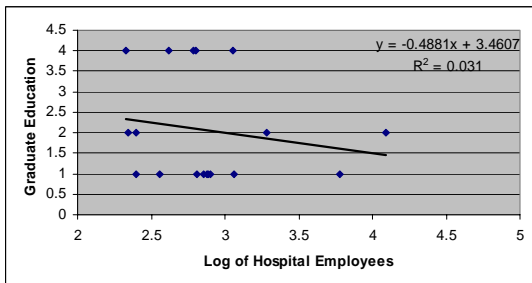
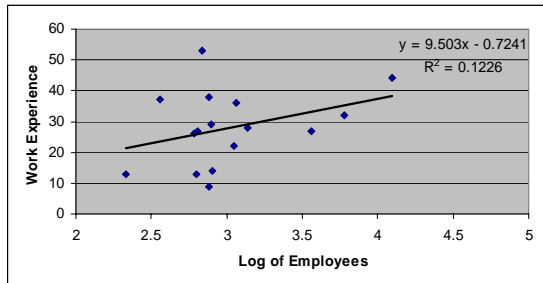
Appendix C: 2-Variable Charts and Trendlines



The effects of competition in the selection for an administrator's work experience or education attainment seems inconclusive.



The effects of hospital visits in the selection for an administrator's work experience or education attainment seems similarly inconclusive.



The effects of the number of employees in the selection for an administrator's work experience seems slightly more persuasive than other factors, though the effects of the number of employees on education is still inconclusive.

Appendix D: Useful Data Set

<u>Hospital Name</u>	<u>Rival Hospitals in County</u>	<u>Number of Visits/Year</u>	<u>Number of Employees</u>	<u>Years of Employment</u>	<u>Bachelor Ranking</u>	<u>Grad/Post- Grad Ranking</u>	<u>Graduate Ranking Tier</u>
Abilene Regional	3	7707	606	26	34	4th tier	4
Christus Spohn Hospital Alice	2	3213	219	-	3rd tier	105	2
Arlington Memorial	25	19585	1926	-	4th tier	67	2
Austin State	19	3864	795	29	-	-	-
South Austin Hospital	19	10937	720	-	3rd tier	44	1
Herris Methodist-Heb.	25	12527	1157	36	1	1	1
Navarro Regional	0	4151	285	-	47	-	-
Doctors Hospital - Dallas	38	8741	756	9	38	12	1
Texas Scottish Rite Hospital for Children	38	2149	763	38	112	21	1
Val Verde Regional Medical	0	3560	359	37	1	1	1
Texoma Medical Center	6	10023	1371	28	-	-	-
Del Sol Medical	14	15224	1125	22	4th tier	4th tier	4
Harris County Hospital District	73	40058	6000	32	47	1	1
Memorial Hermann Hospital	73	29994	3602	27	-	-	-
University of Texas M.D. Anderson Cancer Center	73	19430	12448	44	2	2	2
West Houston Medical	73	10130	634	13	-	4th tier	4
Christus Jasper Memorial	1	2132	214	13	-	4th tier	4
Christus St. Catherine Hospital	73	5315	315	-	-	-	-
Presbyterian Hospital of Kaufman	3	2083	250	-	-	3rd tier	2
Mission Hospital	10	9623	642	27	1	1	1
McKenna Memorial Hospital	0	7080	800	14	3rd tier	52	1
Starr County Memorial	0	2172	249	-	-	1	1
Guadalupe Valley Hospital	0	5017	690	53	-	-	-
Hopkins County Memorial	0	4498	412	-	-	4th tier	4
Winnie Community Hospital	1	647	51	-	-	-	-

Note: Not all hospitals are from the same category.