

**Identifying the Potential Advantages and  
Disadvantages of Creating a Separate  
Foundation for Development at the  
University of Kentucky**

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# Executive Summary

## Statement of Issue

The question of whether or not the University of Kentucky should create a legally independent, institutionally related foundation to receive, hold, invest, and administer the private gift support of the University has been an ongoing debate between UK administrators for many years. This study seeks to identify the potential advantages and disadvantages of creating such a foundation by: (1) conducting a qualitative analysis consisting of personal interviews with officials from the University of Kentucky, the University of Louisville, Western Kentucky University, and Murray State University; and (2) conducting a quantitative regression analysis to determine whether or not there is a significant statistical relationship between the presence of such a foundation and (a) total dollars raised, and (b) endowment investment performance.

## Key Findings from Qualitative Analysis

- Without a separate foundation, UK is able protect private gift funds from state budget cuts.
- Without a separate foundation, UK is able to legally offer and protect donor confidentiality.
- UK is no less flexible in its ability to invest private gift funds than other state universities that manage their endowments through separate foundations.
- A separate foundation would allow UK to bypass time-consuming state regulations associated with accepting and selling real property donations.
- Although such occurrences are rare, separate foundations pose the risk of creating accountability problems for public universities.

## Key Findings from Quantitative Analysis

- No significant statistical relationship exists between the *Presence or Absence of a Separate Foundation* and the dependent variable *Total Dollars Raised—3-Year Average* at public research/doctoral universities.
- No significant statistical relationship exists between the *Presence or Absence of a Separate Foundation* and the dependent variable *Percent Increase/Decrease in Total Endowment from 2002-2003* at public research/doctoral universities.

## Conclusion

The absence of a separate foundation at UK is not related to its fundraising performance as measured by 1) total dollars raised and 2) percent growth in endowment. UK has most of the flexibility that separate foundations have in receiving, investing, and administering private gift support. Only one potential advantage was identified regarding the creation of a separate foundation at UK: the ability to accept and sell real property gifts more expeditiously. Because this advantage involves bypassing state laws that are grounded in the need for oversight of public resources, it raises numerous practical and ethical concerns. I therefore recommend that UK abstain from creating a separate foundation.

## Statement of the Issue

The question of whether or not the University of Kentucky should create a legally independent, institutionally related foundation to receive, hold, invest, and administer the private gift support of the University has been an ongoing debate between UK administrators for many years. This study seeks to identify the potential advantages and disadvantages of creating such a foundation by: (1) conducting a qualitative analysis consisting of personal interviews with officials from the University of Kentucky, the University of Louisville, Western Kentucky University, and Murray State University; and (2) conducting a quantitative analysis to determine whether or not there is a significant statistical relationship between the presence of such a foundation and the independent variables (a) total dollars raised, and (b) endowment investment performance.

## Background of the Issue at UK

While there is no active “University of Kentucky Foundation” that meets the criteria established above, the University does have *eight* foundations that exist primarily for philanthropic purposes: the Research Foundation, the Athletics Association, The Fund, the Equine Research Foundation, the Business Partnership Foundation, the Humanities Foundation, the Mining Engineering Foundation, and the Center on Aging Foundation. There is a legal difference between these foundations, however, and the type of foundation being examined in this study. The eight organizations mentioned above are *affiliated corporations* of the University, meaning that the UK Board of Trustees is responsible for the review and oversight of their endowment investments (*The University of Kentucky Endowment Policy* 1). Separate, institutionally related foundations, such as the University of Louisville Foundation, Inc., are defined by Internal Revenue Code

170(b)(1)(A)(iv) as tax exempt “public charities” that are in fact independent of universities and whose endowments are managed by external boards of directors.

According to a senior official in the UK Office of Development, the first formal deliberation over whether or not the University should create a separate foundation to raise, manage, and administer private gift support occurred in 1972, when then-President Otis Singletary hired a private company to conduct a feasibility assessment on the prospect. While the assessment recommended that the University create a separate foundation, something happened “externally” that dissuaded President Singletary from pursuing the separate foundation idea any further.<sup>1</sup>

Since the time of that decision, a mostly informal debate on the issue has persisted between officials in the UK Office of Development who desire such a foundation and other university officials who are skeptical of the idea. Personal interviews conducted in this study revealed that development officials have continued to want a foundation because of the legal flexibility it could provide as a private, nonprofit corporation. Their primary argument is that a separate foundation would be able to accept and sell real property gifts much more quickly and efficiently than the University itself, which has to follow many state guidelines to complete such transactions. Opponents of the foundation idea are wary of surrendering management control of the UK Endowment to an external foundation board of directors, suggesting that serious accountability issues could arise. One UK official, skeptical of granting such “power” to a separate entity, suggested that “the tail could wag the dog.”<sup>2</sup>

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<sup>1</sup> Personal Interview: Rex Bailey, UK Director of Development Administration and Campaign Services. 2-10-04. See *Appendix 2*.

<sup>2</sup> Personal Interview: Henry Clay Owen, University Treasurer. 2-17-04. See *Appendix 2*.

According to one senior university official, former UK President Charles T. Wethington actually created a separate foundation for UK in his final year in office (year 2000). The official Articles of Incorporation were established, foundation board members were appointed, and \$50,000 of private gift money was placed in a private bank account to launch the “The University of Kentucky Foundation”. The activation of this foundation, however, never received formal approval from the UK Board of Trustees. Furthermore, according to the official, succeeding UK President Lee T. Todd, Jr. was uncomfortable with the fact that Wethington was named president of the new foundation. As a result, the University of Kentucky Foundation has never been activated.<sup>3</sup>

## Literature Review

### The Separate Foundation Development Model

Only four separate, institutionally related foundations existed in U.S. public universities prior to 1930. By 1980, a survey conducted by former University of Wisconsin Foundation Vice President Timothy A. Reilley revealed that the number of four-year state universities that had developed separate foundations to raise, manage, and administer private gift support was 339 (Reilley 1985). While there are no current figures available to show the percentage of public universities who exercise their development operations through a separate foundation, the Council for the Advancement and Support of Education (CASE) reports, "The remarkable growth of institutionally related foundations at public colleges and universities has been one of the most dramatic developments in institutional advancement over the past quarter century."

(<http://www.case.org>) Of a sample of 115 public research universities used in the

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<sup>3</sup> Personal Interview: Jack Blanton, retired UK Sr. Vice President of Administration. 3-29-04. See *Appendix 2*.

quantitative analysis of this study, 98 (85%) of them had adopted the separate foundation model (See *Appendix 1*). Included in the quantitative sample were UK's 19 benchmark universities—16 of which have separate, institutionally related foundations.<sup>4</sup>

### **Why Universities Create Separate Foundations**

A general theme found in development literature implies that institutions create foundations in response to “cumbersome or restrictive laws and regulations that prevent them from effectively raising funds or administering gifts.” (Rennebohm 1) The CASE Organization website lists the common pro-foundation arguments that are promoted by professionals who have published in the university development field

(<http://www.case.org>):

1. **“Foundations provide a better means of clearly separating public and private funds.”** This argument provides the reason for the creation of the nation's first separate foundation at Kansas University in 1893, when the state treasurer attempted to replace state appropriations with private gift funds (Reilley 9). A recent article in the *Lexington Herald Leader* suggested that this argument was applicable to UK. In an article entitled “Universities to Lose Additional \$45 Million: State to Take Money Schools Get from Tuition, Gifts” Linda B. Blackford reported that State Budget Director Brad Cowgill was going to “cut into public university restricted funds, including undesignated gifts.” (*Lexington Herald Leader* 2004).
2. **“Foundations are better able to protect donor confidentiality.”** Public universities are subject to state open records laws that can, in some states, compromise the desired confidentiality of donors. If a university cannot ensure donor confidentiality, individual decisions to support universities may be altered (Ransdell 1996). Indiana University Foundation President

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<sup>4</sup> Only three UK Benchmark Universities raise, receive, invest, and administer private gift support without the use of a separate foundation: The University of Texas-Austin, Penn State University, and The University of Michigan.

Curtis Simic writes, “Many donors will have made planned gift arrangements with the institution, and no one wants their estate plans splashed all over the front page of the newspaper. By giving through a foundation, wills, trust agreements, and highly personal correspondence can be protected from public scrutiny.” (223)

3. **“Foundations are able to invest private gift funds more profitably, thus increasing the revenue available to the university.”** Some professionals argue that public entities in certain states are legally limited in the way that they can invest their private gift funds, thereby forcing them to partake in highly conservative investment strategies. Nonprofit corporations, such as university foundations, are subject to different laws and regulations and are sometimes able to invest their assets more profitably. (Rennebohm 1981)
4. **“Foundation boards often exert political, economic, and professional influence that can improve a university’s fund-raising capability.”** The roles of influential board members as fundraisers, business experts, and major donors are highly valued among development professionals in higher education. (Worth 2002) Many separate, institutionally related university foundations have dozens of influential board members for this very reason.
5. **“Foundations are not subject to regulations governing the sale or purchase of property by the state and can perform these transactions in a more competitive and expeditious manner.”** Universities often use separate foundations as mechanisms with which to accept and sell real property gifts as a way of bypassing state regulations that can delay the process (mandatory appraisals, environmental liability assessments, etc.). Some foundations, such as the University of Wisconsin Foundation, Inc., have been used to purchase real estate on behalf of the university in order to bypass public procurement regulations (Rennebohm 1981).

### **Accountability Problems**

Because institutionally related foundations exist to serve public institutions, they are often perceived as being public entities themselves (Ransdell 1996). It is the

discretionary actions that foundations sometimes take as private, nonprofit organizations that can arouse intense public scrutiny and criticism.

***Donor Confidentiality***

The general public has historically shown that it expects public university foundations to abide by the same freedom of information laws as those that govern state agencies (Rennebohm 1981). Public university foundations, however, have often turned down open records requests from the media and other sources in order to protect the requested confidentiality of donors. Their refusals have been based upon: (1) the fact that they legally exist as private, nonprofit organizations, and (2) the belief that there are many ethically legitimate reasons for which donors might desire confidentiality. Clandestine gifts or business transactions, on the other hand, often arouse public suspicion over whether or not confidential donors are attempting to purchase influence within the university or with individuals closely associated with the university. Below is a table listing recent court cases and rulings that have dealt with the open records issue

(<http://www.case.org>):

<b>Open Records Disclosure and University Foundations</b>		
<b>Year</b>	<b>Court Case</b>	<b>Open Records Disclosure Enforced?</b>
1992	Frankfort Pub. Co., Inc. v. The Kentucky State University Foundation, Inc.	Yes
1992	The State ex. rel. Toledo Blade Company v. The University of Toledo Foundation	Yes
1995	State Board of Accounts v. Indiana University Foundation	No
2003	Mark Gannon & Arlen Nichols v. Iowa Board of Regents & the Iowa State University Foundation	No
2003	Cape Publications, Inc. (Courier Journal) v. The University of Louisville Foundation, Inc.	Partially. 62 donors who had initially requested confidentiality when giving their gifts were protected. Info on 45,000 other donors' gifts were made accessible to the public.



### ***Financial Self-Dealing between Board Members and the Foundation***

The combination of private, nonprofit legal status and lax public oversight can result in personal corruption within university foundations. One recent example is found at the University of Georgia. In an article entitled “Trustees’ UGA Ties Good for Business” *The Atlanta Journal Constitution* reported:

The University of Georgia Foundation manages a \$400 million endowment in clubby, familiar manner that often works to the financial gain of its trustees’ businesses. Half of UGA’s trustees are affiliated with firms that have done more than \$30 million in business with the foundation or the university since 2000... These transactions, which involve 27 of 55 trustees, took place despite a state law and federal tax codes that restrict “self-dealing” by directors of nonprofit organizations. (*Atlanta Journal Constitution* 2003)

### ***Power Struggles between Foundation Boards and Universities***

Several of the officials interviewed in this study from four different universities knew of particular instances in which personality conflicts and power struggles had emerged between university presidents and foundation boards. A documented example is once again provided by the University of Georgia, where the current university president failed to renew the contract of a popular athletics director during the summer of 2003. The UGA Foundation Board of Trustees subsequently applied political and financial pressure in an eight-month attempt to remove the president from office (*Atlanta Journal Constitution* 2004).

### ***Interdependence***

In attempts to prevent potential accountability problems from occurring, many universities establish formal ties of communication and interdependence with their foundations (Young 10). At Indiana University, for instance, the IU Foundation Charter includes a provision stating that the President of the University and three Trustees must also serve as foundation board members (<http://iufoundation.iu.edu/people/board.shtml>). At

Western Kentucky University, the University Vice President of Institutional Advancement also serves as the non-voting Executive Director of the WKU Foundation (<http://www.wku.edu/campaign/foundation.html>).

## **Research Methodology**

### **Part I: Qualitative Analysis**

Purpose: To gather a wide range of professional opinions on the potential advantages and disadvantages of creating a separate, institutionally related foundation for development at the University of Kentucky.

#### **Method**

Using the arguments for and against institutionally related foundations outlined in the *Literature Review*, I developed a general set of topics with which to conduct personal interviews with four development officials at three public universities in Kentucky: the University of Louisville, Western Kentucky University, and Murray State University. I selected these universities for two reasons: (1) Unlike UK, they have separate, institutionally related foundations that serve as the primary repositories and managers of their private gift funds, and (2) they are public universities in the Commonwealth of Kentucky, meaning that they are governed by the same state laws and regulations that govern UK. In order to gain a wide range of perspectives on the issue, I also conducted interviews with six officials from the University of Kentucky in the following departments: Office of Development, Office of Controller and Treasurer, Legal Office, Real Property Office, and Auxiliary & Campus Services Office. The interviews lasted from 30 to 60 minutes and were tape-recorded and transcribed for further analysis. See *Appendix 2* for a list of all general interview topics and interviewees.

## Part II: Quantitative Analysis

Purpose: While holding twelve independent variables constant ( $X_{2-13}$ ), the purpose was to determine whether or not a significant statistical relationship existed in 115 public research/doctoral universities between the presence or absence of an institutionally related foundation ( $X_1$ ) and the following dependent variables:

$Y_1$ : Total dollars raised (3-year average, 2001-2003)

$Y_2$ : The percent change in total endowment (from 2002-2003).

Any significant relationship between  $X_1$  and either of the dependent variables would reveal the possible significance of institutionally related foundations in relation to **(1)** university fundraising performance ( $Y_1$ ), and **(2)** university endowment investment performance ( $Y_2$ ).

### Method

I calculated two separate multiple regression equations using the two dependent variables listed above ( $Y_1$  &  $Y_2$ ) and the following set of independent variables ( $X_{1-13}$ ):

1. Presence or Absence of a Separate Foundation for Development (1 = Foundation, 0 = No Foundation)
2. Total Student Enrollment: Full + Part Time (2003)
3. Total # of Alumni on University Record (2003)
4. Total # of Alumni Solicited (2003)
5. Total # of Alumni Donors (2003)
6. # of Alumni Donors as a percent of Alumni on University Record (2003)
7. # of Alumni Donors as a percent of Alumni Solicited (2003)
8. Average Alumni Gift (Alumni \$  $\div$  # of Alumni Donors, 2003)
9. # of Governing Board Donors (including foundation trustees, 2003)
10. Total University Expenditures<sup>5</sup> (2003)
11. Gross State Product (2001)
12. Total Personal Income by State (2002)
13. Per Capita Personal Income by State (2002)

*See Appendix 3 for the formal regression equation and description of the model.*

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<sup>5</sup> In the *VSE Survey*, "Total Expenditures" included: Research, Public Service, Academic Support, Student Services, Institutional Support, Scholarships/Fellowships, Operation & Maintenance. Excludes: Auxiliary Enterprises, Hospital Services, and Independent Operations.

## About the Data

Data for both dependent variables and most of the independent variables in this model were taken from the *Voluntary Support of Education* (VSE) survey, conducted annually by the Council for Aid to Education (CAE)—a subsidiary of the RAND Corporation<sup>6</sup>. While other independent variables were desired for the regression equations, such as resources allocated by universities towards fundraising (development staff size, campaign expenditures, etc.), the first 11 independent variables listed above ( $X_{1-11}$ ) were the only figures available from the VSE survey that were potentially related to the dependent variables of this model. Individual state economic data for independent variables ( $X_{11-13}$ ) in the list above were taken from the U.S. Department of Commerce Bureau of Economic Analysis (<http://www.bea.gov/>). These variables were selected based on the premise that the state economic conditions of the areas in which the sample universities are located may have a significant impact on the dependent variables ( $Y_1$  &  $Y_2$ ) of the regression equation.

## The Universities

Of the 115 public research/doctoral universities provided by the VSE Survey, only 17 (including the University of Kentucky) did not have a separate foundation that served as the primary repository and investment mechanism of private gift support (see *Appendix I*). Using several of the independent variables from the regression model of this study, the table below displays a descriptive statistical comparison between *foundation* and *non-foundation* universities used in the quantitative sample:

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<sup>6</sup> According to CAE's official website, "For over 40 years, the VSE has been the authoritative national source of private giving to higher education and private K-12, consistently capturing about 85% of the total voluntary support to colleges and universities in the United States."  
([http://www.cae.org/content/pro\\_data\\_trends.htm](http://www.cae.org/content/pro_data_trends.htm))

<b>Descriptive Statistics on Sample Universities</b>			
<b>Variable</b>	<b>Non-Foundation Schools</b>	<b>Foundation Schools</b>	<b>All Schools</b>
<b>n</b>	17	98	115
<b>Avg. Total Enrollment</b>	25,515	25,344	25,369
<b>Enrollment Range</b>	11,036 to 52,261	7,749 to 49,676	7,749 to 52,261
<b>Avg. # Alumni on Record</b>	183,338	153,463	157,879
<b>Alumni Donors as a % of Alumni on Record</b>	10.68%	11.06%	11.01%
<b>Avg. Alumni Gift Size</b>	\$852	\$663	\$691
<b>State Per Capita Income</b>	\$29,348	29,951	\$29,862
<b>Gross State Product</b>	\$327,099,765	\$364,575,673	\$359,035,757
<b>Avg. # of Governing &amp; Foundation Board Members</b>	32	65	61

### **Limitations of the Data**

A noticeable time disparity exists between data taken from the Bureau of Economic Analysis ( $X_{11-13}$ ) and data taken from the VSE Survey ( $X_{1-10}$ ). This inconsistency is present because of time lags on the release of Gross State Product and Personal Income data. Because years 2001 and 2002 are the most current release dates of GSP and Personal Income variables, these data served as mere proxies for year 2003 in the analysis. While I have acknowledged that this inconsistency can present problems, the regression equation was conducted under the assumption that between years 2001 and 2003, there were no shifts in GSP and Personal Income that were dramatic enough to substantially alter the accuracy of their effect as independent variables.

The dependent variable *Three-Year Average of Total Dollars Raised* ( $Y_1$ ) also presents potential problems with time and accuracy. VSE data does not include total dollars raised by current year, but rather, total dollars raised by three and five-year averages. The three-year average data were the closest information available to indicate

how much money each of the 115 sample universities raised in year 2003. Once again, the regression equation was calculated under the assumption that there was no dramatic shift in the average number of dollars raised in universities between the years 2001 and 2003.

## **Qualitative Results and Analysis**

### **Summary of Interview Results: Outside University Officials**

The advantages and disadvantages of separate, institutionally related foundations identified by development officials at the University of Louisville, Western Kentucky University, and Murray State University were mostly uniform and directly echoed the pro-foundation arguments presented in the literature review.<sup>7</sup>

#### **The Clear Separation of Public and Private Funds**

Three out of four outside officials argued that foundations provide a clearer means of keeping private funds separate from public funds, suggesting that UK would need a separate foundation in order to protect its private gift funds from future state budget cuts.

#### **The Ability to Offer and Protect Donor Confidentiality**

All of the outside officials stressed the importance of the ability to offer donor confidentiality in university fundraising, claiming that some donors would not give if confidentiality could not be protected. None of the officials believed that UK, as a public agency, would be able to protect donor confidentiality from an official open records request.

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<sup>7</sup> The following outside university officials were interviewed: (1) Joseph S. Beyel, V.P. of Institutional Advancement, U of L (3-04-2004); (2) Gary A. Ransdell, University President, WKU (3-05-2004); (3) Thomas S. Hiles, V.P. of Institutional Advancement, WKU (3-05-2004); (4) J. Mark Hutchins, V.P. of Institutional Advancement, MSU (3-11-04). Each official interviewed specifically asked *not* to be directly quoted. See *Appendix 2*.

## **The Ability to Invest Private Gift Funds more Profitably**

None of the outside officials believed that UK was at any disadvantage in comparison with foundation universities in its legal ability (as a public entity) to invest its gift funds in the private market.

## **Foundation Board Members as Influential Fundraisers**

All of the outside officials argued that having a foundation board was one very effective way to coordinate and mobilize influential alumni and university friends into focusing on the long-term financial goals of the institution. They each suggested that having an influential foundation board increases a university's fundraising capacity.

## **The ability to perform real estate transactions competitively and expeditiously**

Each outside official regarded the ability to bypass red tape in real property transactions as a competitive advantage that separate foundations have over public universities.

## **Disadvantages Identified: Accountability**

Each outside official suggested that foundation accountability problems, though possible, were "very rare." Three out of four of these officials, however, spoke of instances that they knew of in which foundation boards had applied pressure in an attempt to get university presidents fired, or had refused to support presidential initiatives with foundation funds.

## **Summary of Interview Results: UK Officials**

### **The Clear Separation of Public and Private Funds**

Officials from the UK Office of Development and the UK Office of Legal Counsel quickly dismissed the argument that UK would need a separate foundation in order to protect its private gift funds from future state budget cuts. In response to the

recent article published by the *Lexington Herald Leader*, one official proclaimed that the assertion made by the State budget director that the State could claim a public university's private gifts was "ill-advised."<sup>8</sup> According to these officials, the clear separation of public and private funds at UK is a "non-issue."<sup>9</sup>

### **The Ability to Offer and Protect Donor Confidentiality**

According to officials in the UK Office of Legal Counsel and the Office of Development, UK is no less able to protect donor confidentiality than university foundations in Kentucky. The ability of institutionally related foundations to protect donor confidentiality as *private* institutions is called into question by a recent Jefferson County Circuit Court Case in which it was ruled that that the *University of Louisville Foundation, Inc.* was indeed a *public* agency subject to Kentucky Open Records Laws.<sup>10</sup> Furthermore, UK can and does offer confidentiality to its donors under the protection of Kentucky Revised Statute 61.878(1)(a)—the Personal Privacy Exemption. According to the statute, the following public records are exempt from KY open records law: "Public records containing information of a personal nature where the public disclosure thereof would constitute a clearly unwarranted invasion of personal privacy." This exemption gives the legal right to protect the personal information of donors if confidentiality is requested.

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<sup>8</sup> Personal Interview: Rex Bailey, UK Director of Development Administration and Campaign Services. 2-10-04. See *Appendix 2*.

<sup>9</sup> Personal Interview: Barbara Jones, Legal Counsel General Associate. 3-19-04. See *Appendix 2*.

<sup>10</sup> Jefferson Circuit Court-Division Nine: Cape Publications, Inc. (The Courier Journal) v. The University of Louisville Foundation, Inc. 9-18-03. Records of donations from 45,000 U of L Foundation donors were declared as "subject to open records law." 62 Donors who had provided restricted gifts through the foundation for the McConnell Center and who had initially requested confidentiality remained confidential under the protection of KRS 61.878(1)(a)—the Personal Privacy Exemption. The ruling is currently under appeal at in the state Supreme Court.



### **The Ability to Invest Private Gift Funds more Profitably**

According to officials in the UK Office of Controller and Treasurer, the argument found in the literature stating that public universities are sometimes inhibited in their investment practices by state regulation is not applicable to UK.<sup>11</sup> Under KRS 164A.550 through 164A.630, the Investment Committee of the UK Board of Trustees is granted the considerable freedom to (1) formulate and review its own investment policies, to (2) appoint its own investment managers/consultants, and to (3) review and approve plans for the general management of its own endowment funds. While there are certain standards of investment *prudence* that UK must follow under the Uniform Management of Institutional Funds Act (KRS 273.520 to 273.590), interviews with development officials at U of L, WKU, and MSU revealed that each of their foundations' investment committees also follow the standards of UMIFA.

### **The Ability to Conduct Real Estate Transactions Expeditiously**

Only one potential advantage was identified by UK officials for creating a separate foundation: the ability to conduct real estate transactions expeditiously. UK is often involved in transactions that involve the acceptance of charitable real property donations solely for the purpose of selling those assets on the private market to support the University. According to officials in the UK Office of Campus & Auxiliary Services and the Office of Real Property, several steps must be taken before such a sale can be completed. After a mandatory environmental assessment on the property is obtained, acceptance of the gift must be approved by the Board of Trustees. The property must then be declared officially as surplus by the State. The University must then receive two mandatory appraisals and a mandatory survey of the real estate before it can sell the gift

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<sup>11</sup> Personal Interview: Henry Clay Owen, University Treasurer. 2-17-04. See *Appendix 2*.

in either a sealed bid or public auction process. Development officials claim that the combination of these regulations provides for a very slow and inefficient process that can be displeasing to donors who wish to see their gifts liquidated and applied to the University as quickly as possible. A separate foundation, they argue, could accept and liquidate real estate gifts on behalf of the University without having to jump through so many bureaucratic hoops.<sup>12</sup>

Other UK officials interviewed in the Offices of Controller & Treasurer, Campus & Auxiliary Services, and Real Property dispute the claim that creating a separate foundation in order to bypass real estate regulations is a potential advantage. These officials claim that even though several steps must be taken, the University is normally able to complete these transactions within “three to four months.”<sup>13</sup> Furthermore, they didn’t characterize real estate regulations as necessarily burdensome. The law requiring the acquisition of two appraisals, one official argued, “is just good business.”<sup>14</sup> Some officials also raised ethical concerns over creating a foundation to bypass laws that were “grounded in the need for public oversight over public resources.”<sup>15</sup>

## **Discussion of Qualitative Analysis**

Findings in the qualitative analysis reveal that UK has the administrative flexibility to perform most of the tasks that have been characterized as *advantages* of separate foundations by development literature and by professionals from other public universities in Kentucky. Two areas of contention remain: (1) does the presence of influential foundation board members serving as fundraisers increase a public

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<sup>12</sup> Personal Interview: Rex Bailey, UK Director of Development Administration and Campaign Services. 2-10-04. See *Appendix 2*.

<sup>13</sup> Personal Interview: Allene Rash, UK Real Properties Manager. 3-14-04. See *Appendix 2*.

<sup>14</sup> Personal Interview: Ken Clevidence, UK V.P. of Auxiliary & Campus Services, 3-14-2004. See *Appendix 2*.

<sup>15</sup> Personal Interview: Henry Clay Owen, University Treasurer. 2-17-04. See *Appendix 2*.

university's capacity to raise private funds? (2) does the ability to conduct real estate transactions more quickly place foundation universities at an advantage over non-foundation universities?

The answer to the first question will best be addressed in findings from the quantitative analysis (next section). One of the independent variables of the regression analysis that attempts to determine factors that affect the dependent variable *Total Dollars Raised* ( $Y_1$ ) is *# of Governing/Foundation Board Donors*<sup>16</sup> ( $X_5$ ). Any significant relationship identified between these two variables will substantiate the argument that the presence of influential foundation board members increases a university's fundraising capacity.

The second question is more complicated due to the following issues: (1) the *degree* to which separate foundations are faster than public universities in accepting and selling real property gifts remains unclear, and (2) there are legitimate ethical concerns regarding a separate foundation's ability to bypass laws and regulations that were created with the intention of providing public oversight over public universities. These concerns will be discussed in further detail in the conclusion of this study.

## Quantitative Results and Analysis

### Testing for Correlation between the Two Dependent Variables

Before estimating the two separate regression equations, it was first necessary to make sure that *3-Year avg. of Total Dollars Raised* ( $Y_1$ ) and *Percent Increase/Decrease in Total Endowment from 2002-2003* ( $Y_2$ ) were not highly correlated. Because many private gifts go towards the establishment of endowment accounts and thus increase the

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<sup>16</sup> This variable was selected under the assumption that virtually all foundation board members serve both as fundraisers *and* as individual donors (it's often a requirement of board membership). The # of board donors, therefore, is somewhat indicative of the size of foundation boards.

size of a university's total endowment, it was important to make sure that the two dependent variables were not one in the same.

The relationship between these two dependent variables was investigated by calculating a Pearson correlation coefficient. Preliminary analysis was performed to ensure that there were no violations of the linearity and homoscedasticity assumptions (See *Appendix 4* for scatterplot). The test showed that (1) there was a very weak correlation between the two variables ( $r = .029$ ), and that (2) the 2-tailed significance level of .764 far exceeded the preferred significance level of .05.

### **Multicollinearity Problems: Regression Calculations 1 and 2**

Many of the independent variables in the regression model were highly correlated with one another when each of the equations was calculated, causing numerous multicollinearity problems. The Pearson Correlation between *Total Personal Income by State* ( $X_{12}$ ) and *Gross State Product* ( $X_{11}$ ) was  $r = .997$ , and the Pearson Correlation between *Alumni Donors as a % of Alumni on Record* ( $X_6$ ) and *Alumni Donors as a % of Alumni Solicited* ( $X_7$ ) was  $r = .660$ . Table 1 below displays five more independent variables that were highly correlated:

<b>Multicollinearity between Independent Variables</b>					
<b>Pearson Correlation</b>	<b># Alumni on record</b>	<b># Alumni Solicited</b>	<b># Alumni Donors</b>	<b>Total Enrollment</b>	<b>Total Expenditures</b>
<b># Alumni On record</b>	1	0.871	0.828	0.767	0.835
<b># Alumni Solicited</b>	0.871	1	0.783	0.7	0.738
<b># Alumni Donors</b>	0.828	0.783	1	0.641	0.79
<b>Total Enrollment</b>	0.767	0.7	0.641	1	0.709
<b>Total Expenditures</b>	0.835	0.738	0.79	0.709	1

In sum, it was necessary to omit the following 6 independent variables (out of 13) of the regression model in order to eradicate all problems associated with multicollinearity:

1. Total Personal Income by State
2. # of Alumni Donors as a % of Alumni Solicited
3. Total # of Alumni Solicited
4. Total # of Alumni Donors
5. Total Enrollment: Full + Part-Time
6. Total Expenditures

### **Checking for Violation of Assumptions: Regression Calculations 1 & 2**

*Appendix 5* shows that the normal probability plot of the regression standardized residuals were in a reasonably straight diagonal line from bottom left to top right, indicating that there were no major deviations from normal distribution in either of the regression equations. Additionally, there were no discernable distribution patterns in the scatterplot of the standardized residuals, indicating that there were no violations of the assumptions of homoscedasticity or of the independence of errors in either of the equations.

### **Results of Regression 1**

The primary purpose of the first regression calculation was to determine whether or not a significant statistical relationship existed in the sample universities between *The Presence or Absence of an Institutionally Related Foundation* ( $X_1$ ) and the *Total Dollars Raised—3 Yr. Avg.* ( $Y_1$ ), while holding the remaining six independent variables constant.

### ***Evaluating the Model***

The calculated coefficient of multiple determination ( $r^2$ ) in the first regression equation was .705, indicating that 70.5% percent of the variation in *Total Dollars Raised—3 Yr. Avg.* ( $Y_1$ ) can be explained by the 7 independent variables of the model. The calculated adjusted  $r^2$  value was also considerably high at .681.

### *Evaluating Each of the Independent Variables*

The standardized coefficient table below displays the fact that there is a statistically significant relationship between the dependent variable *Total Dollars Raised—3 Yr. Avg.* ( $Y_1$ ) and 4 of the 7 independent variables:

<b>Regression Model 1</b> (dependent variable $Y_1$ : Total Dollars Raised – 3-Year Avg.) $N = 115$		
<b>Independent Variable</b>	<b>Coefficient (standard error)</b>	<b>Sig.</b>
<u>Foundation/No Foundation</u>	7,918,978 (11,507,000)	0.493
# Alumni on University Record**	469 (49)	<b>0.000</b>
Alumni Donors as % of Alumni on Record**	2,985,957 (852,924)	<b>0.001</b>
Average Alumni Gift Size**	23,957 (5,956)	<b>0.000</b>
# of Governing & Foundation Board Donors	331 (80,672)	0.997
Gross State Product (2001)**	.03 (.01)	<b>0.010</b>
State Per Capita Income (2002)	1,323 (1,163)	0.258
R Square	0.705	
Adjusted R Square	0.681	

\*\*Significant at the 1% Level

\*Significant at the 5% Level

### *Discussion*

With a significance level of  $p = .493$ , the results of the equation indicate that there is no statistically significant relationship between *The Presence or Absence of an Institutionally Related Foundation* ( $X_1$ ) and *Total Dollars Raised—3 Yr. Avg.* ( $Y_1$ ).

A Beta value of .609 and a significance level of .000 (far below the standard .05 significance level) indicated that *# of Alumni on University Record* has by far the most significant impact on *Total Dollars Raised—3 Yr. Avg.* ( $Y_1$ ). Additionally, the high Pearson's correlation between these two variables ( $r = .750$ ) indicates a very strong

positive relationship. It is important to note that there was an extremely high Pearson's correlation between *# of Alumni on University Record* and the previously omitted variable, *Total Enrollment: Full + Part-Time* ( $r = .767$ ). These findings indicate that there is a very strong positive relationship between school size (measured by enrollment and alumni base) and annual dollars raised in public research universities.

Other important relationships were found to exist between the dependent variable and *Gross State Product* (sig. = .010), and the dependent variable and *Average Alumni Gift* (sig. = 0). These findings indicate that *Total Dollars Raised—3 Yr. Avg. (Y<sub>1</sub>)* is significantly influenced by external factors outside of public university control – such as state economic conditions.

## **Results of Regression Calculation 2**

The primary purpose of the second regression calculation was to determine whether or not a significant statistical relationship existed in the sample universities between *The Presence or Absence of an Institutionally Related Foundation (X<sub>1</sub>)* and *Percent Change in Total Endowment from 2002-2003 (Y<sub>2</sub>)*, while holding the remaining six independent variables constant. This calculation would reveal the importance of a foundation in relation to a university's endowment investment performance.

### ***Evaluating the Model***

The calculated coefficient of multiple determination ( $r^2$ ) in the second regression equation was .050, indicating that only 5% percent of the variation in *Percent Change in Total Endowment from 2002-2003 (Y<sub>2</sub>)* can be explained by the 7 independent variables of the model. The calculated adjusted  $r^2$  value was also considerably low at -.023.

### ***Evaluating Each of the Independent Variables***

The standardized coefficient table below displays the fact that there is no statistically significant relationship between the dependent variable *Percent Change in Total Endowment from 2002-2003* ( $Y_2$ ) and any of the seven independent variables:

<b>Regression Model 2</b> <b>(dependent variable <math>Y_2</math>: % Change in Endowment between 2002-2003)</b> <b><math>N = 115</math></b>		
<b>Independent Variable</b>	<b>Coefficient (standard error)</b>	<b>Sig.</b>
<u>Foundation/No Foundation</u>	2.837 (4.944)	0.568
# Alumni on University Record	.000 (.000)	0.118
Alumni Donors as % of Alumni on Record	.011 (.366)	0.975
Average Alumni Gift Size	.002 (.002)	0.364
# of Governing & Foundation Board Donors	-.006 (.035)	0.863
Gross State Product (2001)	.000 (.000)	0.817
State Per Capita Income (2002)	.000 (.000)	0.348
R Square	0.050	
Adjusted R Square	-0.023	

### ***Discussion***

Before discussing the results of Regression 2, it is first necessary to consider a structural limitation of the model. The dependent variable measures the change in total endowment over a period of two years (2002-2003), while the independent variables are representative of only *one year* (2003). This inconsistency in time measurement may have had a significant impact on the failure of the regression calculation to reveal any significant statistical relationships between the dependent and independent variables. The logical solution to this problem would be to measure all of the variables in the model



over a two year period, but this was not possible due to limitations in the survey data. Keeping this potential problem in mind, the most important discovery of the regression calculation was the lack of a statistically significant relationship between the dependent variable and *The Presence or Absence of an Institutionally Related Foundation* ( $X_1$ ).

## **Conclusion and Recommendation**

### ***Summary of Findings from Qualitative Interviews***

1. UK does not need a separate foundation to protect its private gift funds from state budget cuts.
2. UK does not need a separate foundation to offer and protect donor confidentiality.
3. UK does not need a separate foundation for the purpose of increasing its private gift fund investment flexibility.
4. Separate foundations give universities the flexibility to bypass time-consuming state regulations in the process of accepting and selling real property gifts.
5. Although such instances are rare, separate foundations pose the risk of creating accountability problems for public universities.

### ***Summary of Findings from Quantitative Analysis***

1. No significant statistical relationship exists between the *Presence or Absence of a Separate Foundation* and the dependent variable *Total Dollars Raised—3-Year Average* at public research/doctoral universities.
2. No significant statistical relationship exists between the *Presence or Absence of a Separate Foundation* and the dependent variable *Percent Increase/Decrease in Total Endowment from 2002-2003* at public research/doctoral universities.
3. Significant statistical relationships exist at public research/doctoral universities between *Total Dollars Raised—3-Year Average* and the following independent variables: (1) *# of Alumni Donors on University Record*, (2) *# of Alumni Donors as a % of Alumni on Record*, (3) *Gross State Product*, and (4) *Average Alumni Gift*.
4. No significant statistical relationship was identified between the dependent variable *Percent Increase/Decrease in Total Endowment from 2002-2003* and any of the seven independent variables of the regression model.

## ***Discussion and Recommendation***

The regression analysis of this study revealed that the absence of a separate, institutionally related foundation at UK has no bearing on its private fundraising or endowment investment performance. The debate over whether or not the University should create a foundation, therefore, becomes an issue of flexibility: as a public agency, is UK substantially inhibited by red tape in its ability to receive, hold, invest, and administer private gift support? If so, does it need a separate foundation to overcome such obstacles? Despite many arguments presented in university development literature and by officials at other public universities in Kentucky, the qualitative analysis of this study revealed that UK has the administrative flexibility to perform most of the tasks that have been characterized as *advantages* of separate foundations. It is important to note, however, that such legal flexibility may not be present in other states – which could make the creation of independent, non-profit university foundations more necessary. Florida State University, for instance, may not legally be able to protect donor confidentiality or to invest private gift funds profitably without the presence of a separate foundation. In this regard, the qualitative conclusions of this study are generalizable only to public universities *in Kentucky*.

The one area involving administrative flexibility that remains in contention at UK is the ability to accept and sell real property gifts expeditiously. The process that the University must go through to complete such transactions consists of mandatory public procedures that some development officers perceive as cumbersome, time-consuming, and potentially displeasing to the real estate donor. The creation of a separate foundation would enable the University to move more quickly in the acceptance and sale of land donations. The quickness afforded by a foundation, however, comes at the cost of

bypassing state laws that were created to provide oversight of public resources for the citizens of Kentucky. Some officials expressed ethical concerns over this dilemma. One official made the following specific remarks: "...for a public institution to rely heavily on the activities of a private foundation, and thereby creating flexibilities in that foundation that we don't have as a public university, it seems to me like we're attempting to change the character of an institution from public to private. But we're not private. We're state supported."<sup>17</sup>

The degree to which separate foundations are faster than public agencies in completing real estate transactions must also be considered. Officials at UK argue that there are certain sensible actions that any organization should take in the sale of real estate. Whether public or private, it may be in the best interest of a university to check for environmental liabilities before it accepts a real property gift. If a university foundation accepts a non-appraised real property gift and wishes to sell it, then it only makes sense for that foundation to have the land appraised before it attempts to make the sale. In this regard, public protocol is not simply mandatory – it's also logical and necessary.

Given that (1) the absence of a separate foundation at UK is not statistically significant in relation to fundraising or endowment investment performance, (2) the degree to which separate foundations are faster than UK in accepting and selling real property gifts is unclear, and (3) the creation of a separate foundation at UK raises practical and ethical concerns of public oversight (despite increased flexibility), I recommend that the University of Kentucky abstain from creating a separate, institutionally related foundation

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<sup>17</sup> Personal Interview: Henry Clay Owen, University Treasurer. 2-17-04. See *Appendix 2*.

## **Public Research/Doctoral Universities Used in this Study** (listed in descending order by total enrollment)

### **Non-Foundation Universities**

1. The University of Texas-Austin
2. Penn State University (University Park)
3. The University of Michigan (Ann Arbor)
4. Temple University (Philadelphia)
5. The University of Kentucky (Lexington)
6. The University of Pittsburgh (PA)
7. The University of Utah (Salt Lake City)
8. Central Michigan University (Mt. Pleasant)
9. The University of Missouri (Columbia)
10. The University of Texas (Arlington)
11. Utah State University (Logan)
12. The University of Delaware (Newark)
13. The University of Alabama-Birmingham (AL)
14. The University of Miami (Coral Gables, FL)
15. The University of Texas (Dallas)
16. The University of Massachusetts (Lowell)
17. The University of Vermont (Burlington)
29. North Carolina State University (Raleigh)
30. The University of California-Davis
31. The University of Kansas (Lawrence)
32. Ohio University (Athens)
33. The University of Oklahoma (Norman)
34. Virginia Tech (Blacksburg)
35. Georgia State University (Atlanta)
36. Iowa State University (Ames)
37. The University of Tennessee (Knoxville)
38. George Mason University (Fairfax, VA)
39. State University of New York-Buffalo
40. The University of North Carolina (Chapel Hill)
41. Virginia Commonwealth University (Richmond)
42. The University of Connecticut (Storrs)
43. The University of South Carolina (Columbia)
44. The University of New Mexico (Albuquerque)
45. Colorado State University (Fort Collins)
46. Northern Illinois University (DeKalb)

### **Universities with Separate Foundations**

1. Ohio State University (Columbus)
2. The University of Minnesota (Twin Cities)
3. The University of Florida (Gainesville)
4. Arizona State University (Tempe)
5. Texas A&M University (College Station)
6. Michigan State University (East Lansing)
7. The University of Wisconsin (Madison)
8. The University of Washington (Seattle)
9. The University of South Florida (Tampa)
10. Indiana University (Bloomington)
11. Purdue University (West Lafayette)
12. The University of Central Florida (Orlando)
13. The University of California-Los Angeles
14. The University of Arizona (Tucson)
15. Florida State University (Tallahassee)
16. Rutgers University (New Brunswick, NJ)
17. The University of Maryland (College Park)
18. California State University (San Diego)
19. Florida International University (Miami)
20. The University of California-Berkeley
21. The University of Cincinnati (OH)
22. The University of Georgia (Athens)
23. Oklahoma State University (Stillwater)
24. The University of Colorado (Boulder)
25. The University of North Texas (Denton)
26. Texas Tech University (Lubbock)
27. Western Michigan University (Kalamazoo)
47. The University of California-Irvine
48. New Mexico State University (Las Cruces)
49. The University of Akron (OH)
50. West Virginia University (Morgantown)
51. Florida Atlantic University (Boca Raton)
52. The University of California-San Diego (La Jolla)
53. The University of Massachusetts-Amherst
54. Kent State University (Kent, OH)
55. Auburn University (Auburn, AL)
56. The University of Nebraska (Lincoln)
57. Kansas State University (Manhattan)
58. Washington State University (Pullman)
59. State University of New York (Stony Brook)
60. Middle TN State University (Murfreesboro)
61. Southern Illinois University (Carbondale)
62. Miami University (Oxford, OH)
63. Illinois State University (Normal)
64. The University of Louisville (KY)
65. The University of Toledo (OH)
66. Old Dominion University (Norfolk, VA)
67. The University of California-Santa Barbara
68. Bowling Green State University (OH)
69. The University of Oregon (Eugene)
70. The University of Northern Arizona (Flagstaff)
71. The University of Virginia (Charlottesville)
72. Oregon State University (Corvallis)
73. The University of Hawaii (Manoa)
74. Ball State University (Muncie, IN)

28. The University of Iowa (Iowa City)

75. State University of New York-Albany

**Public Research/Doctoral Universities, Continued**

76. Clemson University (SC)

88. The University of North Carolina-Greensboro

77. Mississippi State University (Jackson)

89. State University of New York-Binghamton

78. Georgia Tech (Atlanta)

90. The University of Montana (Missoula)

79. The University of Arkansas (Fayetteville)

91. The University of Wyoming (Laramie)

80. The University of Louisiana (Lafayette)

92. The University of Idaho (Moscow)

81. The University of California-Riverside

93. Louisiana Tech (Ruston)

82. Wichita State University (KS)

94. Indiana State University (Terre Haute)

83. The University of Nevada (Reno)

95. The University of Maryland-Baltimore County

84. The University of Mississippi (Oxford)

96. The University of Northern Colorado (Greeley)

85. The University of New Hampshire (Durham)

97. The University of Maine (Orono)

86. The University of Rhode Island (Kingston)

98. College of William &amp; Mary (Williamsburg, VA)

87. The University of California-Santa Cruz

## General Interview Topics

1. The clear separation of public and private funds
2. The foundation vs. the university: ability to protect donor confidentiality
3. Public scrutiny associated with foundations and donor confidentiality
4. The foundation vs. the university: ability to invest private funds
5. The foundation vs. the university: ability to purchase real estate
6. The foundation vs. the university: ability to accept and liquidate real estate gifts
7. The influence of foundation board members as fundraisers
8. Problems of corruption (self-dealing) between board members and foundations
9. Power struggles between foundations and the universities they serve
10. Further advantages and disadvantages not yet discussed

## Personal Interviews, in Chronological Order

1. Renee Mussetter, Attorney and Gift Planning Officer. The University of Kentucky Office of Development. Interviewed November, 2003.<sup>18</sup>
2. Rex Bailey, Director of Development—Administration and Campaign Services. The University of Kentucky. Interviewed 2-10-04.
3. Henry Clay Owen, University Treasurer. Office of Controller and Treasurer. Interviewed 2-17-04.
4. Joseph S. Beyel, V.P. of Institutional Advancement. The University of Louisville. Interviewed 3-04-2004.
5. Dr. Gary A. Ransdell, former V.P. of Institutional Advancement-Clemson U. Current President of Western Kentucky University. Interviewed 3-05-04.
6. Thomas S. Hiles, V.P. of Institutional Advancement. Western Kentucky University. Interviewed 3-05-04.
7. J. Mark Hutchins, V.P. of Institutional Advancement. Murray State University. Interviewed 3-11-04.
8. Ken Clevidence, V.P. Associate of Auxiliary and Campus Services. The University of Kentucky. Interviewed 3-15-04.
9. Allene Rash, Real Properties Manager. The University of Kentucky. Interviewed 3-15-04.
10. Barbara W. Jones, Legal Counsel General Associate. The University of Kentucky. Interviewed 3-19-04.
11. Jack Blanton, retired Sr. Vice President of Administration. The University of Kentucky. Interviewed 3-29-04.

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<sup>18</sup> Interviews with Renee Mussetter and Jack Blanton (#'s 1 & 11) were the only interviews conducted that were neither tape-recorded nor transcribed. Extensive notes were taken.

## Regression Model

$$Y_i = \beta_0 + \beta_1 X_{1i} + \beta_2 X_{2i} + \beta_3 X_{3i} + \beta_4 X_{4i} + \beta_5 X_{5i} + \beta_6 X_{6i} + \beta_7 X_{7i} + \beta_8 X_{8i} + \beta_9 X_{9i} \\ + \beta_{10} X_{10i} + \beta_{11} X_{11i} + \beta_{12} X_{12i} + \beta_{13} X_{13i} + \epsilon_i$$

Where:

$Y_1$  = Three year average of total dollars raised, 2003.

$Y_2$  = Percent change in total endowment from 2002-2003

$\beta_0$  = Y intercept

$X_1$  = Presence of separate foundation for development (1= foundation, 0 = no foundation)

$\beta_1$  = Slope of dependent variables ( $Y_1$  &  $Y_2$ ) with presence/absence of foundation, holding all other independent variables constant

$X_2$  = Total student enrollment: full + part time

$\beta_2$  = Slope of dependent variables ( $Y_1$  &  $Y_2$ ) with total student enrollment, holding all other independent variables constant

$X_3$  = # of alumni on university record in 2003

$\beta_3$  = Slope of dependent variables ( $Y_1$  &  $Y_2$ ) with # of alumni on university record, holding all other independent variables constant

$X_4$  = # of alumni solicited in 2003

$\beta_4$  = Slope of dependent variables ( $Y_1$  &  $Y_2$ ) with # of alumni solicited, holding all other independent variables constant

$X_5$  = Total # of alumni donors in 2003

$\beta_5$  = Slope of dependent variables ( $Y_1$  &  $Y_2$ ) with # of alumni donors, holding all other independent variables constant

$X_6$  = # of alumni donors as a percent of # of alumni on university record, 2003

$\beta_6$  = Slope of dependent variables ( $Y_1$  &  $Y_2$ ) with # of alumni donors of a percent of alumni record, holding all other independent variables constant

$X_7$  = # of alumni donors as a percent of # of alumni solicited, 2003

$\beta_7$  = Slope of dependent variables ( $Y_1$  &  $Y_2$ ) with # of alumni donors as a percent of alumni solicited, holding all other independent variables constant

$X_8$  = Average \$ amount of alumni gift (Alumni \$ ÷ # of Alumni Donors)

$\beta_8$  = Slope of dependent variables ( $Y_1$  &  $Y_2$ ) with average \$ amount of alumni gift, holding all other independent variables constant

$X_9$  = Gross State Product in 2001

$\beta_9$  = Slope of dependent variables ( $Y_1$  &  $Y_2$ ) with Gross State Product, holding all other independent variables constant

$X_{10}$  = Total Personal Income by state in 2002

$\beta_{10}$  = Slope of dependent variables ( $Y_1$  &  $Y_2$ ) with Total Personal Income by state, holding all other independent variables constant

$X_{11}$  = Per Capita Personal Income by state in 2002

$\beta_{11}$  = Slope of dependent variables ( $Y_1$  &  $Y_2$ ) with Per Capita Personal Income by state, holding all other independent variables constant

$X_{12}$  = Total # of governing board donors in 2003 (including foundation trustees)

$\beta_{12}$  = Slope of dependent variables ( $Y_1$  &  $Y_2$ ) with total # of governing board directors, holding all other independent variables constant

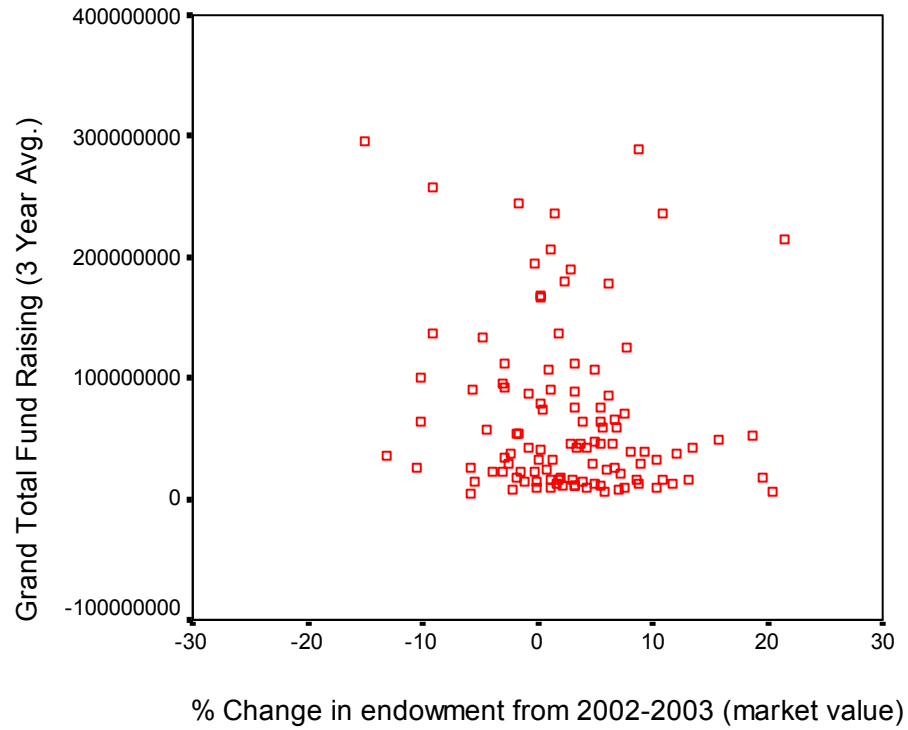
$X_{13}$  = Total university expenditures

$\beta_{12}$  = Slope of dependent variables ( $Y_1$  &  $Y_2$ ) with total expenditures, holding all other independent variables constant

$\epsilon_i$  = Random error in  $Y_1$  &  $Y_2$  for public research/doctoral universities

### Scatterplot

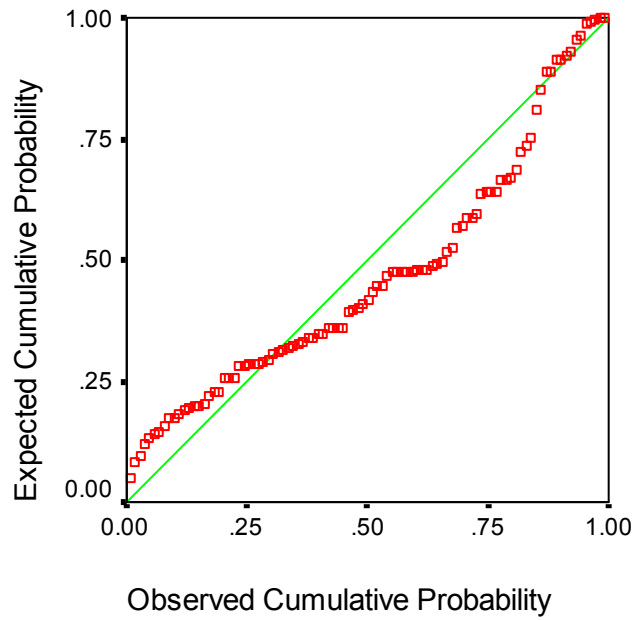
(Testing for Correlation between Two Dependent Variables)





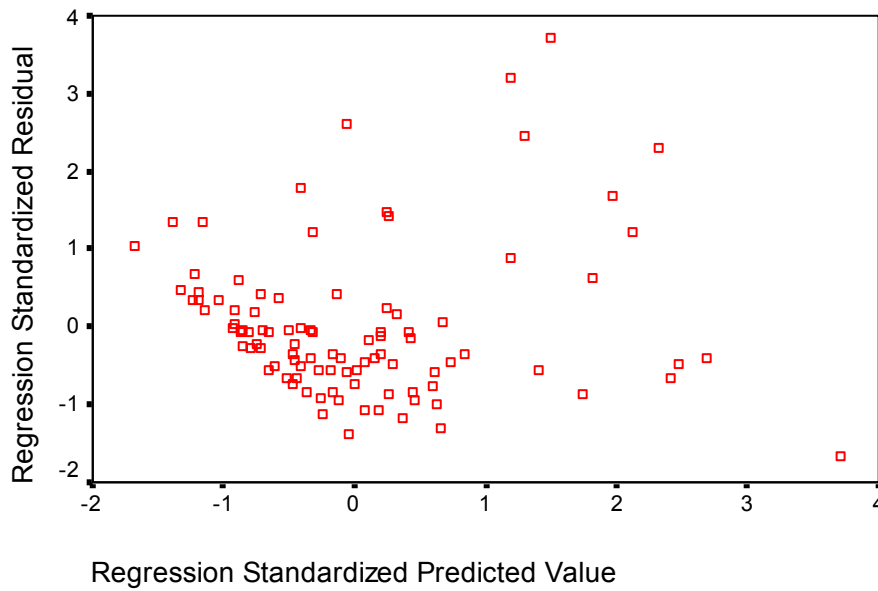
### Normal Probability Plot

#### Grand Total Fund Raising--3-Yr Avg. (Y1)



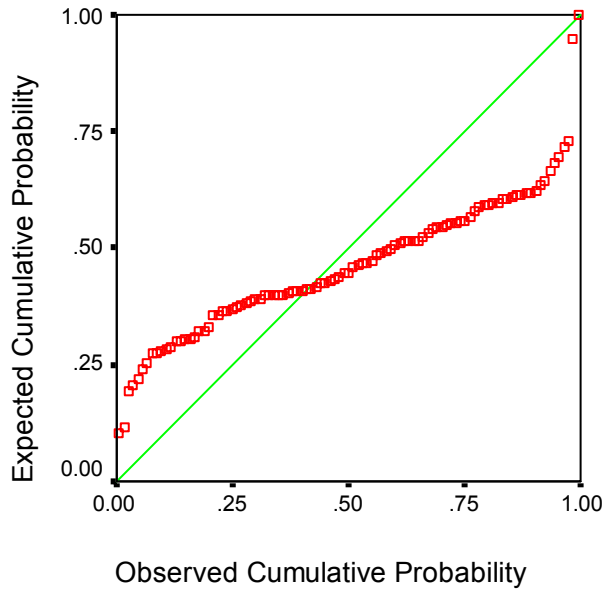
### Scatterplot

#### Grand Total Fund Raising--3-Yr Avg. (Y1)



# Normal Probability Plot

% Change in endowment--2002-2003 (Y2)



# Scatterplot

% Change in endowment--2002-2003 (Y2)

