

ENTREPRENEURIAL ACTIVITIES IN THE BRAZILIAN FEDERAL  
UNIVERSITIES: A CASE STUDY OF THE FEDERAL UNIVERSITY OF CEARA

by

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## ABSTRACT

One of the most debated topics within public universities in Brazil is the development of alternative resources generated from entrepreneurial activities in order to supplement the lack of government funding for higher education. This study analyzes this issue, addresses questions about the creation of private institutions that provide fiscal support to federal universities, and discusses the relationship between federal universities and these private organizations. In particular, the research for this project is based on a case study of the Federal University of Ceara (UFC) and the eight private foundations that function within its structure and are sources of additional revenue for the institution.

This study draws on resource dependency theory, academic capitalism theory, and globalization theory as its theoretical framework. Resource dependency theory is used to clarify why federal universities in Brazil have turned to private institutions within their structures in order to generate external revenue. Academic capitalism theory provides an understanding as to why universities are shifting their focus and functions towards a new market orientation. Globalization theory is used to explain how emerging international markets and concepts are affecting the new environment in public institutions in Brazil.

The present research is based on UFC's experience with the eight private organizations which exist to provide support to their respective departments and to the university as a whole. The data collected is based on institutional documents such as statutes, contracts, and financial statements. Interviews were the other source of data gathering. The results indicate that private institutions (foundations and faculty associations) contribute significantly to the activities of their federal universities by

generating additional, external revenue. At the same time, this national phenomenon is the subject of a heated debate centering on the question of whether public higher education in Brazil is essentially becoming privatized. The research also confirms that foundations are contributing to a shift in public higher education toward the new market orientation.

## CHAPTER 1: THE NATURE AND PURPOSE OF THE STUDY

### Background

Most countries throughout the world are working to expand their economies and advance their social structures and standards of living. Inevitably, these nations are also interested in improving their higher education systems as an important means toward reaching their economic and social goals. However, higher education in nearly every country faces severe financial constraints. Slaughter and Leslie (1997) cite the decline in block grant funding of higher education in Australia, Canada, the United Kingdom, and the United States as the single most significant factor in the decrease of governmental support of higher education. There is no exception to this trend in Brazil, where the federal government continues to reduce its fiscal support for higher education at a time when enrollment and demand are increasing.

Indeed, a review of the literature provides ample evidence that the decline in government funding of higher education is essentially a global issue. In the United States, according to McPherson and Shapiro (1999), the contribution of federal, state and local monies has been decreasing for the last 10 years or more. They explain that higher education's fiscal policies and funding sources have been shifting due to the lack of governmental support. This is even the case with regard to direct support of students. For example, Slaughter and Rhoades (2004) note that federal student financial aid has increased from 20% in 1964 to 58% in 2001. However, they also document the steady decline in grants from federal aid since 1972, accompanied by a concurrent expansion of

loans. Hovey (1999) further explains that higher education receives more government funds during positive economic times and less during economic downturns. He states that universities fare disproportionately poorly during times of limited financial resources, and disproportionately well during times of favorable state fiscal environments.

According to Daniel and Teichler (1999), European nations are similarly grappling with funding shortfalls for higher education. They explain that from country to country, the level of support tends to vary. This is seen as a function of the value each nation places on higher education relative to both its social and its economic roles within its society. Teichler also noted the challenges of funding higher education in Europe:

There might be political efforts to change patterns of higher education during a period of stagnation or slow expansion as strongly as during a period of rapid expansion, but these efforts are less successful in time of stagnation because a redistribution of resources is more painful than under conditions of growth. (1993, p. 31)

Castanos-Lommitz, Didriksson, and Newson (1998) provide a comparable assessment of the state of Mexican higher education. They note that Mexico is unable to participate in scholarly discourse at the same level as the United States and Canada because it has not increased its share of public resources to higher education beyond the level reached in the early 1980s.

Schwartzman's study of higher education policies in Latin America focuses on issues that are most prevalent in the public sector (1993). He explains that while Latin American universities typically have a strong central administration, ministers of education at the national level are empowered with discretionary distribution of funds to public higher education institutions. Not surprisingly, public universities experience

funding shortfalls in times of scarcity and funding increases in times of abundance. This is also the case in Brazil where higher education funding is more likely to be cut during economic downturns than is funding for social initiatives, which are perceived to be more urgently needed.

As we can see, the literature reveals a consistent pattern in which higher education systems throughout the world are seeking alternative sources of revenue in direct response to declines in government funding. This appears to be the case regardless of the general economic stability or instability of each nation. As such, revenue consistency is as significant an issue as quantity.

### Higher Education Funding in Brazil

As Slaughter and Leslie (1997) discuss, entrepreneurial activities are the most prevalent response by university systems to the fiscal shortfalls which they face. In Brazil, a number of factors have motivated the federal universities to move toward these market-like activities in order to supplement their budgets and continue to function. For example, salaries of federal university employees (i.e., faculty, administrators, and staff members) have remained unchanged since 1994. In addition, faculty members are bound by an exclusivity clause in their contracts which limits them to gainful employment within the federal university system.

The federal universities' lack of autonomy is another significant factor in their movement toward the market, and one which directly affects actual spending patterns in higher education. The legal framework under which federal universities operate provides

for an inflexible budget that distributes funds into categories without allowing for the shifting of monies from one category to another. For example, if there are surplus funds in maintenance at the close of the fiscal year, they cannot be used in other areas which may have deficits. The lack of financial and administrative autonomy can also be seen in policies which prohibit federal universities from hiring personnel without Ministry of Education authorization.

Slaughter and Leslie note that higher education in Canada, the United Kingdom, Australia, and the United States is moving aggressively toward academic capitalism. In order to continue functioning, universities are developing entrepreneurial responses to funding deficiencies, as documented by Slaughter and Rhoades (2004) in the United States and by Clark (1998) in Europe. Some of these revenue-generating responses include charging higher tuition, providing community services and social benefits to attract donors, creating small, private organizations within university systems, creating new biotechnology programs to follow current market trends, closing departments and programs that do not generate revenue, and establishing competitive research programs for government, corporate, and private interests.

In keeping with this trend, a defining and significant change is occurring in Brazilian higher education. Facing financial crisis, public institutions are increasingly establishing working partnerships with private faculty associations and foundations which operate within the public higher education structure. Foundations and faculty associations are private organizations which conduct various activities within the

structure of a given university and are managed primarily by faculty members from affiliated academic or administrative departments.

Slaughter and Rhoades (2004) explain this development within the framework of resource dependency theory. As unrestricted monies for higher education constrict, institutions within a national system will change their resource-seeking patterns to compete for new sources of money. These private organizations within the Brazilian federal university system have been developed to provide alternative revenue streams through their entrepreneurial initiatives. The result is an enormous, bureaucratic higher education system, indeed, one of the largest in the world. More importantly, the presence of private organizations operating within the federal university structure, whose primary purpose is to generate additional revenue, is fundamentally transforming the very nature of public higher education in Brazil.

These changes in Brazilian higher education have sparked a nationwide debate among policy makers, the public, administrators, and faculty. Many scholars argue that federal and state universities are moving to the market in ways that are detrimental to the higher education system overall. One of the greatest concerns is that Brazil is moving ever closer to essentially privatizing federal and state universities as their academic functions become increasingly intertwined with the production of revenue.

Balbatchevsky and Quinteiro (2003) explain that in particular, student tuition is a growing source of tension. We see this in Brazil where public universities are charging tuition to students who attend federal university-sponsored extension and specialized programs that are in current high demand. Although private foundations collect these

fees, this practice, at least in spirit, contradicts the no-tuition policy which governs public higher education in Brazil.

Other scholars argue that this phenomenon is only a temporary resort while federal and state governments work to reinstate sufficient funding to keep public higher education institutions functioning satisfactorily. In addition, the perceptions of what is acceptable are also shifting. For example, according to Schwartzman and Balbachevsky (1996), outsourced consulting and other services were once seen as infringements of full-time faculty contracts. Now, these revenue-generating services are more frequently recognized as legitimate ways to link universities with the new market environment.

Thus, as fiscal support of higher education by the federal government declines, public higher education institutions in Brazil, especially the federal universities, are responding to the challenge of providing a quality education to society. By and large, their response is marked by a shifting emphasis toward entrepreneurial activities. This move to the market, which Slaughter and Leslie (1997) describe as academic capitalism, and which is being so strongly debated, is a product of the convergent forces of globalization. In Brazil, as in countries throughout the world, entrepreneurialism has become higher education's solution to the problem of how to remain fiscally and functionally viable.

#### Purpose of the Study

The purpose of this study is threefold. First, the intention is to construct an understanding of how foundations and associations, which are a central component of the

Brazilian public higher education system, materially benefit federal universities. This will be accomplished through a case study of the entrepreneurial activities of the private foundations and associations which operate within the Federal University of Ceara (UFC).

Second, this study will provide an overview of the relationship between UFC and its foundations and faculty associations, as well as analyze the links between the private foundations and associations at UFC and certain international organizations.

The final objective is to provide an understanding of how the entrepreneurial phenomenon in Brazilian higher education has become an issue of national significance. Interviews with the financial directors of the federal universities in Brazil are presented to document the impact of this trend on Brazilian higher education at large.

#### Statement of the Problem

The fundamental issue addressed in this study is whether and how entrepreneurial activities developed by private foundations and associations operating within the system of public universities (especially federal institutions), have materially benefited public higher education in Brazil. As a case in point, the present study is particularly focused on the relationship between the Federal University of Ceara and the eight private organizations (i.e., foundations and faculty associations) which operate within its structure.

Essentially, the creation of foundations and faculty associations is a means to bypass existing legal restrictions in order to generate external funds. This is a national

phenomenon in that nearly all Brazilian federal institutions of higher education have a strong relationship with at least one private organization working within their campus structures.

### *Research Questions*

This project is based on four research questions which guide the analysis of the issue at hand and address the objectives of this study:

*Question 1:* What are the financial benefits, particularly as explained by academic capitalism, of the entrepreneurial activities that ostensibly make UFC more competitive? Secondly, are the administrators and professors of UFC satisfied with the outcomes of these activities in light of the limited public resources available for higher education?

*Question 2:* Does academic capitalism explain the nature of the relationship between UFC and its foundations and associations as it relates to market-driven activities? Secondly, does resource dependency theory explain how and why UFC seeks to generate resources through private foundations and organizations?

*Question 3:* Are foundations and associations at UFC adopting an international orientation by creating links with international organizations in response to the pressures of globalization and the challenges of insufficient revenue?

*Question 4:* Is the existence of foundations and associations at federal universities a national phenomenon?

## Theoretical Framework

The theoretical framework for this study is derived from academic capitalism theory (Slaughter & Leslie, 1997; Slaughter & Rhoades, 2004), resource dependency theory (Pfeffer & Salancik, 1978; Tolbert, 1985), and globalization theory (Stiglitz, 2002; Waters, 2001).

### *Academic Capitalism Theory*

Academic capitalism is an economic system in which allocation decisions are driven by market forces. This theory predicts that universities will change the focus of their activities in order to compete for new funds, a phenomenon which can be observed in both private and public universities.

According to Slaughter and Rhoades (2004), negative changes in revenue patterns promote academic capitalism because they prompt universities and their faculties toward market-like activities. Slaughter and Leslie (1997), note that in Australia, the federal government eliminated its practice of providing universities with research money for each faculty member. The result is that faculty members must now compete for research funds. In addition, institutions in Australia are seeking external revenue by recruiting overseas students, establishing partnerships with corporations for research and training, and developing products and processes suitable for the market.

According to the theory of academic capitalism, individual faculty members will turn to the market to maintain research resources and to maximize prestige. Slaughter and Leslie found that Australian faculty perceived the benefits of market-generated revenue as extending well beyond the revenue itself. They suggest that these indirect benefits,

such as prestige, positive spillovers to teaching and research, employment of graduate students, and future consulting opportunities, should be further analyzed.

### *Resource Dependency Theory*

The second theory, resource dependency, will be used to explain that in a climate of limited public resources, higher education activities in Brazil, specifically at UFC, are driven by the need to generate resources in order to survive. Resource dependency theory posits that organizations become increasingly similar to and dependent on the sources of their revenue if they require that revenue to remain functional (Pfeffer & Salancik, 1978; Tolbert, 1985).

Slaughter and Rhoades (2004) further suggest that a university receiving resources from only one source will become heavily dependent upon that supplier. This has been the case with federal universities in Brazil which traditionally receive the majority of their funding from the federal budget. However, as government support continues to decline, universities are seeking alternative funding sources - and becoming more market-like in the process, as well as more dependent on those sources.

Pfeffer and Salancik (1978) argue that organizations survive by acquiring resources from the environment, that is, from other organizations. They also point to resource dependency theory to explain that institutions become increasingly dependent on and similar to their sources of revenue. This convergence of dependency on alternative sources of revenue with increasing similarity to market-driven entities is evident in the creation of private foundations and faculty associations operating within public

universities in Brazil. Their aim is to assist their host universities maintain fiscal and functional viability, but the outcome is an emerging public higher education system which is increasingly dependent on external revenue and increasingly entrepreneurial in nature and purpose.

### *Globalization Theory*

Globalization theory is specifically applied in the present study to the third research question, which asks whether the UFC foundations are assuming an international orientation in their entrepreneurial activities. This theory suggests that globalization is a social and economic force that generates significant changes in higher education systems. It also implies that no given relationship can remain isolated. Waters argues that globalization is an essential interrelationship which creates social ties among all individuals and nations in the world. He further defines it as "... a social process in which the constraints of geography on economic, political, social, and cultural arrangements recede, in which people become increasingly aware that they are receding, and in which people act accordingly" (2001, p. 5). Stiglitz contributes to our understanding of globalization by describing it as:

...the closer integration of the countries and peoples of the world which has been brought about by the enormous reduction of costs of transportation and communications, and the breaking down of artificial barriers to the flows of goods, services, capital, knowledge, and people across borders. (2002, p. 9)

### Significance of the Study

According to Brazilian law, full time faculty members at federal universities must be employed exclusively within universities. Thus, scholars are uncomfortable with

conducting research in the area of entrepreneurialism in higher education since many of them supplement their salaries by working for foundations and associations.

Consequently, very little has been written about this topic. The present study was conducted in large part due to the newly favorable environment in Brazilian federal universities. Today, many professors recognize that focused study in this area has increasing relevance in developing better communication and a more constructive partnership between society and the higher education system, which presumably exists to serve that society.

Not surprisingly, there is an ongoing debate about the necessity for private foundations and associations. One of the objectives of this study is to reduce the gap in the literature in this area and begin to explain more fully the relationship between public higher education institutions in Brazil and the private foundations which exist within their systems. The Federal University of Ceara and its eight foundations provide an excellent opportunity to examine the benefits and detriments associated with this relationship.

Another objective is to present an overview of the entire Brazilian federal university system, particularly as it relates to the market-driven activities which are embedded within that system. Similar analyses have not been presented in any previous studies.

Due to the few studies of academic capitalism in Brazil, and since the federal universities are using an increasing number of private organizations to develop entrepreneurial activities for them, this study will contribute to the body of knowledge that scholars can access in both national and international environments. In addition, and

perhaps more importantly, it is anticipated that this study will be useful to both policy makers and stakeholders in the Brazilian federal higher education system.

It is also hoped that the research discussed here will provide insight through the description and explanation of the relationship between federal universities and the private organizations that develop market activities within their structures. In terms of practical implications, the research findings may enable federal university administrators and presidents of foundations to better understand the effects of this relationship and to identify new aspects of academic capitalism which influence the university environment.

The research for this study provides additional findings which contribute to the body of work supporting the theories of academic capitalism and resource dependency. In the case of resource dependency, the findings of the present study affirm that the resources generated by private organizations within federal universities are sought because they are necessary for the survival of those universities. In the case of academic capitalism, the evidence suggests that the private entrepreneurial organizations which operate within the environment of Brazilian federal universities are essential for these institutions. These private foundations and associations are the means by which the existing legal limitations may be circumvented, thus allowing public universities to enter the market arena and compete for additional resources.

Of course, the present study cannot completely close the gap in the literature regarding this issue. However, it will hopefully add to the body of knowledge among scholars and policy makers about how universities throughout the world, and specifically

in Brazil, are meeting the challenges to their survival and quality in the midst of declining government support.

### Overview of the Study

This study is presented in six chapters. The first chapter presents the nature and purpose of the study. It also provides background and context and explains why the study is a useful contribution to research in higher education.

Chapter two reviews the scholarly literature relevant to this topic. A brief commentary is also provided which describes the influence of the federal government in shaping the Brazilian higher education system, how private and public systems are financed in Brazil, access to the public and private systems, and the central issues facing the higher education system in Brazil today. In addition, this chapter defines foundations and faculty associations and presents the theoretical framework which guides the research for this study.

Chapter three presents the research design and methods used in the study. The research was implemented using qualitative methods based on document analysis (i.e., scholarly literature, higher education data from federal government records, statutes, rules and internal procedures), and personal interviews with foundation presidents and deans of colleges at UFC, as well as interviews with finance directors from most Brazilian federal universities. Procedures, strategies and limitations for this analysis are also explained in this chapter.

Chapter four provides the context for higher education in Brazil by describing the country in terms of its population, culture, regions, capital, economy and demographics. A brief history of higher education in Brazil is included as well as a description of the organizational structure of the federal system of higher education, including that of the Federal University of Ceara, the site of the case study for this research.

Chapter five explains how foundations and faculty associations function within the UFC framework. Data indicating the number and nature of foundations among federal universities in the entire country is also provided. A discussion of the relationship between private organizations and UFC is the most important element of the analysis in this chapter.

The summary of findings, recommendations, and conclusions are presented in chapter six. Each of the foundations at Federal University of Ceara is analyzed according to types of activities, background, institutional rules, links with international organizations, organizational structure, and its relationship with UFC. In addition, the costs and benefits of foundations and faculty associations within the UFC environment are discussed and analyzed.

## CHAPTER 2: LITERATURE REVIEW

### Influence of the Federal Government

Since the establishment of the first college in Brazil, the influence of the federal government in shaping the higher education system has been significant. Unlike the United States where the development of the higher education system was highly influenced by the absence of a central force or authority, the openness to market forces, and an active role of philanthropists in donating considerable resources to higher education, the development of the Brazilian higher education system has occurred in almost the opposite manner. The Brazilian federal government and a few state governments played a central role in establishing and funding the majority of all higher education institutions until the mid-1960s. Since then, the expansion of the higher education system has occurred primarily in private colleges and universities.

Currently, public institutions of higher education are responsible for conducting the most expensive activities, such as graduate education and research, while the great majority of private institutions are only responsible for offering undergraduate programs. Geiger explains that the “dominant public sector generally chooses to monopolize the university component of higher education either because of the high level of expenditures required to maintain universities according to internationally recognized standards, or because of the importance of university credentials for state and society” (1986, p. 107).

The establishment and funding of the Brazilian system of public higher education has been strongly influenced by the federal and state governments. From a total of 929

higher education institutions in Brazil, the federal government finances 57, while state and local governments maintain 152. Together, these 209 institutions are responsible for conducting the vast majority of research activities in Brazilian academia, in addition to enrolling roughly 38% of all undergraduate students and 82% of all graduate students (Schwartzman, 1998).

Besides differences in terms of activities performed by public and private institutions, the manner in which the public system is financed has promoted an inefficient allocation of resources and inequitable access to higher education.

#### The Dichotomies of Tuition and Access

One fundamental characteristic across the public higher education sector is the free-tuition policy observed by all public institutions. According to Schwartzman, “public higher education is totally free, and this is socially unjust. The introduction of cost recovery, combined with fellowships and long-term loans for the needy, would be an important instrument of social justice, and would have other positive effects” (1991, p. 20).

#### *Public and Private Higher Education Tuition*

In Brazil, there is an apparent dichotomy between public and private institutions in terms of how students pay for college and which institutions they attend. On one hand, public institutions in Brazil are characterized by a free-tuition policy under which nearly all of their student-related expenses are covered by federal, state, or local governments. According to Levy (1986), groups in the military have traditionally opposed this model.

They argue that the government cannot meet its primary and secondary school commitments if it bears the burden of public higher education as well. In addition, students who meet the academic qualifications to enter public institutions are able to attend at no direct cost, yet these same students are often the most financially secure. Thus, taxpayers bear the burden of funding the higher education of those most able to pay their own costs.

On the other hand, private institutions are funded primarily from the tuition paid by students who use their individual and family income to bear the costs of their education. Although there are some sources of financial aid, such as institutional grants and federal loans, the proportion of students who actually received these types of aid in 1998 was only 13.2% and 7.5% respectively (Schwartzman, 1998). Because of the limited financial aid offered to students who attend private institutions, low-income students may be unable to attend private colleges as well.

The cost barrier, which presents a significant obstacle for low-income students to enroll in private institutions, is one of the most serious problems in the Brazilian higher education system. Since it bears full budgetary responsibility to fund all federal institutions of higher education, the federal government has not been able to provide an adequate loan program for students with financial need. The old federal loan program known as *credito educativo* reached only 7.5% of the students enrolled in private universities and colleges. In addition, a primary problem with loans in Brazil is that most are not paid back. According to Bollag (2001), the Brazilian loan program has a nearly 90% default rate, which understandably poses a serious problem for its continuance. To

make matters worse, there is no federal grant program for students whose families cannot bear the costs of private education.

The federal government is currently using a new *credito educativo* program known as the Financial Aid for Students Program (FIES). This new loan program allows only 15,000 new agreements per year and maintains another 45,000. Since at least 500,000 students need financial aid, the federal government would have to add US\$ 600 billion in order to accommodate them. Nonetheless, the federal budget will not be able to address the scale of need that exists since it cannot provide funds of this magnitude to the Ministry of Education (Schwartzman & Schwartzman, 2002).

Institutional aid, which consists of grants given by institutions, is not necessarily based on financial need. In addition, only 13.2% of students actually receive this particular type of financial support.

The net result of the cost barriers in the Brazilian higher education system is that the system itself is inherently inequitable. Essentially, federal appropriations to the Ministry of Education for financial aid are inadequate; institutional financial aid is not always given based on financial need; the need-based aid that is available is largely in the form of loans rather than grants; and only a small proportion of students with need actually receive aid. Consequently, the structure of the Brazilian higher education system does not allow for the removal of financial obstacles for low-income students who want to attend college.

*Access to Public and Private Higher Education*

The situation is worsened by the meritocratic values influencing both access to higher education and the type of institution attended. The admission process is based largely on merit, meaning that the academically better prepared students are selected to the detriment of those who are less prepared. Since the most desirable institutions in terms of quality and prestige are public universities, this sector attracts the most privileged students. Paradoxically, these students, who are most able to pay the costs of higher education, attend tuition-free institutions (Levy, 1986).

The national survey, National Household Sample Survey (PNAD) conducted by the Brazilian Institute of Statistics and Geography (IBGE) in 1997, helps illustrate the extent to which low-income students have been tracked away from higher education in Brazil. PNAD found that only 14% of higher education students came from low-income families (first and second quintiles), while 86% came from the middle and upper-income families (third, fourth, and fifth quintiles).

Even though the public high school system has struggled to increase the quality of education during recent years, the best elementary and secondary schools in Brazil are private ones, which charge tuition that low-income families cannot afford. Therefore, students from the middle- and upper-income classes who attend private high schools tend to enroll in the best universities and colleges, which are public and tuition-free, while low-income students must attend private colleges at great cost.

### Central Issues Facing Higher Education in Brazil

Although the federal laws related to higher education have remained unchanged since 1968 (Schwartzman, 1998), public universities are cautiously searching for ways to generate external funds in order to continue functioning. At the same time, the wider society needs universities to continue focusing on their primary academic and social goals. It is this tension that characterizes higher education in Brazil today.

#### *Enrollment*

Beginning in the 1990s, several new issues have come to the forefront in terms of the federal higher education system. First, the federal budget to support public universities is not keeping up with the growth of enrollment in the federal system (see Table 2.1). The gradual expansion of enrollment in the federal universities has not seen a parallel increase in the budget, thus the higher education budget today is insufficient given that the federal government is the most important source of financing for these institutions. It should be noted that the principle item in the budget of the higher education system is faculty and staff salaries. State and local governments are responsible for financing the elementary, middle, and high schools.

The Brazilian government has pushed all federal institutions of higher education to increase their enrollment by creating new programs at both the graduate and undergraduate levels. However, the steady expansion of higher education in Brazil has led to an attendant problem, which is how to finance this growth in enrollment. Schwartzman (1991) argues that public universities could double their numbers of students with about the same physical infrastructure and personnel they have today.

Indeed, as Table 2.1 indicates, federal institutions of higher education in Brazil have proportionately similar budgets from 1998 to 2001 in relation to their gradual expansion in enrollment over those years. Higher education budgets in Brazil have not seen significant increases for several years and budgetary restrictions will not allow change in this sector, except by better use of existing resources (Schwartzman, 1991).

Table 2.1: Federal Government Expenditures in Federal Universities (1996-1998) and the Number of Students Enrolled

Year	Students Enrolled	Budget *
1998	392,873	R\$ 615,445,395
1999	442,562	R\$ 596,263,136
2000	482,750	R\$ 679,872,855
2001	502,960	R\$ 694,510,927

Source: Ministry of Education (2002)

\* This amount is related only to maintenance expenditures. Personnel expenditures are excluded.

### *Fiscal Constraints*

The budget problems in the public sector have a long history. According to Ribeiro (1986), the Vice-Rector for Planning at the Federal University of Minas Gerais, who spoke about the financing of public universities to the members of the National Congress, every public university in Brazil is experiencing great financial difficulties because of insufficient funds. As a result, infrastructures and academic activities are both suffering. Currently, the authorized budget allocates 3.52% for maintenance expenses and

96.48% for personnel costs. Additionally, the federal government is decreasing even further the amount of resources which cover regular expenditures. This part of the budget, the maintenance of universities, was significantly higher in previous decades - 30% in 1970 and 10% in 1987 (Ribeiro, 1986).

### The Current Model

Trigueiro (1999) argued that what public institutions need is more resources and support from government and society. Of course such help is needed, but it is equally important that legislative changes are made that will permit universities to function and survive independently. The current model for financing these institutions provides for an annual budget that is virtually the same as the previous year's budget with a percentage variable. This variable is largely a function of the political pressure exerted for each institution, which can and does vary year to year. In addition, the variable is insufficient to cover the rising costs universities face each year.

Clearly, the current budgetary situation is one in which there is a great discrepancy between the rapidly growing enrollment and the resources available to fund that growth. In addition, there is almost no planning for future growth and the federal government has guaranteed only the funds to pay personnel costs.

### Stagnant Salaries

A second critical factor is that the salaries of federal university employees (i.e., faculty, administrators, and staff members) have remained virtually unchanged since 1994, despite inflation and the economic challenges noted previously. The serious nature

of this situation becomes clear when a comparison is made between faculty salaries in the federal and private universities. This discrepancy is forcing many federal faculty members either to work outside their campuses in order to supplement their salaries, or to seek positions with private institutions. According to Alexander (2001), private colleges are able to lure top faculty from many of the world's best public universities because they have more capital and more fiscal autonomy. Public institutions cannot compete and are beginning to see their academic and research functions decline in relative quality, status, and prestige.

#### Administrative Deficiencies

Another important issue is that there are no professional managers in the federal universities occupying administrative positions. Consequently, information about costs, personnel, research, planning, and other financial matters tends to be inaccurate and poorly managed. Governance in Brazilian public institutions of higher education is patterned after the traditional European model, that is, extensive power is given to the academic bodies and faculty members, with a significant lack of professional administrators and managers in board positions (Trigueiro, 1999). Rectors and vice-rectors for management, planning, finance, and research are recruited from among the professors and staff according to their political affiliations rather than their professional suitability for those positions.

### Lack of Autonomy

Federal legislation does not allow the federal higher education system to have absolute autonomy. Durham (1998) describes absolute autonomy as full discretion in the disbursement and management of resources. In Brazil, the federal government authorizes the budget for higher education in its entirety and institutions cannot make changes. For example, if there is a surplus in the funds used for personnel expenditures at a given university, managers cannot apply it to infrastructure or maintenance costs.

How can an organization become fiscally and operationally sound if it does not have autonomy over its own budget? This is one of the central questions of the ongoing national debate over the state of higher education in Brazil. Levy (1986) notes that the government's bureaucratic control over institutional expenditures places a heavy burden on federal universities. He explains that these universities have severely limited freedom. For example, federal universities pay their personnel according to wage parameters set by Ministry of Education regulations. Universities may not raise salaries or hire new faculty without the Ministry of Education's authorization.

Schwartzman states that "Regarding central control, the federal government has traditionally proceeded on the assumption that all institutions should conform to similar standards, to be determined when the courses start, and reexamined again if any change is to be made, or if any serious problem arises" (1991, p.17 ). However, despite the fact that federal universities receive funding from the federal budget and are regulated by the same legislation, they are not entirely similar in structure, culture, and organization.

## A Centralized Budget

Most public universities have a federal mandate to function fiscally within a centralized budget. This means that all revenue flows directly to the central administration. According to Brazilian law, each federal institution must use just one federal account, known as *conta unica*, to manage income and expenditures. However, each university may have different financial sub-systems to control decentralized funds which are eventually sent to *conta unica*. The Federal Financial Administration System (SIAFI), created in 1986 to provide federal accounting and financial management for the federal government, controls the *conta unica*.

The process of resource allocation is very simple. First, funds for routine costs (e.g., personnel, services, and maintenance), are authorized and disbursed by the central administration. The remaining funds are distributed to units according to priorities defined by the president of the institution, who has full decision-making power.

This centralized model of resource allocation is highly politicized in most Brazilian federal universities. Elections are held to choose the president of each institution and those departments who supported the president's campaign are likely to have more resources available to them than departments that did not. This situation leads to the sort of interest-group bargaining strategy cited by Morgan (1984). He explains that this strategy creates a resource distribution system which is highly political, and which is dominated by the interest groups currently in favor with the president. The unfortunate consequence is that the allocation of resources within federal universities has a tendency

to protect the interests of those in power rather than distribute the resources across departments to benefit the university as a whole.

There are also significant conflicts involved because faculty members from different political perspectives want different outcomes with regard to expenditures. According to Wildavsky and Caiden, “Budgetary control involves conflict among people who want different outcomes and who attempt to exert power to make the size and distribution of spending different than it might otherwise have been” (2003, p.20)

The centralized budget could be considered a cultural characteristic within most federal universities, yet there is a great deal of debate over the budget issue. Certainly, many within their university communities are hoping for a new and more equitable model, but the debate raises many questions. Could the fiscal situation become worse? How might the public react? How might the culture of the university change?

The institutional culture that surrounds a centralized budget would undoubtedly be very difficult to change. Whalen explains that “changing the way decisions are made and how resources are allocated, can have a palpable effect on an institution’s culture” (2002, p.12). Clearly, the centralized budget model within public higher education will continue to be a source of debate and discussion in Brazil.

### The Legal Framework

Another notable factor in terms of resource allocation is that the legal framework in Brazilian public higher education system is old and does not fit the needs of today’s public universities. According to Altbach and Lewis (1996), the current model of higher

education in Brazil was established in 1968 when educational reform took place based on the American model.

In the federal system, the Ministry of Education makes most of the important decisions such as hiring and firing academic, technical, or administrative staff, setting salaries, opening new courses, transferring budget resources among expenditure categories, and deciding on the number of positions to offer (World Bank, 2002).

Schwartzman also mentions that the current legislation governing higher education was adopted in 1968, when total enrollment in higher education was nearly 300,000. In contrast, current enrollment was approximately 1.5 million students in 1991. He argues for change, stating that “Higher education, like other cultural activities, requires individual creativity and commitment of each person with his daily routines, which can only exist in an appropriate climate of autonomy, decentralization, and local responsibility for the final product of one’s work” (1991, p.14).

### Globalization

Last, the market itself is changing with the adoption of the globalization model. With regard to higher education, Slaughter and Leslie (1997) explain that faculty members in research universities in the United States have moved toward the market because government spending on higher education has decreased. The same rationale motivated faculty members in federal universities in Brazil to move toward entrepreneurial, market-driven activities as well.

Clearly, major changes are occurring in the public university environment. In order to acquire the resources needed to finance and maintain services, entrepreneurial

activities have increased to the extent that most departments in federal universities are focusing largely on the acquisition of external funds.

### Foundations and Associations

As a result of these budgetary issues, many foundations and faculty associations were established throughout the public higher education system in Brazil to facilitate the creation and management of resources. This study will focus on the Federal University of Ceara, which functions within the Brazilian federal system of higher education and has taken a leading role in establishing foundations to meet its fiscal needs. The primary purpose of this study is to explore the relationship between the private foundations and associations which function within the structure of UFC. At this point, before continuing with this discussion, it may be useful to define what foundations and faculty associations are and how they function.

According to Paes (2001), foundations in Brazil are private non-profit organizations that consist of a complex system of goods and services provided to support social initiatives. This author defines associations as non-profit institutions formally organized by a group of people with the same objectives in order to offer services, activities, and knowledge that contribute to those objectives. Within federal universities, foundations and associations are non-profit organizations in which members are not financially recompensed for their general participation (i.e., they do not receive salaries). However, they may be compensated for the specific projects and activities they develop during their work for the association. As a result, many faculty associations arguably

exist primarily to meet the financial needs of faculty and staff members within the federal higher education system.

Charao and Cafardo (2001) explain that higher education foundations and associations were created in an attempt to supplement revenue for higher education activities in the public sector. These organizations have an important role in developing research projects, providing teaching supplies to colleges and academic departments, and also in offering services in order to generate external revenues. They are also responsible for the interaction between students and the market by offering scholarships and internship programs.

#### *The Argument against Foundations*

Many who work in federal universities are critical of the entrepreneurial activities of associations and foundations that generate external revenue. They argue that becoming dependent on these organizations could move public higher education toward privatization.

For example, the Association of Faculty from the University of Sao Paulo (USP) sent a letter to the Ministry of Education on February 18, 2004, referring to the results of a study of the foundations which operate within the USP system. The study found that these foundations provide only two percent of the entire USP budget and that they transfer only five percent of their total annual revenue to the university, while the majority of the remainder is used to compensate faculty members of each foundation.

The crux of the Association's criticism is that foundations are essentially self-serving, rather than motivated by the needs of the university. In addition, the Association

of Faculty claimed that the funds earned by the associations are the result of contracts with federal, state, and local government institutions, that foundations are a means to bypass the constitutional requirement for free tuition at public universities since they charge tuition for graduate level specialization programs, and that they use the USP name as a symbol of prestige without any advantage to the university. The letter concluded that the foundations are housed permanently within the infrastructure of the University of Sao Paulo and are reaping the private financial benefits of that arrangement with few benefits extending to USP (Faculty Union of University of São Paulo-ADUSP, 2004).

#### *The Argument for Foundations*

On the other hand, there are those who defend these organizations as providing a unique way for the activities of higher education - teaching, learning, and research - to survive. In some large public universities, such as the Federal University of Minas Gerais and the Federal University of Rio de Janeiro, foundations have an important role in supplementing the federal budget (Schwartzman, 1993). The proponents of foundations argue that without these external resources, federal universities could not have developed to the extent that they have to date. These external resources come from entrepreneurial activities generated by foundations, and it is these activities that are an important focus of this study.

#### Theoretical Framework for the Study

This study is framed by academic capitalism, resource dependency, and globalization theories. Slaughter and Leslie's conception of academic capitalism provides

a lens for the present study in that boundaries between the market and the state are not static and are increasingly challenged when notions of the public good are redefined by commerce (1997).

### *Academic Capitalism*

Slaughter and Leslie describe academic capitalism as the competition by higher education for external resources related to a new market environment. They note that capitalism is defined as an economic system in which allocation decisions are driven by market forces. Academic capitalism, then, is an extension of that concept in which higher education faculty and staff expend their efforts to compete in the market environment. They also discuss the emergence of higher education employees who are essentially employed simultaneously by the public and private sectors.

In *Academic Capitalism: Politics, Policies, and the Entrepreneurial University*, Slaughter and Leslie comment that university costs and benefits must be evaluated according to how well the institutional goals for teaching, learning, and service are met. The authors describe the effects of academic capitalism by stating:

Academic capitalism contributed importantly to university income. Even though the two universities constituting the case studies were described by informed observers as “not major players” in self-generating revenues from external sources, the amounts involved were substantial. (1997, p.116)

Slaughter and Leslie also explain that faculty and research universities have moved toward the market because government spending for higher education has decreased. This is precisely the situation in Brazil today as Schwartzman explains. He notes that “The public sector has not increased for several years, and budgetary

restrictions will not allow it to grow soon, except by better use of existing resources” (1991, p.16).

The federal government would do well to analyze the new economic paradigm in higher education in which federal universities connect social enterprises with efforts to generate additional revenue. At times, it seems that the federal government is tentatively in favor of foundations working beside universities as a means to move away from public financing of higher education, particularly since their activities often are directly beneficial to the community or to society in general. Since the federal government is not currently interfering in the relationship between universities and foundations, many scholars believe that they will very likely allow federal universities to continue to find their own economic solutions. If so, public higher education institutions will soon be almost entirely financed with external funds, a phenomenon that would clearly be an overt expression of academic capitalism.

Slaughter and Rhoades (2004), suggest that institutions are changing their resource-seeking patterns to compete for new funds. They describe activities such as increasing tuition, becoming more active in expanding services and sales, and substituting full-time with part-time staff and faculty members as examples of ways in which higher education institutions are following the market model.

They also explain that universities are investing more in non-academic services, for which they can charge students additional tuition and fees. In their analysis, they find that faculty members are forced to compete for more resources to teach more students even as they must also compete for external research money. Similar changes in resource-

seeking behaviors are affecting the Brazilian system as well. The concept of academic capitalism appears to be applicable to many countries throughout the world.

### *Resource Dependency Theory*

The research by Feldman, Feller, Bercovitz, and Burton (2002) in the area of technology transfer describes higher education institutions as using new mechanisms for promoting the commercialization of academic research and generating external revenue. Their discussion highlights the efforts that institutions are making to discover new ways to fund their activities. Federal universities in Brazil are similarly engaged in seeking new sources of revenue since federal resources continue to be insufficient.

Tolbert (1985) explains that resource dependency theory can be used to show the need to ensure a stable flow of resources from external sources of support, which in turn, partially shapes administrative organization and differentiation. Pfeffer and Salancik (1978) on the other hand, focus on the external control of organizations. They suggest that organizations become dependant on those organizations whose resources are necessary for their own survival as well as when there is an absence of alternative resources. Slaughter and Leslie explain that resource dependency theory predicts that organizations which are deprived of critical revenues will seek new resources in order to survive (1997).

Thus, as the federal budget in Brazil increasingly deprives public higher education of the funds upon which it has been completely dependent, foundations and associations are providing a means to generate alternative resources. Today, these private organizations are helping their universities, students, staff, and faculty members to

supplement their budgets and survive. The result, as resource dependency theory expects, is an increasing dependence by universities on the foundations and associations which operate within their campuses.

The literature about the entrepreneurial activities which define academic capitalism and about resource dependence theory is very important to the present study as a basis for understanding the changes which are occurring in the economic relationship between public universities and the government. In addition, the relationship between the market and higher education institutions is also very important to understand in terms of the emerging economic paradigm guiding universities today.

#### External Influences

Of course, there are wider external influences that also need to be analyzed. The globalization model and international organizations have influenced not only the higher education system but also most other activities in the world. Brazil is not an exception to these influences. Slaughter and Leslie mention the importance of higher education in postindustrial societies and note the implications of the globalization model on its institutions. They explain four implications for higher education:

First is the constriction of moneys available for discretionary activities such as postsecondary education. Second is the growing centrality of techno-science and fields closely involved with markets, particularly international markets. Third is the tightening relationship between multinational corporations and state agencies concerned with product development and innovation. Fourth is the increased focus of multinational and established industrial countries on global intellectual property strategies. (1997, p.36)

International organizations have also influenced higher education systems around the world. The Brazilian federal government, similar to sub-Saharan African countries, is being pressured by the World Bank to reduce public expenditures, which include those for higher education, in order to achieve national economic growth (Banya & Elu, 2001).

According to Kempner and Jurema (2002), the World Bank has focused on an educational model that prioritizes basic education. Thus, the Bank's decision was against maintaining a high degree of federal financing of higher education in Brazil. This is certainly in keeping with Kempner and Jurema's discussion in which they note that international agencies often act beyond their own countries to manipulate markets, dictate trade policy, and demand new economic and social policies in other countries.

These factors clearly have a strong influence on higher education worldwide and as we have seen, higher education is a preferred site for reducing public expenditures. As McPherson and Shapiro (1998) discuss, federal, state, and local government funding for higher education has changed over the last 50 years, specifically from 1939 through 1993. Focusing on the trends of tuition, grants, and financial aid, they address the implications for private and public institutions as well as for students of different incomes. They found that the contribution of state and local government spending decreased steadily in between 1983 and 1993. They also comment that tuition has been replacing government spending at both private and public institutions of higher education and that federal funding declined to its lowest level since the late 1950s.

The purpose of this review has been to demonstrate that Brazilian public higher education has a new and promising road to follow in the years ahead and to try to

convince the Brazilian community and government that a strong higher education system is indispensable for scientific and technological development. The public higher education system needs to recoup and expand its investments in order to continue to offer high quality services as well as to improve them. However, as Schwartzman argues, “to move along this road would require to change the Constitution, the legislation, to confront entrenched corporatist interests, and above all the mental habits and attitudes of so many people” (1991, p. 22).

## CHAPTER 3: RESEARCH DESIGN AND METHODOLOGY

### Context

The context of this study is the federal university system in Brazil, using a specific case study of the Federal University of Ceara and its eight foundations and faculty associations. The present chapter is arranged in four sections which describe the research conducted for this study, including the design and methodology. The limitations of the research are also discussed.

The first section explains the criteria used to select the Federal University of Ceara for the case study. The second section presents the four research questions which were the focus of the analysis. The procedures for the data collection and the methods used to process and analyze the data are described in the third section. Last, the limitations of the study are presented to provide perspective and point toward future research.

### Design and Rationale

As mentioned previously, a case study of UFC is the primary site of analysis for this study and provides the data from which to address the four research questions which guide the analysis. According to Bassey (1999), a case study is an investigation of an individual, group or phenomenon that requires an in-depth study in order to present a complete description within its context. Yin (1994) further explains that a case study has at least six sources of evidence: documents, archival records, interviews, direct

observation, participant-observation, and physical artifacts. Thus, the choice of a case study for this project required intensive data collection from a public, federal institution in Brazil. The Federal University of Ceara offered an ideal environment from which to gather such evidence and conduct a meaningful case study.

The eight foundations and associations which operate within the UFC structure provide a sound basis for analysis of the relationship between these organizations and the university itself. In addition, the researcher for this study was Vice President of Finance at UFC from 1991 to 1995, a national coordinator of the National Forum of the Financial Directors of Federal Universities, and is currently a faculty member and the vice president for one of the UFC foundations. This broad experience and background facilitated the investigation as a whole and allowed unlimited access to interviewees and documents for analysis.

At the same time, it must be acknowledged that such a direct and immediate relationship between researcher and object of study has its limitations and dangers. These will be addressed subsequently within the body of this work.

A case study was chosen as the vehicle for analysis because the 45 universities in the federal higher education system are managed by the Ministry of Education, operate under the same legislative rules, and are structured similarly. These similar characteristics allow for the expectation that findings at one university will, to some extent, be broadly generalizable to the federal higher education system as a whole. This is particularly the case for the present study, which examines a national phenomenon, the shift in public

universities toward the market, as it is manifested in one university, the Federal University of Ceara.

### Research Questions

As noted previously, academic capitalism, resource dependency, and globalization theories comprise the theoretical framework within which the research questions were designed and posed and the stated objectives of this study addressed. These research questions ultimately led to a greater understanding of why entrepreneurialism is becoming pervasive in higher education worldwide - and more specifically, in Brazil.

#### *Research Question 1*

*What are the financial benefits, particularly as explained by academic capitalism, of the entrepreneurial activities that ostensibly make UFC more competitive? Secondly, are the administrators and professors of UFC satisfied with the outcomes of these activities in light of the limited public resources available for higher education?*

In order to address Question 1, a review of the existing eight nonprofit foundations and associations at UFC was conducted. These organizations are developing entrepreneurial activities involving university employees (faculty and staff members), and also have a direct relationship with UFC. The question at hand addressed the types of entrepreneurial activities being developed, how they benefit UFC financially, and whether administrators and staff members of academic departments are satisfied with the outcomes of these activities.

The researcher conducted one “elite” interview with each dean of the nine colleges of UFC - Law, Business, Medicine, Dentistry, Nursing and Pharmacy,

Education, Humanities, Technology, Agrarian Sciences, and Sciences. The focus was on deans and not department heads because foundation revenue flows directly to the colleges, not to the departments in the colleges. The Vice President of Finance at UFC and two faculty members who are not involved in any of the eight foundations were also interviewed. The deans and the Vice President of Finance were specifically selected because they are responsible for hiring foundations to engage in contracts and services that will benefit their respective departments. Most deans also administer or participate in at least one foundation.

The two professors who were interviewed were chosen because they are not involved in the foundation environment and are thus able to provide a different perspective from those individuals who are. One professor teaches in the College of Education. The other is affiliated with the Department of Accounting, and although he is not associated with any foundation, his department is strongly connected to the foundation affiliated with the College of Business.

### *Research Question 2*

*Is the nature of the relationship between UFC and its foundations and associations, as it relates to market-driven activities, explained by academic capitalism? Does resource dependency theory explain how and why UFC seeks to generate resources through private foundations and organizations?*

To address this question, the relationship between UFC and each one of the foundations and faculty associations was examined. Since each foundation is related to a college or to the central administration, “elite” interviews were employed to explore the

nature of these relationships, which is the major focus of this question. The eight foundation presidents were each interviewed in 40 to 50 minute sessions.

### *Research Question 3*

*Are the UFC foundations adopting an international orientation by creating links with international organizations in response to the pressures of globalization and the challenges of insufficient revenue?*

This question considers whether foundations and associations have formal, contractual links with international organizations, including international agencies such as the World Bank and the International Monetary Fund. The focus is on whether the activities of these private organizations operating within the structure of public universities are developing an international orientation in the pursuit of their market-driven activities.

In order to address this question, the researcher used the same interviews noted previously with the eight foundation presidents and the nine deans of colleges. In addition, an analysis was conducted of the statutes, contracts, and other important documents related to UFC and the eight private organizations.

### *Research Question 4*

*Is the existence of foundations at federal universities a national phenomenon?*

Brief interviews were also held with 35 finance directors from the 45 federal universities throughout Brazil to address the fourth question. These interviews were conducted at the National Forum for Finance Directors of the Federal Universities, which was held in the city of Manaus in the state of Amazon, on November 8 - 10, 2004. The

objective of these interviews was to confirm that the existence of foundations and associations is a national phenomenon within the federal university system. The interviews also established that the driving force behind the creation of these private organizations is essentially the need for additional sources of revenue for the universities with which they are associated.

## Methodology and Data Collection and Analysis

### *Methodology*

In particular, the present study relies greatly on such qualitative methods as personal, “elite” interviews and analyses of documents (e.g., statutes, contracts, rules and procedures manuals, agreements and financial statements).

Marshall and Rossman (1999) explain that “elite” interviews are typically applied to individuals who are considered to be influential, prominent and/or well informed in the context of an organization. These interviewees are knowledgeable, can provide strategic information, and almost always are in a position of power. For the purposes of this study, interviewees include individuals in highly strategic positions such as foundation and faculty association presidents, deans of colleges, faculty members and directors of finance. The interviews were an important source of data for the task of analyzing the costs and benefits of the private organizations and the relationship between UFC and its private foundations and associations.

Seidman (1998) noted that interviewing is both a research method and a social relationship. As such, this investigation used semi-structured, informal interviews in

which broad questions were asked in order to generate discussion from which more specific questions emerged. Prior to each interview, the interviewer (also the author of the present study) presented the topic and the objectives of the study to the interviewee. The questions were straightforward and pre-prepared, but allowed for open-ended discussion in which opinions were encouraged.

As noted earlier, this researcher is intimately familiar with all aspects of UFC, having served in administration and currently serving as a faculty member in the College of Business and as vice president of one of the UFC foundations. As such, it was particularly important that the study be conducted with professionalism and impartiality to every extent possible.

Document analyses also provided an important source of information for this study. According to Yin (1994), documents are important investigatory tools which provide for the triangulation of evidence and information. They are also useful for making inferences about events and providing an understanding of the nature of communications between parties in the study and the decisions they made. The document analyses performed for this project served to both augment and confirm the information collected during the interview process.

Statutes from each foundation were used in order to analyze how foundations function and in what types of entrepreneurial activities they engage. Financial statements were also investigated in order to gain a broad understanding of the amounts of monetary resources involved in these activities. Contracts between foundations and UFC were also researched. These contracts served to reveal and explain specific details regarding the

relationship between UFC and its eight foundations. Unfortunately, it was possible to research only four foundations. The other four either did not have financial statements or access to them was not provided.

### *Data Gathering and Data Analysis*

Based on the author's experience as a participant in one of the UFC foundations, a preliminary literature review was conducted in December, 2002. The qualitative research, which primarily used "elite" interviews and document analyses, was conducted from June to November of 2004.

#### Elite Interviews

The interviews with the 35 finance directors of various federal universities were an important component of the research for this study. These participants are in privileged positions and, by virtue of those positions, are highly knowledgeable about the extent to which academic capitalism is permeating federal universities through the activities of associations and foundations. The interviews provided the researcher with sufficient data to develop a comprehensive overview which documents the current prevalence of foundations and associations throughout the federal university system in Brazil.

Once all the interviews were conducted, including those with the faculty members, administrators, and deans at UFC, a transcription of each interview was created in order to facilitate the analysis. The transcripts were read and reread completely several times in an iterative process to find connections to the research questions and to begin the

process of coding the data. Rosenblatt (2003) explains, “One should try to elicit words from interviewees that refute, support, or qualify one’s developing interpretation” (2003, p. 232). The coded information provided a means to both identify and analyze important factors related to the research questions.

A coding scheme was prepared and the entire text of interviews was transcribed once again. The passages were then affixed with the previously determined codes, allowing the researcher to analyze the text and identify significant patterns. Following Marshall and Rossman’s notion that “Coding data is the formal representation of analytic thinking” (1999, p. 155), a profile was developed to condense all of the codes into five categories and to allow for a further refining of the analysis.

#### Categories for Analysis

The categories created from the profile were: *the mutual relationship between UFC and its foundations, the necessity to generate external resources, legal factors in the creation of foundations, the types of entrepreneurial activities developed by foundations, and the costs and benefits of these activities to the Federal University of Ceara and its academic units.*

A description of each category was derived from reading the transcripts after they had been coded. This process was used to analyze all of the interviews and to generate new data. The interviewees’ comments, once coded and analyzed, provided an incisive and relevant perspective from which to understand each category. For example, with regard to *the mutual relationship between UFC and its foundations*, declarative statements were made, such as, “Well, there is a strong relationship in this area...” and,

“So, I see these two organizations as a right hand of UFC in the area of offering extended services and consulting to the private sector.”

In discussing *the necessity to generate external resources*, one participant noted, “The university, without providing extended services, without technology transfer and without outsourced training of human resources, does not have university status.”

To emphasize the *legal factors in the creation of foundations*, another interviewee stated, “The law that regulates the public institutions’ way of working has many legal restrictions that prevent the federal universities from offering their services to the private sector. So, the unique way universities have found is the utilization of foundations.”

Commenting on the *types of entrepreneurial activities developed by foundations*, another participant said, “I think consulting, research about public opinion, and instruction are the most important ones.”

#### Document Analysis

The second method of data gathering was the analysis of institutional documents which was important in defining the organization’s nature, purpose and vision. These included statutes, financial statements, memos, newspapers and other institutional publications. According to Marshall & Rossman (1999), the review of documents is an unobtrusive method, yet richly portrays the values and beliefs of participants in a given setting. This method also provides an opportunity to understand the history and organizational and administrative context of a specific institution.

In addition to the documents noted above, others which were analyzed included the primary foundation contracts with UFC, financial statements from the year 2003,

budgets, payroll details, and samples of contracts and agreements with institutions other than UFC.

In order to code these documents, they were organized into groups according to type of document. They were then separated into three large groupings consisting of (a) statutes, procedures, and a manual of internal rules; (b) financial and accounting statements; and (c) brochures, internet, and other miscellaneous types of institutional documents.

Fortunately, most of the foundation documents were readily available and it was also possible to gather essentially the same package of documents from each foundation. This was important in that it allowed for a standardized approach to the data analysis.

### Limitations

It is expected that this research will accurately describe the connections between federal universities and private foundations and associations, as well as the impact of those connections on higher education policies, specifically with regard to UFC. The present study is also expected to provide a better understanding of the nature of the relationship between foundations and federal universities in order to clarify the debate about this matter.

However, this investigation has limitations which must be acknowledged. First, the research is based on a single case study and cannot yield conclusions which represent with certainty all of the institutions within the federal university system, despite their similarity to the Federal University of Ceara. Nonetheless, the study does demonstrate

that the phenomenon of academic capitalism is occurring throughout public universities in Brazil, which are similar in organizational and functional structure.

Another limitation is the inherent bias of the author of this study by virtue of his long-standing professional connection to UFC and its foundations. Such a strong personal knowledge of the object of study mandated a meticulously accurate and sound methodology during the data collection and data analysis so that final interpretations were based solely on the research and not on the investigator's preconceived ideas.

## CHAPTER 4: THE CONTEXT OF HIGHER EDUCATION IN BRAZIL, THE FEDERAL UNIVERSITIES, AND THE FEDERAL UNIVERSITY OF CEARA

The goal of this chapter is to offer a general overview of Brazil and its higher education system, the Federal System of Higher Education, and also to provide information about the Federal University of Ceara, which is the site of the case study used for this study.

### Brief Overview of Brazil

#### *History, Populace, and Government*

Brazil was discovered by Europeans in 1500, and existed under Portuguese colonial rule for over three centuries until 1822. In 1889, Brazil became a republic and was named República Federativa do Brasil. The nation is by far the largest and most populous country in South America, with a population of approximately 180 million.

In contrast to the other 12 Spanish-speaking countries in South America, the official language of Brazil is Portuguese. The capital, Brasilia, was established in 1962 and is located in the center of the country. Brazil has 26 states divided into five administrative regions: north, northeast, south, southeast, and central. The southeast is the most developed and richest region, followed by the south. The poorest is the northeast region, followed by the north. The largest cities are São Paulo, Rio de Janeiro, and Belo Horizonte in the southeast, and Salvador, Fortaleza, and Recife in the northeast.

The latest constitution dates to October 5, 1988. The voting system is voluntary for those between 16 and 18 years of age and over 70, and compulsory for those over 18 and under 70 years of age. Two different sets of direct elections are held in Brazil. One is held every four years for president, state governors, senators, and federal and state representatives. The second is held every four years for mayors and municipal representatives.

The President of Brazil is both the Chief of State and the Head of Government. Brazil has a bicameral National Congress (Congresso Nacional) that consists of the Federal Senate or Senado Federal and the Chamber of Deputies or Camara dos Deputados. The former consists of 81 seats. Three members from each state or federal district are elected according to the majority principle to serve eight-year terms. One-third of the members are elected after a four-year period and two-thirds are elected after the subsequent four-year period. The latter is comprised of 513 seats. Members are elected by proportional representation to serve four-year terms.

The judicial branch is composed of the Supreme Federal Tribunal which consists of 11 ministers appointed by the President and confirmed by the Senate, the Higher Tribunal of Justice, and the Regional Federal Tribunals whose judges are appointed for life.

### *Economy and Resources*

Today, Brazil is South America's leading economic power with vast natural resources and a large labor pool. Brazil is well developed in the agricultural, mining, manufacturing, and service sectors. The most important agricultural products are coffee,

soybeans, wheat, rice, corn, sugarcane, cocoa, and citrus. Industry is highly diversified, as seen by representation in textiles, shoes, chemicals, cement, lumber, iron ore, tin, steel, aircraft, motor vehicles and parts, and other machinery and equipment.

Brazil imports machinery, electrical and transport equipment, chemical products, and oil. Its principal trade partners are, according to 2003 figures, the United States (21.4%), Argentina (11%), Germany (8.7%), and China (4.1%). On the other hand, Brazil exports primarily to United States (22.4%), China (6.9%), Germany (5.1%), the Netherlands (4.4%), Mexico (4.2%), and Argentina (4.1%). The direct export products are transport equipment, iron ore, soybeans, footwear, coffee, and automobiles.

Brazil is expanding its presence in world markets. The Brazilian economy grew, on average, only 1.1% per year from 2001 to 2003. However, Brazil has an economic program which was initially established by former President Fernando Henrique Cardoso, and subsequently strengthened by the current President, Luiz Inácio Lula da Silva. This program has three pillars: a floating exchange rate, an inflation-targeting regime, and a tight fiscal policy, which has been reinforced by a series of International Monetary Fund programs. These policies have had a substantial impact on higher education by limiting spending in the public sector and expanding the private sector.

While economic management has been moderately successful, important economic vulnerabilities still exist. The most significant are debt-related in that the government's large domestic debt increased steadily from 1994 to 2003, straining government finances. Although its overall debt is largely domestic, Brazil's foreign debt (a mix of private and public debt) is large in relation to Brazil's modest (but growing)

export base. Another challenge is maintaining economic growth over a period of time in order to generate employment and make the government debt burden more manageable.

Other economic data indicate that the Brazilian Federal budget in 2003 consisted of \$147.2 billion in revenue and expenditures of \$172.4 billion. The public debt is 58.5% of GDP (2003). On the whole, the Brazilian labor force is divided by occupation into three large groups as follows: agriculture (23%), industry (24%), and services (53%).

As a developing country, Brazil has many considerable problems. A highly unequal income distribution is perhaps the most significant of these, with 22% of the population living below the poverty line (IBGE, 1998), an unemployment rate of 12.3% (IBGE, 2003), and an inflation rate of 14.7% (IBGE, 2003). However, violence, corruption, and drugs are also important problems that impede progress in Brazil.

For example, there is massive illegal drug production from illicit coca cultivation in the Amazon region, some which is used for domestic consumption. The federal government has enacted a large-scale eradication program to control this situation. Brazil is an important transshipment country for Bolivian, Colombian and Peruvian cocaine headed for Europe and the United States, as well as a major drug-related market for these same countries. The illegal narcotics proceeds earned in Brazil are often laundered through the financial system and there is also significant illicit financial activity in the Tri-Border Area of Argentina, Paraguay and Brazil.

## The Brazilian Higher Education System

### *A Brief History of Higher Education in Brazil*

During the colonial period, under the rule of Portugal, the only higher education provided was that by Jesuit colleges created by the Catholic Church. It was not until the twentieth century that Brazil had a complete university.

Until then, Portuguese laws and ordinances did not permit the establishment of higher education institutions in Brazil. Only in the nineteenth century, when the Portuguese royal family came to Brazil to escape Napoleon, were the first higher education institutions created, although they were somewhat narrow in scope. Before then, the elites of Brazil had to travel to Europe in order to enroll in universities.

According to Levy, “Unlike Spain, Portugal saw insufficient reason to create colonial institutions of higher education. Colonial elites would be trained in Portugal at the University of Coimbra” (1986, p.174) In comparison, Spanish America created universities by the sixteenth century and English America by the seventeenth century.

In 1834, an educational system was born under the “Ato Adicional,” a Brazilian law which established a dual structure anchored by the central government and the provincial (state) systems. Since that time, the central system, which is regulated by the federal government, has been in charge of managing and financing higher education. The provincial system, regulated by the states, manages and finances the elementary, middle, and high school levels.

The first university in Brazil, the University of Rio de Janeiro, was created only recently in 1920. It was the first institution of higher education to be given serious

consideration by the Brazilian authorities. Clearly, Brazil was a latecomer in the history of higher education, and only as a result of Portugal's colonial policies in 1930 did Brazil begin to diversify its entire higher education system and enable expansion.

The University of São Paulo, a state institution, was created in 1934. Afterwards, other higher education institutions were created in many states throughout the country. The creation of the first Catholic institution in 1940, Pontificia Universidade Catolica do Rio de Janeiro, was the start of a strong representation in higher education by private institutions. New private universities and colleges were created subsequently, to the extent that today, they comprise the largest private system in Latin America, and in fact, one of the largest in the world.

The legal framework of Brazil's higher education system is an important feature of its historical growth and expansion. In 1968, higher education law was established which is still in place. Essentially, the American system was adopted. This legislation replaced the old chair system with its departmental model of academic organization. The 1968 legislation also provided full-time contracts for faculty and created the credit hour system which was incorporated at the undergraduate level.

Over time, Brazil has seen a huge increase in the number of institutions in its higher education system. According to Schwartzman and Schwartzman (2002), Brazil had 1,180 higher education institutions in 2000. Of this number, 1,004 were private institutions. The number of new institutions continues to increase, as evidenced by the data which follows.

*Public and Private Higher Education Institutions*

By 2003, Brazil had 1,859 higher education institutions which are either public (i.e., federal, state, and municipal) or private. As indicated in Table 4.1, almost 89% of the higher education institutions are private. As a result, the Brazilian higher education system is one of the most privatized in the world.

Table 4.1: Number of Higher Education Institutions in Brazil (2003)

Institutions	Number	Percentage
Federal (Public)	83	4.5%
State (Public)	65	3.5%
Municipal (Public)	59	3.1%
Private	1652	88.9%
Total	1859	100%

Source: Deaes/INEP/MEC – Brazil, Ministry of Education - 2003

The federal government finances 83 institutions (each state has at least one) and state and local governments maintain 124. The remaining 1,652 are private institutions, which provide primarily undergraduate programs.

Table 4.2 indicates that approximately 50% of all institutions are located in the southeast region, the most affluent area of Brazil. In this region are two of the most populated cities in the country, Rio de Janeiro and São Paulo. Universities in the north region account for only five percent of the total institutions.

Table 4.2: Number of Higher Education Institutions in Brazil by Type and Region (2003)

Type	North	Northeast	Southeast	South	Center	Total
Public	15	52	81	36	23	207
Private	86	252	857	270	187	1652
Total	101	304	938	306	210	1859

Source: Deaes/INEP/MEC – Brazil, Ministry of Education - 2003

According to Levy, Brazil has had the single largest private higher education system in Latin America since 1980. Indeed, in 1980, 1,345,000 students were enrolled in private institutions in Brazil, which at the time, accounted for more than half of all private enrollments in Latin America. Levy noted at the time that “Brazil has been the only Latin American nation where the private sector has been clearly larger than the public sector” (1986, p.171).

By the same token, Schwartzman (1998) notes that the public higher education system is responsible for conducting the vast majority of research, in addition to enrolling roughly 38% of all undergraduate students and 82 % of all graduate students. Today, those percentages show little change, although, as mentioned earlier, there have been significant increases in overall enrollment.

The entire higher education system, including public and private institutions, now enrolls approximately 3.8 million students. The public system accounts for only for 29.2% of this total, while the private system enrolls fully 70.8% of the total (see Table 4.3).

Table 4.3: Number of Students Enrolled by Type of Institutions  
(2003)

Type	Students Enrolled	Percentage
Public	1,137,119	29,2 %
Private	2,750,652	70,8 %
Total	3,887,771	100 %

Source: Deaes/INEP/MEC – Brazil, Ministry of Education - 2003

Another important point is that Brazilian higher education is largely a night program. Of 3,887,771 students enrolled in higher education classes in 2003, 2,270,653 were enrolled in night classes. Of these, 1,863,209 students attended private institutions. The implication is that Brazil has another major contradiction within its structure which greatly affects access. Wealthy students attend public institutions, which hold classes mostly during the day, while poor and middle class students who must work to pay for higher education attend private institutions at night.

Another important aspect of the higher education system in Brazil concerns the number of students in each region. Approximately 53% of all undergraduate students in the country are enrolled in universities in the southeast region. This region has the three largest universities in the country, Universidade Estácio de Sá in Rio de Janeiro, Universidade Paulista, and Universidade de São Paulo in São Paulo.

The north region accounts for only four percent of the total student population. Yet, according to The Ministry of Education Report (2003), only 10.8% of all higher

education students live in the city of São Paulo. Clearly, Brazil needs to invest in the development of higher education in other regions besides the southeast.

### *The Graduate System*

The graduate system is divided into *lato* and *stricto sensu*. *Lato sensu* is basically composed of specialization programs. The *stricto sensu* system involves academic master's, professional master's, and doctoral programs.

The private system has 84.9% of all *lato sensu* programs. On the other hand, according to Coordination of Training for Higher Education Personnel (CAPES), Brazil has 1,570 *stricto sensu* programs, of which 86% are managed by public institutions (2002). 56% of these public universities are federal while 30% are state-run and 0.2% are municipal institutions. Private institutions are considerably more invested in learning at the undergraduate level. Consider that they develop and administer only 14% of the *stricto sensu* programs in the nation. As Schwartzman (1990) explains, most graduate programs are in public universities. Only a few are found in research institutions, such as institutes of physics and mathematics which are linked with the National Research Council.

### *Access to Higher Education*

Access is another area where significant changes in the higher education landscape can be observed. According to the Ministry of Education (2002), the number of higher seats available in higher education institutions is larger than the number of high school graduates. Nonetheless, approximately 4.9 million students applied to higher education in 2003, while only 1.2 million were actually enrolled by the system.

Without question, these statistics point to the urgent need for Brazil to address the inequity of access that is inherent within its education system as a whole. Some of the challenges that must be met are those posed by current admission policies and standards, the lack of academic preparedness of a large number of high school graduates, and a tuition policy that places higher education out of reach for a majority of potential students.

#### *Faculty in Brazilian Higher Education*

A further significant issue for higher education in Brazil is that of the quality and qualifications of faculty members. The vast majority of faculty members with doctorates teach at public institutions (see Table 4.4). However, due to the Ministry of Education's evaluation of graduate programs, private institutions are beginning to change. They are investing in better-qualified faculty members in order to receive better scores on the evaluations conducted by the Ministry, and consequently, to attract more students.

The best private universities also pay better salaries to faculty in comparison with federal and state institutions. Alexander discusses this phenomenon with regard to its occurrence in the United States (2001). He argues that the academic labor market is becoming increasingly polarized due to "brain drain." Private colleges are able to attract top faculty from public institutions because they can provide better salaries. Public universities have not been able to increase their salaries for ten years, so they are beginning to lose their best professors, who can no longer afford to remain in these institutions.

Table 4.4: Faculty Positions by Type of Institution and by Degree (2003)

Degree	Total	Public	Private
Specialists	110,378	29,536	80,842
Masters	89,288	24,229	65,059
Doctors	54,487	35,030	19,457
Total	254,153	88,795	165,358

Source: Ministry of Education (2003)

In addition, the academic labor market is a national and international market for those at the top of their discipline. In this sense, “brain drain” is essentially a global issue in that institutions everywhere desire top faculty in order to maximize institutional and departmental prestige. While this aspect of “brain drain” is not yet in evidence in Brazil, the issue of faculty members moving from public to private institutions is a growing concern.

Another issue with regard to faculty is that of full-time and part-time positions and their relative prevalence. In 1999, full-time faculty members in public system were in the majority at 77.4% in the public universities. They accounted for nearly 40% in other public institutions. The private system, on the other hand, employed a majority of part-time faculty (see Table 4.5). The situation today remains largely the same (MEC, 2003).

For the most part, faculty members at public institutions have an exclusive contract, meaning that nearly all are full-time and receive consistent salaries for their

work. In contrast faculty members in the private system are largely part-time and are not salaried, although they may be better paid in relative terms.

Table 4.5: Faculty Positions (1999)

Type	Universities		Others		Total
	Public	Private	Public	Private	
Faculty	47214	51658	7761	41295	147928
Full -Time	77.40%	19.80%	39.10%	9.20%	
Part-Time	22.60%	78.20%	60.90%	90.80%	

Source: Ministry of Education – Brazil (1999)

The increase of part-time faculty is a worldwide phenomenon. Because faculty salaries are an institution's largest fixed cost, universities are hiring increasing numbers of part-time faculty, who are paid a fraction of full-time salary levels and often do not receive benefits (Slaughter, 1993). In federal institutions in Brazil, there is a new level of faculty created specifically to allow the hiring of more temporary professors. These part-time instructors can be hired or laid off to meet fluctuating institutional requirements (Slaughter). They have little prestige and are not given any responsibility in terms of service, curriculum development, or involvement in institutional governance. In addition, they have no permanency or job security. In effect, part-time faculty members seem to be on the periphery of their institutions' activities and academic life.

Rhoades further describes this periphery as the site in which administrative managers assert control over the growing numbers of part-time faculty members (1998). Indeed, Rhoades argues there is evidence that new, part-time faculty members are being deskilled, in contrast with full-time faculty members who are established within their institutions. Managers, in effect, are bypassing existing full-time faculty and exercising increasing control over academic matters in direct relation to the growth in numbers of part-time faculty. In addition, students often actively oppose the increase in part-time professors, arguing that they are less invested in the academic process and less likely to remain loyal to their institutions than their full-time counterparts.

There are also several other significant problems in the Brazilian higher education system. These include low completion rates (approximately 30% overall), minimal incentives to improve graduate level education, and the low productivity of university professors in quantitative terms (Schwartzman, 1991).

### The Federal Universities

The Federal University System is situated as part of the public federal institutions that are overseen by the Ministry of Education. These institutions are responsible for offering the best quality higher education throughout the country. They are also relatively new as we noted previously. There are 45 federal universities in Brazil, with at least one institution in each of the 26 states and the single federal district (see Table 4.6).

Table 4.6: Federal Universities by Regions and States		
Institution/Region	Name	State
North		
UFAC	Universidade Federal do Acre	Acre
UNIFAP	Universidade Federal do Amapá	Amapá
UFAM	Universidade Federal do Amazonas	Amazonas
UFPA	Universidade Federal do Pará	Pará
UFRA	Universidade Federal Rural da Amazônia	Pará
UNIR	Universidade Federal de Rondônia	Rondônia
UFRR	Universidade Federal de Roraima	Roraima
Northeast		
UFAL	Universidade Federal de Alagoas	Alagoas
UNIVASF	Universidade Federal do Vale do São Francisco	Bahia
UFBA	Universidade Federal da Bahia	Bahia
UFMA	Universidade Federal do Maranhão	Maranhão
UFPB	Universidade Federal da Paraíba	Paraíba
UFPE	Universidade Federal de Pernambuco	Pernambuco
UFCE	Universidade Federal do Ceará	Ceará
UFRPE	Universidade Federal Rural de Pernambuco	Pernambuco
UFPI	Universidade Federal do Piauí	Piauí
UFRN	Universidade Federal do Rio Grande do Norte	Rio Grande do Norte
UFCG	Universidade Federal de Campina Grande	Paraíba
UFS	Universidade Federal de Sergipe	Sergipe
Center		
UNB	Universidade de Brasília	Distrito Federal
UFG	Universidade Federal de Goiás	Goiás
UFMT	Universidade Federal do Mato Grosso	Mato Grosso
UFMS	Universidade Federal do Mato Grosso do Sul	Mato Grosso do Sul
UFT	Universidade Federal de Tocantins	Tocantins
Southeast		
UFES	Universidade Federal do Espírito Santo	Espírito Santo
UFLA	Universidade Federal de Lavras	Minas Gerais
UFMG	Universidade Federal de Minas Gerais	Minas Gerais
UFJF	Universidade Federal de Juiz de Fora	Minas Gerais
UFV	Universidade Federal de Viçosa	Minas Gerais
UFOP	Universidade Federal de Ouro Preto	Minas Gerais
UFU	Universidade Federal de Uberlândia	Minas Gerais
UNIFEI	Universidade Federal de Itajubá	Minas Gerais
UFSJ	Universidade Federal de São João Del Rei	Minas Gerais
UNIRIO	Universidade do Rio de Janeiro	Rio de Janeiro
UFRJ	Universidade Federal do Rio de Janeiro	Rio de Janeiro
UFRRJ	Universidade Federal Rural do Rio de Janeiro	Rio de Janeiro
UFF	Universidade Federal Fluminense	Rio de Janeiro
UNIFESP	Universidade Federal de São Paulo	São Paulo
FUFSCAR	Universidade Federal de São Carlos	São Paulo

South		
UFRGS	Universidade Federal do Rio Grande do Sul	Rio Grande do Sul
UFPR	Universidade Federal do Paraná	Paraná
FURG	Universidade Federal do Rio Grande	Rio Grande do Sul
UFSC	Universidade Federal de Santa Catarina	Santa Catarina
UFPEL	Universidade Federal de Pelotas	Rio Grande do Sul
UFSM	Universidade Federal de Santa Maria	Rio Grande do Sul
Source: Ministry of Education (2004)		

### *The Lack of Administrative Autonomy*

Brazilian federal universities are structured with extensive power given to the academic bodies. They are also characterized by an absence of professional administrators and managers. This is largely because all top positions are recruited from within the university's faculty. This model, as explained before, is therefore highly political. Some authors, such as Schwartzman (1991), argue that the best organizational results do not depend on management style or administrative efficiency, but on the ability to make prevalent the institution's academic and intellectual values. However, this author is confident that federal universities must employ experienced, professional administrators in at least some strategic areas in order to improve performance and effectiveness.

In addition, public institutions do not have financial, academic, or administrative autonomy. It is the Ministry of Education which has the authority to control the main elements of each federal university's governance. However, this may soon be subject to change. The media frequently reports that the issue of increased autonomy for federal

universities is gaining political support. The former Brazilian president announced that he had a political and strategic plan to create financial autonomy at federal universities, but never implemented such a plan. The current president is following the same pattern, who proposed a similar program. Today, over two and a half years after his election, federal universities still lack autonomy and the Ministry of Education maintains nearly total power and authority over the system as a whole. Nonetheless, there is a growing consensus among some academics, administrators, and politicians that public higher education must have greater autonomy if it is to survive as an integral part of the higher education landscape in Brazil.

Levy (1986) describes the Ministry of Education as an enormous, bureaucratic authority. He explains that federal higher education institutions are locked into adhering to government-mandated rules and regulations, with very limited academic or administrative freedom. All personnel actions, for example, must be specifically authorized by the Ministry. This is evident in the requirement that universities pay their personnel according to salary structures set by ministerial regulations and in the hiring of personnel, which requires explicit permission on a case by case basis. We see this constraint even when federal universities wish to replace retired professors, the result being a serious problem for departments in terms of academic continuity and quality.

In fact, the Ministry of Education makes most of the important decisions within the federal university system. These include all personnel decisions - including hiring and firing - regarding academic, technical, and administrative staff, the establishment of

salary levels, the addition of new courses, and the transfer of budget resources between expenditures categories (World Bank, 2002).

Lack of autonomy in the federal higher education system can further be observed in a variety of ways. Schwartzman argues that “Public and private institutions of higher education should have autonomy to hire and dismiss academic and administrative personnel, establish salaries and career levels, charge tuition, get support recruitment, and so forth” (1991, p.9). If higher education is to serve its fundamental purpose of providing an atmosphere in which the free exchange of ideas, creativity, and learning can occur, it necessarily must exist in a decentralized and autonomous environment.

#### *The Budget of the Federal University System*

The budget to finance federal universities is supplied and controlled by the federal government. The Ministry of Education distributes resources among universities according to an elaborate budgetary matrix. This matrix is used to analyze performance and necessities, but it is also used politically.

This is most evident with regard to the free-tuition policy for federal universities, which was noted previously. Proposals which support a tuition-based policy are perceived by other stakeholders as a movement to give control to private and elite groups. They argue that this will place the burden for financing public higher education on affluent students and their families. Proponents for a continuation of the no-tuition plan do not consider the charging of tuition as an acceptable solution to alleviate budgetary shortfalls. Their expectation is that the federal government has an obligation to continue to finance the public university system despite the fact that the government has been

unable to consistently provide sufficient resources to support its primary activities. The higher education budget has remained constant over time, even as costs and student enrollment have increased.

In addition to being insufficient, the budget provided by the Ministry of Education is inflexible. Each university receives a fixed amount of financial resources annually to apply to specific costs, namely, personnel, infrastructure investment, and maintenance). The budgeted amounts for these costs are also fixed and cannot be changed. For example, if at the end of the year, there are surplus funds from personnel, a given institution cannot transfer these funds to finance investments, or to another category where there is a shortage of resources.

Personnel expenditures comprise approximately 90% of each federal university's budget, with the remainder distributed between maintenance and investment. Inflexibility creates problems in managing these areas, but a relatively simple analysis can be done to demonstrate how to ameliorate this situation. A broad and flexible budget, freedom to make personnel decisions, and better direction from the Ministry of Education concerning each university's outcomes could solve some of the problems that plague federal higher education. These issues threaten the important contribution public universities can make toward improving Brazil's social and economic conditions. Indeed, Schwartzman (1991) calls for budget allocations to be set in global terms according to the results and recommendations of the evaluation bodies which analyze the needs of each university in the context of its region, community, and student population.

### *The Financial Crisis*

Unquestionably, public higher education in Brazil faces an immediate and grave financial crisis. According to Moreira (2001), the resources designated for education by the federal budget decreased from 1.1% of the Brazilian GDP in 1995 to 0.5% in 1999. Moreira also mentions that this exceedingly low level of support for public higher education is all the more alarming because a significant increase in enrollment occurred during the same time period.

Another aspect of this crisis as presented by Moreira, is the typical delay in congressional approval of the federal budget. This delay significantly compromises institutional academic activities as well as complicates the practical, day-to-day administration of these universities.

Additionally, the current fiscal shortfall is such that there are simply no resources with which to finance new projects and programs. Faculty members pay for most of their office supplies, lab equipment, class materials, and various other provisions needed to do their work. There are no new telephone lines, no updated laboratory materials to develop research, and no funds for student scholarships. It seems apparent that the federal government can no longer finance the federal system of higher education without outside help. Schwartzman notes (1991) that the public sector of higher education has not grown for several years and budgetary restrictions will not allow it to grow anytime soon, except perhaps by better use of existing resources, although even that is in question, given the extreme nature of the shortfall.

### *Personnel*

As of the year 2000, federal institutions of higher education employed 55,097 faculty members and 91,451 staff members to serve approximately 600,000 undergraduate students and 60,000 graduate students. Of the faculty members, 34.43% hold doctoral degrees and 34.02% hold master's degrees (MEC, 2000).

### The Federal University of Ceara

As noted previously, the Federal University of Ceara is located in the northeast region of Brazil in the city of Fortaleza, which is the Ceara state capital. Fortaleza is the fifth largest city in the country with a population of nearly two million.

### *A Brief History*

The University of Ceara's history is directly related to the development of region it serves. In 1944, Dr. Antônio Xavier de Oliveira sent a document to the Ministry of Education and Health in an attempt to gain approval to federalize the College of Law. This was the first time the idea emerged of creating a university in Fortaleza. However, it was not until 1954 that Café Filho, the incumbent President of Brazil, signed Law N° 2,373, creating the University of Ceara. In 1955, Antônio Martins Filho was named the first rector of UFC. The same year, the institution began to function as a viable institution of higher education within the structure of the Ministry of Education.

The University of Ceara began with four academic units - the College of Law, the College of Pharmacy and Dentistry, the College of Agronomy, and the College of

Medicine. In 1968, UFC was organized by departments united into colleges and centers of study. Since that time, UFC has expanded and created new programs to serve the community of Ceara. Today, UFC is the tenth largest federal university in the country, based on its budget and number of employees. UFC is the only federal university in Ceara State, and also the most important, largest, and oldest institution of higher education in the state.

### *Organizational Structure*

Currently, UFC is a public university with nine large academic units or colleges - Law, Business, Medicine, Dentistry, Nursing and Pharmacy, Education, Humanities, Technology, Agrarian Sciences, and Sciences. Within these colleges are 52 departments and many administrative units which help the institution develop research and promote extension and learning activities.

UFC enrolls approximately 25,000 students and employs 1,523 faculty members and 3,442 staff members. The institution has 44 undergraduate, 44 masters, and 18 doctoral programs divided among nine academic colleges distributed throughout three campuses - the Health Center Campus, Pici's Academic Campus, and the Benfica Administrative Campus. In addition, UFC has three experimental farms in the rural area of the state where it develops extension and research activities.

### *Administrative Levels*

UFC is coordinated into administrative levels - upper management and academic administration. The upper management level is composed of the following bodies:

- University Council (CONSUNI) - sets university policies and oversees management and financial issues.
- Research, Learning, and Extension Council (CEPE) - concerned with issues related to these areas.
- Council of Internal Auditors - responsible for approving administration accounts before submitting the results to the Ministry of Education.
- Rectory - the executive branch of the administration, overseen by the Rector (President), who has final authority on universities activities, and includes the Provost and six Vice Presidents.

Each of the nine colleges has its own distinct academic administration, which is comprised of members who represent their college according to the following organizational structure:

- College Council - consists of the dean of the college, course coordinators, a faculty member, and a student member.
- Dean of the College - the executive responsible for administering and overseeing college activities.
- Undergraduate and Graduate Coordinator - responsible for administering academic activities.
- Course Department - includes faculty members who teach courses in specific areas.

### *Elections and Administrative Positions*

According to federal legislation, as in all federal universities in Brazil, UFC holds elections every four years for President of the university. After the election, the President of Brazil has the statutory authority to choose any one of the candidates, but most often selects the individual who actually won the election.

After the President's decision, the newly chosen president of the university selects more than seventy assessors to work for a four-year term. These assessors include six Vice Presidents of Finance, Student Affairs, Planning, Undergraduate, Research and Graduate, and Extension, as well as directors of administrative departments, direct assessors who work in the president's cabinet, and other administrative positions. Most of these assessors are chosen from among faculty members.

Faculty and staff members campaign aggressively for these positions, engaging in a very public struggle during the process in hopes of participating in the new administration. These campaigns are often hostile and negative in nature in that groups and individuals make accusations and attribute blame to opposing groups for the problems that the university faces at the time. Unfortunately, this atmosphere of conflict lasts long after the president has made his choices and contributes to the politicizing of administrative and academic issues throughout the ensuing years.

The nine colleges also hold elections in order to select their respective deans. Faculty, staff, and students vote only for the dean of the college where they attend or work. These elections are held six months after the election for the president of the university. Just as the President of Brazil has the authority to choose the president of each

federal university from the candidates, the president of the each federal university also has the authority to select the deans from among the candidates, regardless of which individuals actually won the elections. However, those who won their respective elections are usually selected.

### *Budget Resource Allocation*

The allocation of budget resources is a highly complex process. According to Barr (2002), a budget is not only a set of numbers, but as a rule also reflects the goals and priorities of the institution. He notes that a budget needs to be flexible to respond to changing needs and problems. Resource allocation is also political and highly stressful, and is a process that will never satisfy everyone.

Resource allocation can be accomplished by using either a centralized or decentralized model. Currently, UFC practices a central control budget model, meaning that all revenue flows directly to the central administration, including portions of externally generated resources, which are first held and managed in separate accounts. Because of the scarcity of financial resources in the federal higher education system, the administration of UFC acknowledges that it is has been very difficult to manage the institution without sufficient funding. Indeed, from the administration's perspective, resource allocation is strictly a function of the most immediate priorities of the central administration policies as they are deemed to benefit the university. The federal budget currently provides 95% of UFC's entire budget. As Table 4.7 indicates, personnel costs represent over 92% of the UFC budget, with the remainder allocated to maintenance and infrastructure investment. Clearly, UFC is totally dependant on federal appropriations.

Nevertheless, there are several other external sources of income used to support certain programs and facilities within UFC.

Table 4.7: UFC Budget of 2004 (Expenditures by type)

Type of Expenditure	Amount in US\$ *	Percent of Total
Personnel	160,000,000.00	92.62%
Maintenance	12,100,000.00	7%
Investment	657,000.00	0.38%
Total	172,757,000.00	100%

Source: Budgetary Statement of UFC-2004 (SIAFI) \* Amount in US\$ (currency of R\$ 2.71)

The entrance examination fee is the most significant of these. Each year, the university holds an entrance examination called the *vestibular*. Based on the results of the exam, only 3,600 of 30,000 students who take the exam annually will be offered seats. The College of Agrarian Science's farm production, the College of Business' consulting services, and the College of Technology projects are other examples of revenue sources. Their relative contribution is quite small, however, particularly in comparison to the funds generated by the eight foundations that also work to generate additional funds.

The central administration uses the Vice President of Finance to manage and control the financial functions of the institution and the Vice President of Planning to provide the plans, priorities, goals, and financial rules that drive the university. As mentioned before, the centralized model of resource allocation at UFC is a highly

political model, with the President and the Vice President of Finance having budgetary control and decision-making power. Conflicts commonly arise within this system since faculty members and groups often have competing interests and want very different outcomes in terms of resource distribution. According to Wildavsky and Caiden, “Budgetary control involves conflict among people who want different outcomes and who attempt to exert power to make the size and distribution of spending different than it might otherwise have been” (2003, p.20). Since UFC has a centralized budget, its allocation process appears very simple, but it actually has a very political dimension that complicates the process significantly.

#### *The Process of Resource Allocation*

Resource allocation at UFC is highly bureaucratic. In the first place, personnel expenditures are executed directly by the Ministry of Education. The Human Resource Department at UFC only provides personnel information to the Ministry, which in turn prepares and distributes the payroll disbursements for individual faculty and staff members.

The administrative and academic departments begin the processes related to other types of expenditures such as services, maintenance, and infrastructure. They send their requests to their immediate supervisors (vice presidents and deans according to the department or unit) within the institution. The requests are then analyzed by these vice presidents and deans, who then send them to the Vice President of Finance for final authorization.

Subsequently, according to the university's established priorities and the availability of resources, the Vice President of Finance authorizes the release of funds and sends the paperwork to the administrative sector to execute. There is no coordination or monitoring of the amounts of funds allocated to each department. Thus, one department can easily receive considerably more funds than others. Due to the lack of controls and to the political aspects of allocating resources, the system is inherently inequitable and inefficient.

The Vice President of Finance has broad personal discretion in making allocation decisions. More often than not, these decisions are influenced by political negotiations with various academic and administrative stakeholders. As noted above, the election for president in Brazilian federal universities is a significant factor in the politicized character of these institutions. Departments which supported the president's campaign are likely to receive more resources than those that did not.

In the case of Brazil's federal universities, this model of resource distribution has a tendency to protect the interests of the group which is in power. It does not distribute resources according to a previously negotiated plan, which proposes that each unit should be allocated resources fairly in order to support its activities and programs. The university community is clamoring for a new and more equitable model, but there is much controversy and debate surrounding this issue.

Many stakeholders favor a decentralized budget in which heads of departments, deans of colleges, and the other vice-presidents could have a "piece of the cake." Of course, by using a decentralized model, these positions would have both the authority and

the responsibility for managing the internal resources of their respective units (Whalen, 2002). In Brazil, this would entail answering to federal auditors and rigorously following the many federal rules and laws, which might result in even greater bureaucratic barriers.

However, the current imperfect model has also created room for other, more positive repercussions, primarily the development of private organizations at UFC, which is the central topic of the present study. These foundations and associations are energizing various departments as they implement research projects and offer other kinds of services that support faculty work and supplement the university budget.

## CHAPTER 5: FINDINGS: FOUNDATIONS AND ASSOCIATIONS WITHIN THE FEDERAL UNIVERSITY OF CEARA

Foundations and faculty associations are defined and described in chapter two. However, it is necessary at this juncture to discuss certain aspects of these private institutions in a more comprehensive manner. The legal constraints, relative to federal higher education institutions in Brazil, mandate that while faculty associations may have economic objectives, they must be non-profit institutions. In federal universities, associations are comprised of a group of professors, usually within a particular department, who provide services, products, and activities to a variety of clients in order to generate revenue for that department. These funds often make the difference in whether a given department is able to meet its goals. Another legal constraint is that foundations must use their assets for social improvement, which often results in broad and creative interpretations of what constitutes social improvement.

Additionally, in order to expand and compete, foundations and faculty associations are developing a diverse set of activities. According to Schwartzman and Balbachevsky (1996), these activities include fee-based services rendered to private clients, business organizations, and government agencies. As a result, activities such as applied research, outreach, and consulting are essentially being developed by foundations and faculty associations. In order to function within the federal university structure, these private organizations must each have in place a memorandum of agreement. This is essentially a contract with the federal university that permits them to develop technology,

provide specialization courses, initiate research projects, conduct seminars, and engage in any other activities which generate alternative resources.

The bottom line is that foundations and faculty associations exist to supplement universities' budgets and faculty and staff members' salaries. These private organizations are described by Balbachevsky & Quinteiro (2003) as follows:

These foundations were created at the initiative of the faculty to bypass the bureaucratic constraints imposed by the country's public spending regulations. These foundations allow professional schools to offer income supplements to their faculty and are an important source of fund-raising. (2003, p. 80)

### Findings of the Study

The remainder of the current chapter presents this study's findings from two different perspectives. The first perspective emanates from the analysis of documents from UFC and its eight foundations. The second is revealed in the series of interviews, which were analyzed on the basis of the following categories: the mutual relationship between UFC and its foundations, the need to generate external resources, legal factors in the creation of foundations, the types of entrepreneurial activities developed by foundations, and the costs and benefits of these activities. The fundamental task of this investigation was to employ a qualitative approach in observing the nature and outcomes of the relationship between the Federal University of Ceara and its eight foundations.

#### *Document Analysis*

Currently, eight private, non-profit organizations operate within the UFC framework. They are engaging in and developing entrepreneurial activities which directly involve faculty and staff members from the department with which they are affiliated.

The level of involvement in these activities by faculty members varies with each college. In the College of Business, for example, approximately 30% of all professors are involved in the faculty association activities. In the College of Humanities, Education and Sciences, the percentage is less than 20%, while in Medicine and Dentistry, it is approximately 40%. In the College of Law, the percentage is particularly low since professors frequently serve as judges, lawyers, and other authorities in the justice system in addition to their faculty duties. The level of involvement of professors from the College of Technology is the highest - at least 60% are fully engaged in the activities of that college's affiliated foundation.

These eight organizations are known as Associação Cearense de Estudos e Pesquisas (ACEP), Fundação Cearense de Estudos e Pesquisas (FCPC), Centro de Treinamento e Desenvolvimento (CETREDE), Associação Científica de Estudos Agrários (ACEG), Fundação Paulo Bonavides (FPB), Associação Técnico-Científico Paulo de Frontim (ASTEF), Sociedade de Assistência a Maternidade-Escola Assis Chateaubrian (SAMEAC), and Centro de Estudos e Pesquisas dos Docentes do Curso de Odontologia (CEPDCO).

Each foundation is related to a college or to the central administration at UFC. ACEP is related to the College of Economy, Accounting and Administration (College of Business). ACEG is associated with the College of Agronomy. CETREDE and FCPC are related to and managed by the central administration (Rector). FPB has links with the College of Law. ASTEF is related to the College of Engineering, and CEPDCO and SAMEAC function within the University Health Center.

According to institutional documents, each one of these organizations has a memorandum of agreement with UFC. Their objectives are similar in that they exist to support UFC and its employees in their academic endeavors. They differ, however, with regard to their characteristics and activities. These similarities and differences were revealed in the document analysis, which involved a comprehensive review of the statutes governing each foundation, the contracts between foundations and UFC, and the financial documents of each of the eight private organizations. The findings of the analysis are discussed in the remainder of the present chapter.

#### Fundação Cearense de Pesquisa e Cultura (FCPC)

FCPC is a non-profit, private organization created in 1977 by the University Council of the Federal University of Ceara. Currently, its main objective is to provide financial support to UFC through research and learning projects, institutional development projects, and various service-oriented activities, all of which generate external resources. FCPC works as a link with other public and private institutions in order to provide courses, academic events, research, and other services to the community and to local society in general.

The primary focus of FCPC's work is with government and multinational projects, public opinion research, consulting, and specialization coursework. FCPC is also involved in organizing the entrance exam, known as the *vestibular*, for many universities, including UFC. As mentioned previously, the entrance exam is required at both public and private higher education institutions in Brazil.

The president of UFC appoints an executive director to administer FCPC during a four-year term and the relationship between them is usually quite strong, but also quite rigid. According to the statutes governing FCPC, its administration is divided into two branches: the fiscal council and the executive secretary. The fiscal council has seven members. Six are chosen and appointed by the president of UFC and one is designated by the university council. The fiscal council is responsible for planning the budget, establishing salaries, organizing the administration of the executive secretary's functions, determining rules and procedures, establishing internal and external auditing systems, preparing documents which describe and clarify financial statements, and arranging elections for the president of FCPC and for any significant changes in its statutes.

The executive secretary is responsible for managing FCPC and is appointed by the president of UFC, as is the adjunct executive secretary. The executive secretary represents FCPC and manages it according to fiscal council resolutions. He or she is also responsible for making all personnel decisions and addressing a variety of human resource problems and issues as they arise. FCPC currently has 32 staff members on full-time contracts.

FCPC's statutes determine the following objectives for the foundation: promote and subsidize research projects; offer activities which contribute to UFC's cultural, technical, and scientific endeavors; and provide support to University Hospital. The administrative and functional linkage of FCPC to UFC is mirrored by its physical proximity in that it is housed on the UFC campus itself.

FCPC and UFC have a central memorandum of agreement established to administrate their relationship. This central contract is commonly known as the “mother contract” because it establishes the framework from which secondary contracts are created in order to pursue and develop specific projects. These secondary contracts are known as “son’s contracts.”

*FCPC Financial Information.* The only statement of financial records available was found at FCPC’s website ([www.fcpc.ufc.br](http://www.fcpc.ufc.br)). The most recent balance sheet available is from the year 2002. As seen in Table 5.1, FCPC’s total liquid assets for that year totaled US\$ 2,616,214.45. Total expenses and obligations for the same year were US\$ 1,863,508.98 resulting in a positive cash flow of US\$ 752,705.47. Clearly, FCPC was able not only to pay its expenses, but also to generate significant revenue.

Table 5.1: Balance Sheet - December 31, 2002  
In US\$ (exchange rate US\$ 1.00 = R\$ 3, 53)

Total Assets	4,382,527.26
Liquid Assets	2,616,214.45
Fixed Assets	1,766,312.81
Total Liabilities & Net Worth	4,382,527.26
Current liabilities	1,863,508.98
Net Worth	2,519,018.28

Source: FCPC’s Balance Sheet /2002

Table 5.1 also notes that FCPC has US\$ 1,766,312.81 in fixed assets. This amount represents the organization’s property, equipment, and supplies. The amount of US\$ 2,519,018.28 in net worth (assets minus liabilities equals net worth) consists of contributed capital and retained earnings accumulated over a period of years.

### Centro de Treinamento e Desenvolvimento (CETREDE)

Like FCPC, CETREDE is a non-profit private organization. It was created in 1964 through the combined efforts of the Brazilian Federal Government, as represented by the Federal University of Ceara, the Bank of Northeast (BNB), the Brazilian Northeast Office of Development (SUDENE), and the Organization of American States (OAS).

CETREDE's initial and primary objective was to provide training in the development of economic projects for professionals from various Latin American countries. The intention was to address the economic challenges facing the poorest areas in Latin America.

Since 1973, CETREDE diversified and extended its activities to include training of professionals in Brazilian government agencies, public banks, and public and private institutions, with special attention to the northeast region of Brazil. In 1980, the three institutions (UFC, BNB, and SUDENE) permitted CETREDE sufficient autonomy to further diversify its activities and incorporate research and consulting into its activities. At that time, CETREDE was legally incorporated into the UFC structure.

Currently, CETREDE's activities focus on five different areas: continuing education programs, professional programs, short-term and specialization courses, consulting services, and research. All of these activities are based on CETREDE's training programs which are designed to include a strong foundation in organization and technology. These programs include both intermediate and graduate programs.

CETREDE has a Fiscal Council and a Deliberative Council. The former is comprised of UFC and BNB representatives whose sole responsibility is to analyze and audit CETREDE's financial statements. Decision-making authority rests with the

Deliberative Council, which is comprised of representatives from UFC, BNB, SUDENE, and the State of Ceara's government. The executive director of CETREDE is the president of the Deliberative Council and is appointed by the president of UFC for a four-year term.

CETREDE has 35 staff members and many more qualified professionals (primarily UFC professors and consultants) who contribute to its work. CETREDE, like FCPC, is located in university-owned buildings which are in close proximity to UFC's central administration.

*CETREDE Financial Information.* Financial data for CETREDE was gathered by analyzing 2004 budget proposal (see Table 5.2). Unlike, UFC, which spends nearly 93% of its budget on personnel-related expenses, CETREDE spends less than eight percent (personnel, taxes, and benefits). This pattern contributes to the argument that the largest expenditures in public institutions are associated with personnel while in private institutions, such as CETREDE, personnel expenditures are not as significant.

A breakdown of CETREDE's total proceeds reveals that 68% is generated from contracts with public and private organizations. The remainder is divided among specialization programs (17%), extension programs (2.6%), and professional programs (12.4%). CETREDE keeps 10% of the revenue as an overhead fee. This is to offset the expenses associated with the actual implementation of its various projects, which comprise the largest expense item in the budget (see Table 5.2). The remaining 90% of the revenue is used to finance each project, including its personnel-related expenses.

Table 5.2: 2004 proposal budget of CETREDE (December 31, 2003)  
In US\$ (exchange rate US\$ 1.00 = R\$ 2, 80)

Classification	Expenditures	Annual Amount
1. Total Revenues		4,455,775.00
2. Expenditures		
2.1 General Expenditures (Projects)		3,806,710.71
2.2 Administrative Expenditures	Personnel	221,428.57
	Taxes	88,571.43
	Benefits	39,285.71
	Services	92,857.14
	Materials of Consumption	35,714.29
	Total Expenditures	4,455,775.00

Source: Budget and Planning Proposal - CETREDE /2004

#### Associação Cearense de Estudo e Pesquisas (ACEP)

ACEP, like the other foundations is a non-profit, private organization. It was created in 1997 by a group of professors from UFC's College of Business. ACEP is involved with a number of different services and activities. For example, it develops entrance exams for potential employees of federal, state, and local government institutions. Such exams are mandated by the Brazilian constitution. ACEP also administers most of the specialization programs in the College of Business as well as several programs in other UFC colleges. In addition, ACEP provides fee-based audits of public institutions for the government and offers consulting and research for academic and corporate entities.

According to its statutes, only College of Business faculty members may be associate members of ACEP. They are responsible for electing the president of the foundation from among their ranks. However, since ACEP's inception in 1997, association members have traditionally chosen the dean of the College of Business as president.

ACEP is relatively small, with only three staff members who were chosen from the interns who worked there as part of their undergraduate studies. Eight to ten internships are offered annually for College of Business students who are supervised by faculty members. Unlike the other foundations, ACEP is the only one which is physically located outside the UFC campus, although it is relatively close to the College of Business. The essential point is that the linkage between each foundation to its academic department is nearly seamless, so much so that the purpose of the departments and their associated foundations are nearly merged.

Basically, ACEP develops activities which relate for the most part to economic, accounting, and administrative functions. Its objectives as stated in the statutes are: to collaborate with public and private institutions to improve the socio-economic aspect of the region through programs established by the College of Business at UFC; to provide incentives for research projects in academia; to provide financial resources to the College of Business at UFC; and to support the creation and management of business-related specialization and extension courses for the region.

*ACEP Financial Information.* Based on ACEP's 2003 budget, as seen in Table 5.3, UFC receives a 10% overhead fee related to contracts it has with ACEP, or US\$

96,287.93. In contrast, ACEP revenues totaled US\$ 2,642,708.90. Contracts to prepare and organize entrance examinations for public institutions were responsible for almost 69% of this amount. Of course, this percentage varies from year to year, depending on demand. In 2002, for example, entrance examination contracts accounted for only 10% of the total revenues. 2003 represented a banner year for ACEP regarding this type of contract, largely due to its agreement to organize an unusually large entrance examination for a federal bank.

Specialization programs and professional master programs were also very important, accounting for nearly 17% of the total revenue. The remaining 16% came from other academic and corporate contracts. Clearly, each of these was a significant source of revenue for ACEP and for the College of Business indirectly. It should be noted that UFC participated in just 17 of the 78 total projects in which ACEP was engaged in 2003.

As indicated previously, ACEP has initiated agreements with UFC in order to provide professional master's degree programs. With regard to these programs, it is noteworthy that the Ministry of Education has given approval for students to be charged tuition for them, in contrast with the federal university mandate to provide programs at no cost to students. Professional master's degree programs at federal universities in Brazil represent a new development in higher education which can be explained in the context of academic capitalism theory. As Slaughter and Rhoades explain,

Research universities continue to emphasize doctoral programs associated with the public good, the knowledge regime and research prestige, but also increasingly emphasize professional master's degrees that are associated with the new economy and the academic capitalist knowledge regime. (2004, p. 30)

Clearly, ACEP, which now administers three professional master's degree programs in economy, administration, and accounting, is following the pattern Slaughter and Rhoades describe.

Table 5.3: Budget of ACEP – 2003 by Type of Projects  
In US\$ (exchange rate US\$ 1.00 = R\$ 2, 80)

<u>Classification</u>	<u>Type of Project</u>	<u>Annual Amount</u>
1. Revenues - TOTAL 2003		2,642,708.90
	TOTAL	2,642,708.90
2. Expenditures 2003	Short Courses (Training)	9,647.70
	Specialization Courses	243,839.67
	Professional Masters	195,308.46
	Research	116,658.46
	Entrance Exams for Public Institutions	1,817,033.62
	Overhead to UFC	96,287.93
	Administrative Expenses	123,007.11
	Research Publications	4,634.29
	Miscellaneous	36,291.66
	TOTAL	2,642,708.90

Source: Activities Report of ACEP – 2003

Table 5.4 demonstrates that ACEP had a satisfactory financial result by the end of 2003. The balance sheet below represents ACEP's total assets against its total liabilities. Using the balance sheet, it is possible to analyze several financial and accounting aspects of ACEP's operations.

In 2003, ACEP's total debt, as seen in Table 5.4, was US\$ 8,513.33. Total debt is defined by current liabilities plus long-term debt plus any other form of liability. Total capital included stockholders' equity of US\$ 414,156.45. As we can see, the total debt to total capital ratio was positive in 2003. This ratio is computed as follows:

$$\frac{\text{US\$ 8,513.33}}{\text{US\$ 414,156.45}} = 0.021$$

The result can be expressed as a ratio of 0.02, or as debt being 2% of ACEP's total capital (debt plus capital).

Table 5.4: Balance Sheet – December 31, 2003  
In US\$ (exchange rate US\$ 1.00 = R\$ 2, 80)

Total Assets	422,669.78
Current Assets	337,626.03
Fixed Assets	85,043.75
Total Liabilities & Net Worth	422,669.78
Current liabilities	8,513.33
Net Worth	414,156.45

Source: Activities Report of ACEP – 2003

Table 5.4 highlights another positive financial result, similar to that of FCPC, whereby ACEP also has positive liquidity in that its current assets of US\$ 337,626.03 are easily sufficient to pay its obligations of US\$ 8,513.33.

### Associação Técnico-Científica Paulo De Frontim (ASTEFC)

ASTEFC is a non-profit, private organization created in 1973 by professors of the College of Engineering at UFC. Its work is achieved by the aggregate efforts of professors, students, architects, engineers, and alumni from the College of Engineering at UFC. ASTEF is physically located within the UFC campus at the College of Engineering and has 10 full-time staff members as well as many students developing their internship programs within its structure.

ASTEFC was created to offer consulting and training in the specialized areas of engineering and architecture, and also to develop new technologies in its laboratories to satisfy the needs of various public and private organizations. In fact, ASTEF primarily develops technology projects to enhance the work of these organizations in such areas as transportation, industrial automotive, production processes, environmental concerns, traffic control, and architecture. ASTEF's strong relationship with public and private institutions has also led to its involvement in the development of new technologies in the use of petroleum, hydrology, and even meteorology.

According to ASTEF's statutes, its official objectives are mainly to promote scientific research in its field (engineering and architecture), to offer services which develop planning tools and controls in technological areas through contracts with public and private institutions, and to collaborate with the College of Engineering at UFC and with public agencies to promote the development of technology in the State of Ceara. By statute, the president of ASTEF is also the dean of the College of Engineering. Thus, the College of Engineering faculty member who wins the dean's seat is also by default,

the president of ASTEF. Also by statute, the president of UFC is designated the honorary president of ASTEF.

*ASTEF Financial Information.* Access to updated financial information was not available at this particular foundation, nor did ASTEF have a website during the time the research for this study was conducted. However, a summary of ASTEF's budget for 2001 (see Table 5.5) was included in one of the academic papers at the College of Business (Lima, 2003).

Table 5.5: Budget Summary of ASTEF – 2001 (December 31, 2001)

In US\$ (exchange rate US\$ 1.00 = R\$ 2, 32)

Year	Total Revenues	Expenditure Items	Expenditures in US\$
2001	3,474,058.28	Salaries	266,553.43
		Administrative Expenses	2,390,959.02
	3,474,058.28	Total Expenditures	2,657,512.44

Source: Financial Statements of ASTEF- 2001 (Lima, 2003)

It is again possible to observe that salaries represent only a small part of the budget, or approximately 7.67%. In addition, ASTEF had a surplus (the positive difference between revenues and expenditures) of US\$ 816,545.84 in 2001. At this point, the research seems to indicate a pattern in which foundations and faculty associations generally experience a positive financial outlook overall.

### Centro de Estudos e Pesquisas Dos Docentes do Curso de Odontologia (CEPDCO)

CEPDCO was created as an organization in 1960, but did not begin operating until 1979. As a cultural-scientific organization, its main goal is to congregate faculty members from the Dentistry Department at UFC in order to develop and conduct research into the field of dentistry. Its statutes also provide for other objectives, such as to promote the interchange of information and technologies by national and international organizations, organize short courses and seminars according to demand at UFC, and develop other services, particularly in consulting.

Currently, however, this center only develops short courses and specialization courses in the area of dentistry. One of the primary differences from the other foundations is that CEPDCO charges its members a symbolic monthly contribution of R\$ 5, 00 (five reais in Brazilian currency), or approximately US\$ 1.80. Only faculty may be contributing members; however, CEPDCO also has two other two types of members. Emeriti members provide some academic or financial help to the organization while retired members have no active role and are not charged a monthly contribution fee.

The president of CEPDCO is a professor chosen by associate members under the election process. CEPDCO has no staff members and is located within the College of Pharmacy and Dentistry. Because CEPDCO is currently developing very few projects, it is not administratively organized, has no staff members, and is closed for the most part. In fact, financial statements were not available because its activities virtually ended in 2001.

### Associação Científica de Estudos Agrários (ACEG)

ACEG is a non-profit, private organization created in 2001 by a faculty group meeting at the College of Agronomy at UFC. This is the newest private organization working within UFC. In 2002, only a few projects were developed. One such project is a collaborative effort with Global International Waters Assessment (GIWA) to analyze policy options and provide sound scientific advice to decision-makers and managers concerned with water resources. This joint venture is an ambitious project designed to create a hydrograph, or map, of all the bodies of water throughout the world. UFC helped to secure the project, which contracts ACEG for the bulk of the research as well as the actual implementation of the venture.

According to ACEG's statutes, its main objectives are: to cooperate in social-economic projects established by contract with UFC and other higher education institutions; promote specialization courses, short courses, seminars, and conferences to encourage greater knowledge in its field; offer services such as consulting and analysis, to public and private institutions; conduct academic research in the field of agronomy; develop research projects to aid human resources departments in personnel training; and collaborate with undergraduate programs in the College of Agronomy at UFC.

Unlike other foundations which develop projects outside their particular fields of study, ACEG limits its work to projects involving the College of Agronomy, primarily in consulting and research. ACEG officially employs just one full time staff member. A student intern works in the administrative and accounting area. Additionally, only UFC

faculty members and students participate in its activities. ACEG's administrative structure is composed of a Director Council, a Fiscal Council, and a General Assembly.

The General Assembly of association members elects the president of the association from among its members, as is the case with ACEP. The president's primary function is to manage the Director Council. The Fiscal Council is responsible for the control and auditing of ACEG's financial and accounting systems.

*ACEG Financial Information.* Since ACEG is a very new institution, as of the end of 2003, it did not yet have any fixed assets (e.g., property and equipment), as shown in Table 5.6. On the other hand, ACEG did not have any current liabilities either. In 2003, its total assets were equal to the total stockholders' equity.

Table 5.6: Balance Sheet – December 31, 2003  
In US\$ (exchange rate US\$ 1.00 = R\$ 2, 80)

Total Assets	16,165.55
Current Assets	16,165.55
Fixed Assets	0
Total Liabilities & Net Worth	0
Current liabilities	0
Net Worth	16,165.55

Source: ACEG's Balance Sheet /2003

As indicated in Table 5.7, US\$ 52,120.96, representing nearly 74% of the revenue generated by ACEG, was used to finance its projects in 2003. Like most of the other foundations at UCF, ACEG's administrative expenses are partially covered by the

overhead fees it retains for each project. These fees total approximately 10% of the total revenue. Although its current profit margins are low, ACEG is an emerging organization and its associates believe that large and lucrative projects are forthcoming and will soon provide the resources that ACEG and the College of Agronomy need to remain viable and competitive.

Table 5.7: Income Statement of ACEG – 2003  
In US\$ (exchange rate US\$ 1.00 = R\$ 2, 80)

Operational Revenues	70,612.64
( - ) Costs of Services	0
Total Revenue	70,612.64
( - ) Expenses	
Administrative Expenses	(10,771.86)
Financial Expenses	(111.20)
Taxes	(559.36)
Project Expenses	(52,120.96)
Total Expenses	(63,563.38)
Total Net Income	7,049.26

Source: Income Statement of ACEG – 2003

#### Fundação Paulo Bonavides (FPB)

FPB activities are exclusively centered on developing specialization programs related to the College of Law. This foundation also employs only one staff member, an

administrative assistant. FPB is located within the College of Law and is operated by the College's faculty members. FPB was created in 1993 and is statutorily mandated to develop juridical and scientific projects within the state of Ceara. Its main goal is actually to provide technical and financial support to the College of Law. The Executive Director is chosen by the foundation's General Assembly, which is comprised of College of Law faculty and others who collaborate with FPB on its projects.

FPB is the smallest private organization operating at UFC. Similar to CEPDCO in terms of the intermittent nature of its activities, FPB at times is not engaged in any activities because it is dependent on the region's demand for specialization courses. FPB did not provide any financial information for this study.

#### Sociedade de Assistência a Maternidade Escola Assis Chateaubrian (SAMEAC)

SAMEAC was created in 1965 and is a private foundation responsible for managing the School Maternity Assis Chateaubrian (MEAC). MEAC comprises part of the University Medical School at UFC. Since its inception, SAMEAC's primary goal has been to support MEAC in education, research, and medical services to the university community.

The statutes governing SAMEAC's activities were changed on July 26<sup>th</sup>, 2000, so that it now has different objectives. SAMEAC is currently charged with working not only with School Maternity, but with University Medical School as well. As such, SAMEAC is involved in a wide variety of roles, including making medical appointments for clients from outside the university environment without any kind of discrimination; handling

School of Maternity administration according to its goals; generating resources to finance institutional activities; applying resources to maintain and develop institutional objectives; and applying endowments and donations to various institutional projects and functions.

SAMEAC's association membership is potentially unlimited in that it is comprised of individuals from a number of various organizations and is not limited to UFC faculty and staff. Its members are divided among three categories: creator members from UFC and Popular Maternity of Fortaleza, contributor members, and honoree members.

The Administrative Council of SAMEAC is formed by: the dean of the College of Medicine at UFC, representatives from Popular Maternity of Fortaleza, a faculty member who works at MEAC, a UFC representative chosen by the president, three individuals chosen by the President of UFC who are highly knowledgeable in the health fields, and a graduate student representative from the University Medical School.

Currently, SAMEAC's primary function is to manage MEAC and University Hospital employees. It no longer engages in research or develops other activities to generate revenue. This is largely due to changes made by Federal Government Auditing which divert the flow of revenue that finances University Hospital and Maternity directly to UFC's central administration. SAMEAC employs approximately 1,000 employees at the University Medical School, so the only funds it receives from UFC are to pay personnel expenditures, while previously it was involved in many projects directly related to University Medical School's research and development activities.

*SAMEAC Financial Information.* SAMEAC provided income statements only for the years 2000 to 2002, but even within this narrow timeframe, significant changes occurred in its financial situation. This was largely due to the loss of funds in 2002 from the Federal Health System (SUS) which financed SAMEAC's activities in 2000. The result was a dramatic shift in its financial condition (see Tables 5.8 and 5.9). SAMEAC posted a deficit in 2002 of US\$ 29,292.21, whereas just two years earlier, a surplus of US\$ 1,785,414.18 easily covered expenses.

Table 5.8: Income Statement of SAMEAC– 2000  
In US\$ (exchange rate US\$ 1.00 = R\$ 1, 95)

Revenues Before Costs	14,528,795.80
( - ) Costs of Services	(10,317,250.85)
Net Revenues	4,211,544.95
( - ) Administrative Expenses	(2,133,640.44)
Financial Expenses	(43,706.79)
Taxes	(13,669.64)
Projects Taxes	(695,707.05)
Losses	(969.28)
Net Operational Surplus	1,323,851.75
( + ) No Operational Revenues	461,562.43
Net Income (Surplus)	1,785,414,18

Source: Income Statement of SAMEAC – 2000

In 2000, SUS funding went directly to SAMEAC, which used those resources to manage all its activities and pay its expenses. As of 2002 however, UFC receives funds from SUS and subsequently disburses only the amount necessary to cover SAMEAC's personnel costs based on a federal auditor's decision.

Table 5.9: Income Statement of SAMEAC – 2002  
In US\$ (exchange rate US\$ 1.00 = R\$ 3, 53)

Revenues Before Costs	2,843,228.79
( - ) Costs of Services	(1,910,199.95)
Net Revenues	933,028.84
( - ) Administrative Expenses	(849,116.11)
Financial Expenses	(5,665.12)
Taxes	(20.07)
Projects Taxes	177,812.52
Losses	(2.76)
Net Operational Surplus	(99,587.72)
( + ) No Operational Revenues	70,295.51
Net Income (Surplus)	(29,292.21)

Source: Income Statement of SAMEAC – 2002

#### *UFC Resolution 06 of 2001*

Finally, this research provides a review of the last resolution approved by the UFC University Council in 2001. Resolution 06/2001 addressed the relationship between foundations and the Federal University of Ceara and was approved in order to more

accurately define this relationship as well as craft a more specific financial framework within which to conduct the relationship.

As a result of Resolution 06/2001, it was determined that UFC will receive a minimum of 10% of all revenues that emanate from projects contracted by foundations. Additionally, all equipment and materials involved in these projects are now incorporated as UFC assets through a formal donation agreement upon the completion of each project.

The 10% fee explained above is to be apportioned as follows: 5% to the UFC central administration, 1.5% to the vice-president's office related to the project, and 3.5% to the college or department that created the project.

These amounts are to be deposited in a UFC account and subsequently allocated among various units according to the terms of the resolution. However, since UFC has not designated a specific department to handle these allocations, it was determined that each foundation will inform the central administration, colleges, and vice president's offices as to the amount of funds generated from each specific project so that the appropriate authorizations for disbursements can be made.

Even though these private institutions have a mandate to deposit 10% of all their revenue, the amount this percentage represents is quite small in relative terms. For example, in the Fiscal Year 2004, ACEP generated a total of US\$ 2,740,586.93. Of this amount, only US\$ 729,846.26 was the result of UFC participation, of which only 10%, or US\$ 72,984.62, went into the UFC coffers.

In addition, as described previously, foundations charge clients an overhead fee which is applied directly to the administrative expenses of their various projects. This overhead fee can vary, but generally ranges from 5% to 10%.

This resolution also had a significant political aspect. Since UFC was not receiving an official percentage from all foundation projects, the central administration pressured the President of UFC to strongly support Resolution 06/2001. Prior to the enactment of this resolution, foundations provided funds to UFC and its units only if their statutes so directed them. There were no institutional policies in place to govern either the amounts or the mechanisms by which such disbursements were made. Nonetheless, FCPC and CETREDE (central administration foundations) had been financing central administration projects for some time. These two foundations were particularly influential in bringing Resolution 06/2001 to fruition since they expected it to provide relief from their financial burden by spreading it among the other foundations at UFC.

Thus, these two foundations and many of UFC's top administrators lobbied the President of UFC to establish policy which would require all foundations and faculty associations to participate in supporting UFC directly and more equitably. Although there was strong opposition, Resolution 06/2001 was finally enacted and remains a defining element of the relationship between the university and its foundations and associations.

### Interviews

The first part of this chapter described the document analysis conducted for the purposes of the present study. The purpose of the document analysis was to reach a solid understanding of certain important aspects of the relationship between UFC and its foundations. The data analyzed at this point was also important in order to explain what foundations "look like" - that is, how they fit within the structure of UFC as well as how

they operate financially. It is now time to turn to an analysis of the data generated by individual interviews.

The current section describes the data generated from exploratory interviews which were conducted to help explain the context missing from institutional records. During this investigation, each interview followed a consistent outline and timeframe.

This section is also organized into six separate categories in order to provide a better connection with the research questions outlined previously. In addition to the five categories discussed earlier, one other category emerged as a result of the interviews. Thus, the six categories are: *legal factors in the creation of foundations, the types of entrepreneurial activities developed by foundations, the mutual relationship between UFC and its foundations, the necessity to generate external resources, the costs and benefits of entrepreneurial activities to the Federal University of Ceara and its academic units, and foundations as a national phenomenon.*

All interviews were held in each interviewee's office and were tape-recorded. In addition, copious notes were taken during each interview. As described in Table 5.10, 55 people were interviewed in two different phases of the interviewing process. First, 20 people were each interviewed for 30 to 40 minutes. These individuals were comprised of eight foundation presidents, nine UFC deans of colleges, one UFC faculty member from a department without a foundation, the UFC vice president for finance, and one faculty member who is not a member of any foundation at UFC. Appointments were made to ensure adequate time to conduct these first interviews, all of which occurred at UFC. The

length of each interview was necessary in order to explore certain details in depth and to gather sufficient data for the analysis of each category.

The second phase involved five-minute interviews of 35 out of the 45 federal university finance directors. These interviews were conducted during a National Forum of Finance Directors of Brazilian Federal Universities in Manaus, Amazonas. None of those who were asked to participate in the interview process declined; however, interviews of all 45 directors were not possible since 10 were not in attendance at the National Forum. The primary goal with these short interviews was to gather data that would address whether or not foundations are a national phenomenon in Brazilian federal universities.

Table 5.10 – Interview Participants by Position and Time of Interview

Length of Interview	Deans of Colleges	Foundations Presidents	Finance Directors of Federal Universities	Professor in Department without a Foundation	Professor with no Foundation Affiliation
30-40 minute interview	9	8	1	1	1
5 minute Interview			35		
Total	9	8	36	1	1

Source: Data compiled from interviews conducted June - November 2004

All interviewees pointed out that they were very knowledgeable about the relationship between federal universities and their foundations. During the interviews, all categories were clearly cited and explained. The data yielded a large fund of information

and provided many details to explain institutional behavior with regard to the emergence of foundations and associations.

Although it is the increasingly severe shortfall in federal funds for public higher education that underlies the emergence of foundations, most participants explained that the single most significant reason for the existence of foundations is that they allow a means by which to bypass the inflexible legal constraints imposed by federal law. Thus, the following examination of each of the six categories begins with an analysis of the legal factors in the creation of foundations.

#### *Legal Factors in the Creation of Foundations*

A discussion of the legal aspects which led to the creation of foundations must include the nature of existing federal legislation, which is old and inflexible. An understanding of this factor helps to clarify the difficulties that public universities face in adhering to such laws and explains why foundations were and are being created. Indeed, many of the interviewees quickly cited antiquated legal restrictions as one of the most significant reasons for the emergence of so many foundations at UFC and for UFC's welcome relationship with them. When asked why foundations exist within UFC environment, one dean of a college answered:

The main reason for the existence of these foundations is the legal problems that universities have in offering services. If you permit the departments to develop their own projects and their consulting services using the name of UFC it would be easier. The departments would offer the services and they would send part of the money to the university central administration. However, the legal model for the federal universities in Brazil does not allow it. (male professor, college dean)

Many of the participants also declared that foundations would probably not exist if different laws governing federal institutions of higher education were in place. Instead, federal universities would be free to seek resources directly. For example, as three participants observed:

If all foundation activities could be developed by federal universities directly to work in the same way, we would not need them at all. However, under the current system and current legislation, I think it is impossible. If we had flexible legislation, if we had more staff members, if we...As you can see, there are so many 'ifs' to be reached. (male professor, college dean)

In terms of the university, I guess foundations are better when you talk about the negotiation process, when you talk about the speed in which activities are done, just as we solve any kind of problem in a private organization for example. Thus, we avoid dealing with the kind of slow process that we have in a public institution in order to follow the federal laws (laughs). (female professor, college dean)

The first question is about quickness, agility of working. There is a legal limitation at this point. The university has a difficult bureaucracy and its characteristics explain how difficult and slow it is. Let's imagine that somebody outside the university needs a consulting to look at a project to repair a bridge. First, it goes to the Department of Engineering for analysis. Next, it goes to the College Council, and then it goes somewhere else. By the time it is ready and seen by all units at the university, the bridge would probably be constructed (by another organization). Consequently, we have lost a very nice opportunity to earn money. (male professor, college dean)

Some of the participants also explained that the legal system that federal universities are bound by does not allow full professors to work outside the university campus. This restriction blocks the university from offering services to its community and to society in general. One interviewee lamented the issue by saying:

The legal system prevents the university from offering services and its full-time professors cannot work outside the campus. But I think these foundations are the

way to solve this problem. This is the way to connect the faculty and the private sector. (male professor, foundation president)

Legal factors also constrain the bureaucratic process within the university administration. One of the deans interviewed at UFC readily stated that foundations work better and faster than UFC does. When he was asked what the benefits of having foundations were, he responded in this way:

By using foundations everything works fast. If you go through the university process, you will wait too much time for your projects to move because of the legal issues. (male professor, college dean)

Even when such questions are asked of a professor who has no link with foundations, the response was similar. For example, the question as to why foundations exist was asked of a professor from the College of Education which is not affiliated with a foundation. His answer was as follows:

Because of the legal system in Brazil. The law that regulates the public institutions' way of working has restrictions that prevent the federal universities from offering their services to the private sector. So, the unique way universities have found (it's a national dilemma) is the creation of foundations that use the university's name and have financial autonomy to develop services instead of universities (which don't have such autonomy). (male professor)

All interviewees focused on the effects of the inflexible legal restrictions that exist at federal institutions while none articulated any concern that the university should work to change the legislation in order to be able to work independently in order to generate revenue. Another related aspect that was discussed frequently is the slow manner in which administrative functions operate within the federal institutions. Even if there were

a flexible legal system, it would be necessary to change the culture of public higher education institutions to a more efficient model. One college dean at UFC explained it very well:

There is another point. It is the “receive and pay” aspect. Let me give you an example. I coordinated a short course when I had just started as a UFC employee. Because I had no experience at that time, I organized the program with all student fees being deposited through a university account. This money went through *conta unica*. To summarize, this was in 1985 and as of today, neither the professor nor the coordinator has received money for this program. This demonstrates how difficult is for UFC to develop that kind of activity. (male professor, college dean)

In one sense, these observations reflect the need for different laws and different administrative strategies in order for universities to provide a better quality of services. They also highlight the need for universities to do what is practical in order to generate external funds.

According to Brazilian federal law (1988 Federal Constitution), federal universities cannot charge tuition to students. As a result, many administrators of public institutions strictly interpret this to mean that no funds can be involved in any of their functions. Federal legislation also determines that literally every cent which comes into a federal institution must be deposited into *conta unica*. Thus, higher education revenues that go through *conta unica* are included in the federal budget. Clearly, these factors alone are enough to explain the emergence of foundations which facilitate the “receive and pay” process and keep funds within the departments and universities they are intended to benefit.

The financial accounting of federal universities is governed by so many rules and regulations that it is very difficult to encourage the development of new activities within universities without disobeying current laws. There is a general consensus that either the legal restrictions that prevent federal higher education systems from developing strong, financially productive activities must be changed or these institutions must find ways to circumvent those restrictions. To date, the universal response in Brazilian higher education has been to focus on the latter option.

Barreto and Schwartzman (1999), addressing the need for a better legal framework, argue that a comprehensive budget, the freedom to hire and fire personnel, funding guaranteed by the constitution, and expanded control by the Ministry of Education over federal universities could solve the problems of inefficiency, lack of funding, and the inability to generate resources.

#### *Entrepreneurial Activities Developed by Foundations*

This category describes the types of entrepreneurial activities engaged in by the private organizations within UFC. It is common knowledge that public and private universities are developing entrepreneurial activities in order to compete and generate funds in the market. UFC is also developing entrepreneurial activities in its laboratories, farms, hospital, and consulting offices, as well as in a large number of other areas. As discussed previously, UFC's initiatives, like those of other universities, can be explained by academic capitalism theory.

Although many entrepreneurial activities, such as hospital services, laboratories, and some research, represent academic capitalism, they also may be characterized as

public goods. Rosen (2002) describes a public good as one in which consumption is non-rivalled. However, the interest of UFC in developing these entrepreneurial activities versus a similar interest by other universities does not imply an issue of academic capitalism versus public good. Instead, these two perspectives should be observed as different issues.

The present discussion of the legal factors contributing to the emergence of foundations illuminates the federal universities' use of private organizations to bypass restrictive laws in order to develop their entrepreneurial activities. These private organizations develop a wide variety of activities and projects which provide alternative resources to supplement university budgets and faculty and staff member's salaries. The UFC foundation presidents and deans of colleges described many of these activities.

Some of their comments follow:

We are organizations that transfer resources from large-scale projects which benefit the public. I mean, research projects done with some type of relationship between researchers and organizations such as the World Bank, the Northeast Bank, and the Bank of Brazil. All resources like this come through our foundation. We manage those resources obeying the federal law, like law number 8666/98. We also obey all rules determined by contracts and projects with the university. Today, we work approximately with 420 projects and contracts (memorandum of agreements). (male professor, foundation president)

There is a Center for the Study of Dentistry whose projects have a very consistent format. It receives money from their specialization programs. It also receives money from short courses they offer. (male professor, foundation president)

All these foundations have as a goal to develop UFC's activities. Research, teach and services (extension). All of them work within UFC and they have the same objectives. (male professor, college dean)

Today, our foundation has contracts with federal banks and COELCE (State Electricity Company) for example. However, it has a limited number of activities and it follows the statute, the same as the copy I am giving to you. Basically the resources come from specialization programs. We have specialization programs of criminal law and civil law. (male professor, foundation president)

It depends on each project. For example, we had a research project to evaluate our state coastline about its condition related to fishing. Thus, these are studies that support our culture. Professors, staff members, and students are involved in our projects and activities. Students are involved from an academic perspective because this is the university's rule. We also offer services at times to our local society. (female professor, foundation president)

Each foundation has its own history and different characteristics, and also they develop different activities. At UFC, most of the foundations are not supervised. Many have only specialization programs; others have services as their strongest activity. (male professor, foundation president)

Our foundation, by definition, unlike the others foundations at UFC, does not work with specialization programs. This is not our goal. Our big clients are state and local government agencies. For example, initiatives that help control urban traffic, the water supply (CAGECE), and the subway (METROFOR). They are our biggest clients. We can also add FINEP and ENP (research institutes). We have very few projects that involve private agencies and corporations. Basically, activities are related to legal incentives. The science of information law for example. (male professor, foundation president)

One development is that most of foundations at UFC have changed their objectives from those stated by statute when they were first created. A dean of a college explains this changing aspect of foundations at UFC:

Well, our activities have changed. When we started in 1997, our activities were only related to graduate courses at a specialization level. Currently, UFC is not our first source of revenues. Even our personnel are professors from the College of Business at UFC. Our primary source of revenue comes from meeting outside demands. Now, our projects are constant and we have a permanent flow of resources. What are good for our foundation are the big projects that come from outside the university. (female professor, college dean)

The previous comments describe a fundamental shift in the nature of public universities which can be explained by the theory of academic capitalism. Essentially, foundations and faculty association are changing their objectives and activities in order to follow a market orientation. According to Slaughter and Rhoades, “The theory of academic capitalism explains the processes by which colleges and universities are integrating with the new economy, shifting from a public good, knowledge/learning regime to an academic capitalist, knowledge/learning regime” (2004, p. 7).

The market mentality has moved some foundations to see that their activities could generate more funds by moving away from the interests of the universities within which they function. Instead, they could focus on projects with external organizations that do not necessarily advance those interests, but do generate greater external revenues. At UFC, some foundations are indeed trying to become totally independent from UFC, but they still have a long way to go before they can operate successfully outside of the UFC framework and insignia.

This investigation found colleges within UFC very involved in academic capitalism in that they were using private organizations to solve their lack of funding issues. Even the colleges that do not have affiliations with foundations are in some cases using the foundations of other colleges, although more frequently, the central administration foundations, to provide projects that generate extra funds.

At the same time, resource dependency theory explains other aspects of this move toward the market. This is evident at UFC where the funds generated by foundation activities are necessary for the university to function and to serve its purpose. UFC is, in

fact, dependent to a very large extent on the support of its foundations. One of the interviewees explained this dependency on foundation resources as follows:

Our center basically develops short and specialization courses. At this moment, our foundation is trying to gain authorization for the Federal Council of Dentistry to approve two new programs. This approbation will bring greater financial stability to our center. Besides, we can help UFC and the College of Pharmacy and Dentistry as well, because they also need our resources to survive. (male professor, foundation president)

Many scholars are concerned about the depth of dependency that is evident today, which they believe is transforming the fundamental principles that guide the functions of public institutions of higher education. Their argument is that such dependence creates a new set of principles that focuses on activities that generate resources and are capitalist rather than academic or socially beneficial in nature. Thus, the environment and culture of higher education change and the academy begins to adopt the characteristics of the foundations which support them. As Slaughter and Rhoades explain:

Resource dependency theory predicts that the organization, which is the object of study, will take on and reflect the organizational characteristics of the principal external resource providers in its environment, a conception that requires the focal organization to be distinct and separate from organizations in its resource environment. (2004, p. 7)

These interviews help describe the various types of entrepreneurial activities in which UFC foundations are engaged. Those that provide the largest amounts of external resources include research, specialization and professional master programs, consulting, and the organization of entrance exams for public institutions.

On the other hand, UFC must bear certain costs associated with its foundations. For example CETREDE, ACEG, FPB, CEPDCO, SAMEAC, ASTEF, and FCPC are

using UFC's infrastructure in order to function. Most pay rental fees, although some do not. Even the foundations that do pay rental fees, pay fees which are considerably less than those in the "open market." A review of the financial statements of the foundations revealed that UFC is losing an estimated U\$ 10,000.00 per month in rental income alone.

However, the greatest cost of the foundations to UFC is undoubtedly associated with the time that faculty members spend on association activities rather than university activities. It is difficult to calculate the actual cost in dollars, but the amount is undoubtedly very significant. This researcher would also venture to say that these "invisible" costs may well result in a net loss to UFC even in the case of those foundations which provide supplemental income to the university.

#### The Mutual Relationship between UFC and its Foundations

The relationship between UFC and its foundations is not very well established, nor is it entirely consistent. Some foundations wish to operate traditionally, within the structure of UFC. In other cases, they wish to become independent. To understand this tension, consider the statement of the president of a foundation:

Our foundation historically works within UFC. It is impossible to work outside the College of Dentistry, yet we do not depend on UFC. (male professor, foundation president)

In order to function successfully, foundations must operate within or at least very close physically to the campus with which they are associated. In addition, the legal structure that guides them requires that their activities support the goals of their universities. However, they are operationally independent and have an organizational

format similar to that of a corporation. As Balbachesky and Quinteiro explain, “Foundations are formally independent of the university and usually have a formal agreement with the professional school, paying a fixed percentage of their total income as overhead to the university’s central administration” (1996, p. 80). They also explain that federal universities essentially use foundations to mediate their links with the market.

According to Schwartzman (1993), non-profit private organizations (i.e., foundations) have been established by universities and units (colleges) within universities to enter into contracts, receive and invest funds, hire staff, and pay supplemental salaries to professors. As noted previously, these activities occur as a direct result of the inability of public universities to charge tuition for regular courses. Proposals to introduce tuition in public universities are perceived by many as “...a denial of the government’s responsibility with regard to higher education, and as a movement toward bringing higher education under the control of private and elite sectors” (Schwartzman and Balbachevsky, 1996, p. 278).

Reflecting on the importance of the relationship between UFC and its foundation, many interviewees provided observations such as those that follow:

The foundations are good. They complement work in academia. You can do the research that is necessary, but everyone knows that UFC lends its name to the foundations. (male professor)

We have two foundations. These two foundations have a very strong relationship with UFC, and UFC’s influence on their management is also very strong. Personally I think that the way the directors are chosen and how they choose the main objectives of these foundations is very much influenced by UFC. (male professor)

This is a necessary relationship because you must have some relationship with one of these foundations if you want to have alternative resources. Today we depend exclusively on UFC's budget and it is not enough to solve our problems. We have a small part of the maintenance funds that does not address our requirements. This forces us to find alternative sources of revenue in order to develop our diverse activities. We need to get away from the university because it is so complex. Foundations are here to organize these types of activities. (male professor, college dean)

The relationship between UFC and its foundations is also governed by the extremely competitive market environment. The theory of globalization explains that universities must address and function within the emerging global marketplace. According to Slaughter and Rhoades, "Globalization is a central feature of the new economy. The global nature of the new economy disperses manufacturing around the world" (2004, p. 16). This competitive scenario is described by a college dean:

Today, UFC cannot provide good service to society without foundations. Thus, because of external competition, UFC must have quick access to resources in order to support its activities and provide services to the society. (female professor, college dean)

There is a clear recognition of the importance of the relationship of the university and its foundations. Indeed, the presidents of foundations frequently explained that UFC administrators have publicly declared that the existence of foundations is essential for UFC to continue functioning. One president commented that:

UFC respects all foundations. I know that UFC top administrators acknowledge that foundations are important to the university. (female professor, foundation president)

Other interviewees explained the relationship UFC has with its foundations, which basically is grounded in an agreement for each type of project or activity in which

the foundations are involved. They also mention the importance for UFC of having regulations to manage those agreements, especially with regard to the overhead fee that each foundation pays to UFC as a percentage of its revenue. Note the following comments, which help provide context for the symbiotic relationship between UFC and its foundations:

According to my knowledge, there is a concession's contract which allows the UFC foundations to work within the university structure, but I do not know all the details. So, I believe the fair fee would be calculated according to the type of the service. When we have a simple project that doesn't include strong university participation, the percentage paid to UFC would be small. But, if the project involves technology transfer where the professors are strongly involved outside the university, then the percentage would be quite high. As a large, public institution, UFC must justify the public investment in these activities. So, I agree that we should regulate this relationship better. The University Council has already made the initial step. I think we need to do something more in terms of control to make sure the foundations understand that those services mentioned before are actually university activities. (male professor)

Foundation projects that involve a strong collaboration between faculty and foundation staff members should pay a high percentage fee to the university. This is the most dynamic and legal way to generate external resources for the university, and if you have organizations that use the university's structure and its professors without sharing the financial outcomes, that is an unfair relationship. (male professor)

I do not know many details about this relationship. Two years ago, the University Council established a resolution in order to clarify the financial agreement between UFC and its foundations. Foundations send equipment, furniture, and provide some services to UFC, but now, foundations must also send part of their revenue to UFC. The percentage is defined by this resolution. (male staff member)

As the previous comments indicate, faculty members are less supportive of private institutions than are their presidents. Since many are fundamentally opposed to this

private environment, the only way they can justify the existence of foundations is with regard to the resources they provide. As a result, professors who are resigned to the existence of private enterprise within the university support a higher fee structure which would require foundations to provide more funds to their academic departments. They are also concerned about a transparent relationship in which all rules and expectations are well defined.

On the other hand, foundation and faculty association presidents (who are nearly all faculty members as well) argue that foundations provide essential financial support to UFC. It is this author's assessment that the perspective of faculty members regarding foundations is largely a function of the extent to which they are directly involved in them. Professors who are engaged in foundation projects and who are earning additional income as a result of their work are more likely to support private organizations. Faculty members who have no relationship with any foundations are less supportive of them and feel that since foundations benefit from their affiliation with UFC, they should provide more of their resources to UFC in order to support all departments and faculty members.

By the same token, some interviewees indicated that certain foundations are treated very differently by UFC:

There are foundations using UFC's infrastructure which pay a rental fee, while others use its infrastructure without paying a fee. In some cases, university employees work exclusively for foundations but receive their salaries from UFC. So we can see that there are many differences in the relationships between UFC and its foundations. (female professor, foundation president)

Another important aspect to this relationship is the memorandum of agreement that has been described previously. As the following observations indicate, there is no standardized procedure regarding the contracts between UFC and its foundations.

There is an agreement between UFC and our foundation. This agreement was revised by UFC's former president. It has five years before it expires. The relationship between us is better defined by this new agreement. Now, there is a rental fee for the building we use on the UFC campus and so forth. (male professor, foundation president)

There is a basic agreement between our foundation and UFC that is renewed annually. There is a council at our foundation composed of UFC's top administration and our administration personnel. (female professor, foundation president)

Other interviewees prefer to explain the importance of the relationship of foundations and UFC in terms of the link between each foundation and the college or department with which it is associated. Many deans of colleges are concerned about the direction these private institutions are taking within the UFC structure. They seem to expect that foundations should serve only the interests of the colleges or departments with which they are directly affiliated. At the same time, some foundations are considerably more aggressive than others in promoting their college's interests. Again, the nature and extent of the dean's involvement is closely aligned with his or her perspective. If a dean is also a president of the college foundation, he or she is more supportive of the link between the college, the foundation, and the university. On the other hand, when a dean is not a president of a foundation, it seems that he or she has a more critical view. The following comments help to illustrate these perspectives:

I always have said that our foundation should be ready to serve our college's demands. If it does not, it should be shut down. Our foundation will not survive if one day it exists only to serve the faculty interests. (male professor, college dean)

After the new president's inauguration, and motivated by the University Council resolution, UFC started to define a better relationship with its foundations. From my point of view, it became a stronger relationship. (male professor, college dean)

The relationship with international agencies such as the World Bank and the International Monetary Fund was also investigated; however, the research revealed that an international connection occurs only with regard to contracts with international universities and foundations which finance research and academic projects. There is no significant influence from international agencies at UFC or its foundations. The question "What kind of relationship does your foundation have with international agencies?" elicited responses such as these:

There are only small and specific projects with professors and universities in other countries. (male professor, foundation president)

We had many agreements with Kellogg Foundation, and also with John Hopkins and the International Health Organization, but since last year we have none. (female professor, foundation president)

I do not see any relationship with international organizations. (male professor, college dean)

I cannot say for sure. However, I had a student who went to Germany to be enrolled in a master's degree program, and he told me there is an agreement among one of the UFC foundations and a large university in Germany. Thus, I think there is some association with international universities. (male professor)

We have only a few connections with universities in Europe and the U.S. UFC, for example, has a memorandum of agreement with the University of Arizona. We do not have any connection with the international agencies you are asking about. (female professor, foundation president)

There are some projects with the Organization of American States and with the InterAmerican Development Bank, but they have no influence over our foundation policies. (male professor, foundation president)

We have some projects financed by international institutions. However, they do not have control or influence over us. The only connection has to do with services and projects and there is not any interference in our management. (female professor, foundation president)

I see some programs with the World Bank. The Bank finances some projects. These funds are restricted to very specific projects, but I do not see any other influence over university policies. (male staff member, finance director)

We have some memoranda of agreements with international institutions, most of them with international universities and international corporations. I can affirm with certainty that we do not have any other relationship with international agencies. (male professor, foundation president)

For those foundations which provided unlimited access to contracts, the document analysis did not reveal any significant agreements with international agencies which resulted in noteworthy political influence. Those contracts which existed with the World Bank provided only for buildings and other forms of infrastructure within UFC as a supplement to budgeted federal funding.

### The Necessity for External Resources

It seems that the necessity to generate external resources is very clear within public institutions in Brazil. Balbachevsky and Quinteiro (1996) argue that the lack of

financial and administrative support in the federal universities results in the inability of higher education to maintain its basic infrastructure.

Today, the most pressing objective is simply to keep universities functioning. Moreira (2001) explains that the big challenge at public institutions is to find a solution to the complex problem of lack of funding in the federal higher education system. He notes that the budget restrictions negatively impact the administration of federal universities and they force institutions to find funding alternatives in order to maintain their learning, research, and service functions. Many interviewees confirmed the financial crisis which UFC is facing:

We need foundations and it is very easy to explain the reason. The Brazilian public universities are bankrupted. The federal budget is not enough to finance even the undergraduate programs and graduate programs also need external funds to keep functioning. This external money is available only because of the existence of foundations. (male professor, foundation president)

UFC needs foundations. That's for sure. Most of the time, UFC has no funds to buy material and services. Even a small scholarship for students must be financed by foundations. What is going on in Brazil? (female professor, foundation president)

Based on these severe budgetary shortfalls, UFC has been forced to seek alternative funding sources in order to maintain viability. The search for external resources in order to survive is explained by resource dependency theory which suggests that organizations can and do adapt in order to survive (Pheffer and Salancik, 1978). This perspective is largely about power as it proposes that the organization that has the most resources also has the most power. Accordingly, resource dependency is also a theory of conflict in organizations in that conflict and competition among organizations

will occur when there are a limited resources. All organizations exchange resources within their environment, creating dependencies in those with fewer resources. In higher education, organizational behaviors are influenced in large part by the actions and expectations of external resource providers which essentially become policy makers.

There are two dimensions of resource exchange: (1) the relative magnitude of the exchange, which is measured in shares of resources provided; and (2) the criticality of the resource to the recipient, which is the degree to which the organization can continue to function without the resource (Pheffer and Salancik, 1978).

Resources drive academic behavior and financial behavior defines organizational behavior (Slaughter & Leslie, 1997). As such, the shifting pattern of funding that has been described promotes academic capitalism because it propels faculty and higher education institutions toward market-like behaviors in order to mitigate the loss of government funds.

Currently, federal universities are adapting in order to survive, just as resource dependency theory expects. The phenomenon of foundations in Brazilian higher education can be fully understood as being a result of two factors. First, foundations serve to bypass legal constraints and thus enable faculty members to work on projects outside the university in order to supplement their salaries. Second, foundations exist as a response to the increasing shortfall in funding from the federal government to public higher education. Many of the interviewees described the importance of foundations in alleviating the financial crisis at UFC:

The resources to finance our daily expenses come from foundations. The dean of a college has no guarantee that funds will be available from the UFC budget. This

means that almost all expenses are paid by funds from foundations. Colleges with a foundation have greater flexibility to manage their financial necessities. (female professor, college dean)

We buy equipment and services using foundation funds. We also earn extra funds through foundations which allows us to retain the best professors around. Today, we can almost do without UFC funding entirely. (male professor)

The main advantage in my opinion comes from the fact that there is no public money available to the public higher education system in Brazil. The system is broken. These foundations that were created to give support to universities are providing funds. Our foundation has paid my air tickets to conferences and the conference fees. In our department we have new furniture, air-conditioners, and many other materials purchased by our foundation which help us continue our activities. Part of our foundation revenue goes to UCF, part of it goes to our college, and all projects must be approved by departments. It is not disorganized stuff. (male professor)

Other interviewees affirm that the university and its departments are forced to adapt and change their dependency on the federal government.

Well, I think...the big problem today is not the generation of resources, but it is the availability of the resources to maintain the current activities and also to improve quality and create new and important programs within UFC. Since we have almost a total dependency on public resources from the federal government, which has provided a limited budget for higher education during the last 8-10 years, it is complicated for UFC to continue functioning. (male professor)

These interviews confirm that without external resources, UFC cannot meet society's demands or compete in the market environment.

*The Costs and Benefits of Entrepreneurial Activities*

Advantages (benefits) and disadvantages (costs) can be observed in any type of relationship. The relationship between UFC and its foundations is not an exception. The present discussion begins with the costs of this relationship.

*Costs of the Relationship between UCF and its Foundations.* Most interview participants note that there is little or no accountability in the use of foundation funds. In addition, they presented accusations of corruption in some foundations. These seem to be the foremost problematic issues with regard to foundations. One participant declared that he read about corruption in one foundation at another large federal university.

I read in the newspaper about a high level of corruption in one of those foundations at a large federal university. The newspaper was blaming the lack of control over foundations by the central administration of the federal universities. (male finance director)

In conducting this research, it was quite difficult to find information of depth in most of the foundations at UFC. here is little transparency in the academic society with regard to the process of receiving and spending funds, as some interviewees observed.

I think we should be more transparent. We should be clear about our jobs. Society in general believes in our foundations, but internally we do not have good communication. (male professor, foundation president)

It is also possible to observe a lack of control in the way the central administration of UFC relates to foundations. Resolution 06/2001 of the University Council mandates an audit over the course of a semester to analyze whether foundations are submitting the percentages of revenues that are established according to that Resolution. Currently, UFC

is not effectively controlling the flow of funds from the foundations to university coffers. Even after the approval of Resolution 06/2001, UFC was clearly not equipped to manage foundations in this particular area. The dean of a college noted that

There is a 10% overhead fee. Of this amount, 3.5% is budgeted for the college and 6.5% for UFC's central administration. Unfortunately, this is not happening as expected by the resolution. Why is this happening? I will not blame deans, coordinators, or anyone else. (female professor, college dean)

Since 2001, UFC has attempted to create an internal audit system to manage and control all financial matters. However, because UFC is a federal institution, authorization from the Ministry of Education was required to establish the new positions needed to implement such an initiative and to pay their salaries. Finally, in 2004, UFC was able to create the Internal Audit Office which is being structured to address the many financial issues and problems that plague the university as a federal institution. Until just recently, federal auditors came to UFC only to check procedures and compliance with federal law. They were not concerned with UFC's financial arrangements with its foundations, including the fees they paid to the university. As a result, federal audits were not providing the information that was expected to become more accessible and transparent under Resolution 06/2001.

Many years ago, faculty and staff members were seeking ways to generate resources other than from the federal budget. Now, with foundations in place, it seems that the control and management of these organizations are highly ineffective. Asked about the problems that foundations experience, a dean of a college replied:

I do not see problems in having foundations. I see problems in the way some administrators manage foundations and universities. If you have administrators with no responsibility, the problems will show up. For example, if UFC has a contract with one foundation and this institution does not submit its fee, it is not obeying UFC's regulations. In this regard, we are going to have problems, but foundations are really necessary. (female professor, college dean)

There are some problems with this relationship. Foundations donate equipment to UFC through contracts. However, this procedure brings a huge increase in maintenance expenses. When foundations donate equipment to UFC, they do not provide resources to keep them working. Thus, they have a big impact on the UFC budget. I see this as a negative issue. (male staff member, finance director)

Disadvantages are also found in the relationship between colleges and foundations. For example, at times the president of a foundation does not belong to the same political group as the dean of the college which is affiliated with that foundation. It also becomes problematic when foundations do not support the colleges with which they are linked, or move away from that connection, as two deans noted:

In my opinion, our foundation's main purpose is to support and help the university. At least this is defined in the statute of the foundation linked with our college. Unfortunately, our foundation is not giving any kind of support to our college. Here, our college will must work with or without UFC and foundation funds. I take money out of my pocket when we need something. Professors at our foundation are working only to satisfy their own interests. (male professor, college dean)

In the case of our foundation, its members are a very closed group and they think they are independent from our college. They do not report anything to us. They work only for themselves. This is the big mistake. (male professor, college dean)

During the study, it was observed that in one particular college at UFC where the dean is not the affiliated foundation's president, there is considerable conflict between the foundation and the college. Since the dean of that college was not elected from among the

professors that participate in foundation activities, the college receives little or no help from the foundation. By the same token, the dean of the college has not approved any new foundation projects. Clearly, this type of conflict and the lack of complementary objectives have a negative effect on both the foundation and the college. The foundation has only a few old projects to complete and the college has no prospect of financial support from the foundation.

Interviews with the finance directors also revealed some of the disadvantages or costs associated with foundations. They explained that various federal auditing groups are beginning to visit federal universities in order to examine the financial activities of their foundations. The pressure associated with these audits can be problematic, particularly when the agencies conducting them have different and sometimes conflicting objectives and expectations.

Another issue which is growing in significance is that of hiring personnel. Federal regulations require potential staff or faculty members to take a public entrance examination before universities may hire them. However, foundations frequently hire individuals without requiring the entrance examination. As a result, they are often hiring personnel who are considered unqualified by federal standards. In addition, the hiring process within foundations is often political in nature. One of the interview participants lamented the intrusion of politics into the foundation hiring practices:

The human resources personnel in foundations are not qualified and most of the foundations do not have an organized infrastructure. There is a lack of procedures and standardized rules at foundations. Foundations only hire people who have connections with their top administration. (male finance director)

The high level of commercialization is also one of the negative aspects of the presence of foundations in higher education, as the following comments indicate:

I guess specific legislation should be enacted to make the relationship between universities and foundations better and more controlled in order to avoid the high level of commercialization. Foundations cannot be a branch of commerce. (male finance director)

The finance director occupies a very important position in the federal universities of Brazil. Along with the presidents of universities, these directors are responsible for the financial management of their institutions. In addition, they are most likely to be held accountable if irregularities occur. As a result, they have a vested interest in the federal legislation that addresses financial issues in higher education. Of particular concern to them is the growing entrepreneurialism that is becoming a mainstay at nearly all public universities, as the finance director noted in the previous comments. Many finance directors are calling for legislation that would limit the level of commercialization as well as control the legal and financial relationships between foundations and colleges. At the same time, they understand that foundations provide critically important financial support to university and college budgets. Determining where that fine line should fall is a matter of considerable tension and debate.

Full professors are spending increasing amounts of time developing and conducting specialization programs instead of teaching at the undergraduate level. Established controls are necessary in order for UFC to avoid this outcome which was described by several participants. One of them explained it in this manner:

Personally I do not know of any problem in having foundations at UFC. Many professors are against foundations because they think the specialization courses,

where many of them are earning extra money, take too many professors out of the undergraduate classrooms. I guess the UFC administration should take care of it in order to avoid that kind of thing. In my opinion, the entire university community should help to control this issue. (male professor, college dean)

In addition, there appear to be many conflicts among foundations, as well as conflicts of interest, a situation which results in a significant cost to the university and its colleges. Disagreements and competition occur among professors from different colleges and foundations, among those that work with foundations and those that work only at UFC, and among faculty members of colleges with foundations and those without foundations. The nature of the conflicts centers on the debate over the existence of foundations themselves, and the perception that they contribute to faculty and departmental stratification. According to Slaughter and Rhoades, “Stratification within institutions is increased by colleges’ and departments’ differential capacities in the same arenas, their perceived potential to interest and capitalize on new economy students, employment, research, and service markets” (2004, p. 307). Several interviewees confirmed their analysis with the followings statements:

There is a conflict of interest among professors, I am sure. Sometimes they do not accept foundation policies even though their activities are included. There are many complaints and criticisms from A to Z about all foundations. They say for example: since FCPC sends funds to the president of UFC, we are not bringing our projects there. (male professor, foundation president)

I am not going to say that I know about conflicts among professors at UFC about foundations. However, I believe there are. I sometimes hear comments that many are against foundations at UFC. I particularly hear some of our professors claiming that. (female, professor, foundation president)

Yes, there are conflicts among professors within the same department. Sometimes conflicts among professor at the same college when it is connected with a large foundation. I think this competition is very good. (female, professor, college dean)

Yes, we do have some conflicts. I think colleges without foundations are more reactive against them. Since they have no foundations, they do not have a relationship with the external environment that brings resources into the university. Having no foundation, they are against the philosophy behind foundations. For example, it is very difficult to find a College of Engineering in the federal universities without an association with a foundation. This is true even for Colleges of Health and Colleges of Business. Try to ask them about foundations. They are never going to be against foundations. This kind of disagreement among the colleges brings conflict into academia. (male professor, college dean)

I see some campaigns against foundations that I consider a big offense. What I am worried about is that these campaigns come from many different units at UFC, not only against our foundation but others also. These campaigns started in foundations that have no agreement with UFC. They are foundation with one or two owners and use money without transparency. (female professor, college dean)

*Benefits of the Relationship between UFC and its Foundations.* The presence of foundations is intended to provide better opportunities for the entire UFC community.

Several foundation presidents and college deans expressed their confidence in the value of foundations to the university, the faculty members, and to society.

Foundations provide opportunities for all professors to search for new projects and get involved with students. I see a huge link with the undergraduate programs... and it has had a positive effect. (female professor, foundation president)

I say that there are two aspects in terms of benefits. First, I have no doubt that the presence of our foundation is providing opportunities to our faculty members for developing consulting and other services with UFC approval. Second, the professors can remain with UFC and at the same time involve students in their projects. Without our foundation, professors were leaving the university to work on the same projects. I would be doing that for sure. I cannot survive on only my salary from the university. This is ridiculous. (male, professor, college dean)

These private organizations within federal universities are able to bring research to our university and then transfer it to society. I think foundations can offer the knowledge created within academia to society in many ways such as services, consulting, and so forth. (male professor, college dean)

The opportunity to supplement UFC's budget appears to be the most significant benefit conferred by foundations. When asked to comment on this aspect of foundations specifically, statements such as those that follow were made repeatedly:

I see several benefits. First, there are projects available to foundations that are not available to the university because its budget will not support them. Second, even the daily expenses of the university are not covered by the budget. Who will support the university? This is not a hard question to answer. Of course, foundations are the ones to provide the resources. Third, there is no money for investment (in our infrastructure) at UFC. New equipment is purchased by foundations. So here in our college, almost everything is provided by foundations, such as classrooms, auditoriums, equipment, and so forth. (female, professor, college dean)

I suppose foundations should exist because they help to supplement the university's budget. The benefits exist for sure. However, foundations should not be functioning without UFC's control. (male professor)

I am going to provide you with some data. In the last 2 years, our foundation invested in our college somewhere around US\$ 200,000.00. This is more than the investment budget for the whole university in the same period. (male professor, foundation president)

As the previous comments suggest, the investment in infrastructure is also a significant advantage that continues to benefit the university even after a foundation project has been completed. The following observations elaborate on this theme:

The benefits are huge. I see benefits other than specialization programs. To offer these programs we need to invest money in infrastructure and this investment is kept by the university at the end of the project. (female professor, foundation president)

There are some strong arguments for the benefits of foundations. Computer laboratories were totally built with resources from foundation projects at this college. Students are being involved in internships and working with professors on foundation activities. (female professor, college dean)

Everything in this room, such as furniture, computers, and so forth was bought by our foundation. Even our auditorium, which I believe is one of the best at UFC, was totally refurbished by our foundation. All classroom equipment was also provided by the foundation. These things are financed by foundations for one simple reason - UFC does not have the resources. I would say that today the entire maintenance of our college is paid by foundations. Without this help, we would have a very difficult and complicated situation. We also provide some help to other colleges that do not have a foundation like we do. (male professor, foundation president)

Even if foundations have not yet achieved full legitimacy within UFC, they are pretty much necessary to keep UFC working, at least to retain its infrastructure. (male professor, college dean)

Another point in which many participants agreed was with regard to the benefits of meeting market demands. In fact, interviewees pointed out that UFC needs foundations to move even closer to the market in order to meet society's demands for services.

Foundations are developing activities that the university is totally exempt of. Foundations are filling in the blanks in the market. They are working exactly in the places society needs in order to develop itself. (male finance director)

Well, the general knowledge about these foundations and associations that I have understood is that they have a very important role in improving the relationship between UFC and society, and between UFC and the enterprise. I believe that the most important role of these organizations is offer to the local and regional community consulting services with highly qualified professors who hold doctoral degrees and have academic experience, which is very difficult to find in the private sector. (male professor)

There are a lot of services available to society today because foundations exist. Since foundations invest in projects, UFC can offer them to address the

community's needs. As UFC is structured right now, it could not provide most of the services by itself successfully. (female professor, college dean)

Foundations are also supporting the colleges at UFC with research and consulting. One of the advantages of these activities is that faculty and students gain experience and exposure to advance their career development. Comments such as the following were typical:

The important point is that our foundation is providing not only services outside campus, but we are involving professors and students from UFC in all our projects. This really makes a huge difference in their educational and professional careers. (male professor, foundation president)

If you look into our college, you can see that 10 years ago we had around 10 to 15 doctors. Today, we are 80 doctors. The new doctors brought a huge number of projects and this resulted in an enormous amount of scientific research and scientific papers. Now we have more masters and doctoral programs. It is so difficult to imagine that the university would have it done this without our foundation. (male professor, foundation president)

These organizations have a role more related to placing professors closer to the market. The professors offer the consulting that they cannot offer within UFC because of the constraints and lack of structure. So, what happen is that the professors get together and create these associations that use the UFC name and status to sell their services as a public institution. They have a lot of benefits and advantages in comparison with other private organizations (that are not within the UFC structure). Besides, they have very highly qualified personnel and the UFC name as a well-known institution. (male, professor)

The finance directors also described the benefits of having foundations as partners. They mentioned agility in the buying and paying procedures, and the fast negotiation process with private corporations outside the university. One of them stated:

Federal universities cannot survive without having foundations within their structures. Foundations are helpful and useful in all ways. (female finance director)

Others explained that is easier to work with foundations.

Sometimes we have money but we cannot buy equipment quickly. It is a complicated procedure to buy expensive equipment at UFC. In this regard, I can say something positive about foundations because they can import or buy something as soon as we need it. (male professor, college dean)

In comparison with UFC, I think foundations are necessary because of their flexibility in negotiating with other institutions and solving our problems. We have to avoid the lack of public service that exists at federal universities. (female professor, college dean)

Balachevsky and Quintero explain “Being a professor at a prestigious public university creates opportunities for consulting and community service, which in turn engender new resources of income for these professionals. But these ways of supplementing academic salaries lack legitimacy inside the university” (1996, p. 87).

Despite that perceived lack of legitimacy, the interview participants were quick to affirm that they welcome supplemental income.

People involved in foundation projects are happy because they can make extra money and because they have had the same salary since 1994. I think it is also a way we could get professors to stay at our university. Foundation resources are providing incentives to faculty and staff member of UFC to develop new projects. (female professor, college dean)

### *Foundations as a National Phenomenon*

As Table 5.11 indicates, 35 federal universities out of a total of 45 were studied with regard to the presence of foundations directly related to their activities. Of 35 universities studied, only one is currently creating its first foundation. The remaining 34

institutions have at least one foundation established and working within their campuses. The Federal University of Ceara with eight foundations and the Federal Universities of Santa Catarina, Rio de Janeiro, Brasilia, and Bahia, with four foundations each, are the federal universities with the largest number of private foundations functioning within their university structures and with which they have direct relationships. The existence of private foundations operating within the federal university system is clearly a national phenomenon.

In all states of the country, the existence of foundations within federal institutions was confirmed. State universities also have foundations within their structures. Based on the ADUSP Report (2004), the University of São Paulo (USP), the largest public university in Brazil, has within its campus approximately 30 private foundations which support USP, and a large number of other private institutions, such as centers of study which operate outside the campus. USP is the public university with the most numerous and strongest connections to private organizations in Brazil.

#### Differing Points of Views Regarding Foundations

In conclusion, the research for this study indicates that the points of view held by the various stakeholders in the federal university system are largely a function of their position within this environment. As noted earlier, for example, faculty members are less supportive of foundations than are faculty members who are heavily involved in the work of foundations. Similarly, deans of colleges have views about the significance of foundations that differ widely from those of some professors and foundation presidents.

Deans of colleges tend to be more concerned about their college's interests, while foundation presidents are concerned with developing projects which will generate additional income for their foundations. With regard to faculty members, the analysis showed that there was a clear difference between those who are involved in foundation activities and those who are not. The latter were clearly less likely to be supportive of foundations. That same pattern was demonstrated among deans who are not involved in foundations and those who were also foundation presidents. Again, in the latter instance, there was a clear tendency to support foundations and their market-driven activities.

Table 5.11: Number of Foundations within Federal Universities in Brazil (2004)

Institution	Name	Foundations
<b>North</b>		7
UFAC	Universidade Federal do Acre	1
UNIFAP	Universidade Federal do Amapá	1
UFAM	Universidade Federal do Amazonas	1
UFPA	Universidade Federal do Pará	1
UFRA	Universidade Federal Rural da Amazônia	1
UNIR	Universidade Federal de Rondônia	1
UFRR	Universidade Federal de Roraima	1
<b>Northeast</b>		22
UFAL	Universidade Federal de Alagoas	1
UNIVASF *	Universidade Federal do Vale do São Francisco	-
UFBA	Universidade Federal da Bahia	4
UFMA	Universidade Federal do Maranhão	2
UFPB	Universidade Federal da Paraíba	2
UFPE	Universidade Federal de Pernambuco	1
UFCE	Universidade Federal do Ceará	8
UFRPE	Universidade Federal Rural de Pernambuco	1
UFPI	Universidade Federal do Piauí	1
UFRN	Universidade Federal do Rio Grande do Norte	1
UFCG*	Universidade Federal de Campina Grande	-
UFS	Universidade Federal de Sergipe	1
<b>Center</b>		12
UNB	Universidade de Brasília	4
UFG	Universidade Federal de Goiás	3
UFMT	Universidade Federal do Mato Grosso	1
UFMS	Universidade Federal do Mato Grosso do Sul	3
UFT	Universidade Federal de Tocantins	1
<b>Southeast</b>		19
UFES	Universidade Federal do Espírito Santo	3
UFLA	Universidade Federal de Lavras	1
UFMG	Universidade Federal de Minas Gerais	3
UFJF	Universidade Federal de Juiz de Fora	3
UFV	Universidade Federal de Viçosa	1
UFOP *	Universidade Federal de Ouro Preto	-
UFU *	Universidade Federal de Uberlândia	-
UNIFEI *	Universidade Federal de Itajubá	-
UFSJ *	Universidade Federal de São João Del Rei	-
UNIRIO	Universidade do Rio de Janeiro	2
UFRJ	Universidade Federal do Rio de Janeiro	4
UFRRJ	Universidade Federal Rural do Rio de Janeiro	1
UFF	Universidade Federal Fluminense	1
UNIFESP	Universidade Federal de São Paulo	0
FUFSCAR *	Universidade Federal de São Carlos	-
		6

<b>South</b>		
UFRGS	Universidade Federal do Rio Grande do Sul	1
UFPR	Universidade Federal do Paraná	1
FURG *	Universidade Federal do Rio Grande	-
UFSC	Universidade Federal de Santa Catarina	4
UFPEL *	Universidade Federal de Pelotas	-
UFSM *	Universidade Federal de Santa Maria	-

Source: Data compiled from interviews conducted at National Forum of Finance Directors of Brazilian Federal Universities in Manaus, Amazonas (November 8-10, 2004)

\* No research was done at these institutions

## CHAPTER 6: CONCLUSION, FINDINGS AND RECOMMENDATIONS

### Concluding Statements

The present study focuses on the relationship between the Federal University of Ceara in Brazil and the eight private foundations and associations which function within the UFC campus. The emergence of these organizations is explored, particularly as it relates to the environment of academic capitalism that is observed currently throughout higher education institutions in the world. As Slaughter and Rhoades note in describing this environment, “Professionals, including faculty, are building new networks that connect them with the new economy, spanning boundaries between public, nonprofit, and market organizations. In so doing, they are restructuring universities to accommodate an academic capitalist knowledge/learning regime” (2004, p.38).

UFC, one of 45 federal universities in Brazil, is located in Fortaleza, capitol of the State of Ceara. According to the data gathered in this investigation, UFC is a federal university which has a direct relationship with the eight private foundations that were created to support UFC’s activities within the federal higher education system in Brazil. These foundations, which are present throughout the federal university system, were essentially created to facilitate the generation of external revenue for the public universities within which they function. Furthermore, they exist to provide sufficient support to make their universities more competitive under the new market model.

Three theories provide the analytical framework used to address the research questions and to provide support for the findings of this study. Academic capitalism

theory explains in large part why higher education institutions are changing their fundamental activities and culture in order to move toward the market. Given that this market-like behavior is an essential component of the relationship between UFC and its private foundations, academic capitalism, as proposed by Slaughter and Leslie (1997), and further developed by Slaughter and Rhoades (2004), is a pillar of the theoretical framework that guides the present study.

Resource dependency theory claims that higher education institutions can and do adjust to survive. Since institutions depend on other organizations' resources in order to expand and develop their activities, they change their roles and adapt in order to continue functioning (Pfeffer & Salancik, 1978). The emergence of private foundations at UFC is a prime example of this process of adaptation.

Moreover, concepts of globalization imply that higher education is influenced by international pressures and trends (Waters, 2001). As such, globalization theory helps to explain the integration of higher education institutions with a globalized market in which competition is no longer regional or national. Slaughter and Rhoades (2004) also recognize the growing importance of the global dimensions of colleges and universities which explain the many new mechanisms, organizations, and market-like practices that connect higher education institutions to the new economy in any given country.

## Findings

Federal universities have seen their financial environments change rapidly in the past three decades. Operating under an academic capitalism model, these public

universities are using private organizations to trade the services, programs, and courses they provide to society for the resources they need to remain viable. However, in the course of finding new ways to generate resources, the public character of federal institutions of higher education is also changing. Beginning in the 1980s, and accelerating throughout the 1990s, there has been a shift from purely public to dually public and private institutions of higher education. In Brazil, this shift has changed the face of the federal higher education system in Brazil.

This investigation was drawn largely from the collection and consideration of a wide variety of institutional data at UFC and the eight private institutions that function within its campus. The data analyzed in this study included statutes, contracts, budgets, financial reports, and personal interviews with faculty members, deans of colleges, presidents of foundations and faculty associations at UFC, as well as finance directors from most of the federal universities. The following discussion provides a consolidated data analysis. Since the author was a higher education administrator at UFC and currently is the vice president in a faculty association, many of the conclusions reflect insights from those experiences and perspectives.

As a starting point, and in light of the consistency among the private institutions working within the campuses of federal universities throughout Brazil, it was assumed that the findings from the Federal University of Ceara case study could be considered generally representative of trends experienced at similar federal universities in Brazil.

Academic capitalism is clearly present in practice at the case study institution, UFC, where its foundations and faculty associations generate revenue by taking on a

market orientation. The implications of this type of institutional activity are seen partially in the stratification that occurs among colleges and departments at UCF. Indeed, it has been observed repeatedly that colleges with foundations (Engineering, Business, Medicine, and Law) are becoming increasingly market oriented in direct relationship to their increasing dependence on external revenues to support their activities. Meanwhile, colleges without foundations (Humanities, Science, and Education) are neither expanding nor developing new projects, to the extent that they must struggle even to maintain their primary academic functions within the university.

Despite the increasingly privatized nature of public universities, the administrators and faculty members of increasingly market oriented colleges and universities in the federal system of higher education still prefer that their institutions remain public institutions. By doing so, they maintain their public status and enjoy the privileges that distinguish them from private institutions, even as they continue to work closely with the private sector. Slaughter and Rhoades explain this position as follows:

Colleges and universities are not seeking to become private enterprises; rather they wish to maintain the privileges of not-for-profit status while at the same time entering the private-sector marketplace. Academic capitalism does not involve “privatization,” rather it entails a redefinition of public space and of appropriate activity in that space. (2004, p.306)

Analysis of the data also indicates that administrators of colleges without foundations are more reactive against them. On the other hand, even though they may oppose foundations, they recognize them as a practical solution to the financial problems they face. Moreover, they utilize the foundations of the central administration, and at

times even collaborate with foundations of other colleges, to develop their projects and their small-scale entrepreneurial activities.

It is important to realize that the advent of private organizations within the university structure did not only create a solution for the lack of financial resources. This development also created a means by which the salaries of faculty and staff members could be supplemented. In essence, foundations provided incentives to expand and develop programs and services which benefit the university, its personnel, individual colleges and departments, and presumably, students and the community. While there are concerns and questions about the long-term impact of an entrepreneurial shift in public higher education, these benefits are difficult to ignore or bypass.

The data further reveals that the growing acceptance of private foundations within public universities is based on three primary factors. First, the federal budget is not increasing in proportion to the growing demand for federal universities. The federal budget allocation is limited to employee salaries and a minimal part of institutional infrastructure and maintenance. The federal budget does not even finance infrastructure investment, much less growth in the student population through more programs, faculty members, and services.

The analysis of the data collected for this study indicates that federal budget shortfalls are directly responsible for the public and private relationship described here. At UFC, the lack of federal funding caused colleges and departments to seek external funds in order to develop new projects and even to maintain their present activities. Thus,

to a great degree, the relationship between UFC and its private foundations can be understood as a function of the decreasing federal investment in higher education.

One particularly important element of the relationship between the relative decline in federal funding and the market oriented response by public universities is that of salaries, which have remained stagnant since 1994. UFC uses revenue generated by foundations to provide additional income to faculty members and thus, as a powerful incentive to retain the best professors for research and teaching in specialized and graduate programs. Additionally, the extra income serves to encourage professors to continue teaching at the undergraduate level in public institutions, rather than move to private universities which pay higher salaries overall.

Second, federal legislation is highly complex and prohibits full professors from working on external programs and projects. Clearly, since most faculty members cannot legally be employed outside the public university system, they have a vested interest in maintaining the relationship between universities and their foundations.

The data for this study support the initial assumption that private foundations and associations were created within federal universities to bypass the federal regulations as well as to allow faculty members to supplement their salaries. In addition, in order to maintain and develop activities that allow it to compete and survive in a global market environment, UFC has resolved that it must enter into agreements with private organizations that can operate under markedly different legislative rules and regulations. The foundations and associations discussed in the present study certainly meet that requirement.

To put it another way, UFC, as well other federal universities in Brazil, must be able to function under more relevant and flexible regulations if they are to avoid entering into contractual relationships with the private organizations within their campuses. More to the point, the presence of these organizations is a direct result of legislation that does not acknowledge the fiscal and market realities facing higher education in Brazil.

Third, the inflexible rules and regulations regarding public accounting and management constrict UFC and result in a highly bureaucratic environment which functions slowly and inefficiently. In effect, this model forces university administrators to find alternative ways to compete in the market, participate more directly in local projects, and negotiate more successfully with the private sector. Common elements were found from the interviews which support the idea that foundations are a viable means to accomplish these objectives, as the following statement indicates:

First, we should solve the human resources culture problem at federal universities. Foundations have a better organizational structure to deal with ability to manage private projects. I know that foundations at UFC really do a nice job. A week ago, I received a financial statement of a project that I coordinate in one of UFC's foundations. This transparency makes me happy. In my dreams, the public university will be easy to work with in the future. Thus, today UFC needs foundations in order to do this job for us in a faster way. (male, professor, dean of college)

In addition to the aforementioned factors which contribute to the growing acceptance of private foundations at public universities, there are others as well. These include the increase in academic research costs at the same time that the federal government is decreasing its research budget. Second, universities are learning new ways of accessing the market from the models provided by private foundations. Third,

foundations provide a more globalized orientation by creating connections to a wide variety of fields and cultures within the university, as well as to new ways of solving industrial and social problems through those connections. An example of the variety of university cultures was provided by one interviewee:

I guess the university is very complex. So, cultures are different within the variety of UFC areas. If you are in the College of Humanities it is very different from the culture of the College of Law. Thus, we are going to find different opinions about foundations depending on where you are. This diversity of culture is nice because we can discuss and ask in order to grow up. (male, professor, president of foundation)

This movement toward the market is not so much a movement away from government as it is a trend toward establishing relationships between government and private institutions by the university. Unlike higher education in developed countries, Brazil has a relatively new and unformed relationship with private organizations, which is still in its early stages, as is higher education itself.

The specific conclusions of this study, which follow, are presented in the context of the research questions which guided both the research and the subsequent analysis.

### Conclusions

The title of the present study combines a consideration of entrepreneurial activities in the federal universities of Brazil with a case study of the Federal University of Ceara, a federal university in Brazil. This title is based on an assumed exchange between UFC and private foundations and associations which permits and encourages the development of entrepreneurial activities. These activities in turn, generate funds which are used to support academic projects and research and to provide additional income to faculty members. The aim is to not only provide details about entrepreneurial activities,

but also to present aspects of the relationship between UFC and the private organizations which operate within its structure.

### *Research Question 1*

The first research question addresses the financial benefits that come from the entrepreneurial activities explained by academic capitalism theory. Currently, there is heated debate within UFC as well as in the federal higher education system generally about the benefits and costs that accompany entrepreneurialism in public universities. The data obtained in this investigation help illuminate some of the direct advantages and disadvantages in this relationship.

#### Benefits and Advantages

Beginning with the main benefits, this investigation concludes that the possibility of having greater fiscal flexibility is an important advantage. The federal government sometimes cuts specific expenses from the budget. For example, federal universities currently cannot spend their federal funds on marketing and advertisement contracts. As a result, many administrators ask how UFC can promote its services and courses in order to compete in the higher education market without publicizing them. Private foundations and associations provide a means to bypass the federal rules and solve this situation.

In addition, private institutions are supplementing the university budget for investment and maintenance. At times, the external resources that flow to UFC through foundations exceed the federal budget amounts designated to cover certain expenses. However, the revenue from all foundations and faculty associations which provides

supplementary income to UFC is not a significant amount in comparison to the amount budgeted for higher education by the federal government. In the Fiscal Year 2004, approximately U\$ 660,000.00 was provided to UFC from foundations. This is approximately .4 % of the total budget provided by the federal government to UFC. This amount represents the amount allocated to finance infrastructure (i.e., equipment, furniture, computers, and other durable materials, as well as buildings and construction investments) as seen on Table 4.7.

The relationship between the university and its foundations offers better opportunities for staff and faculty members to participate in important projects, allows colleges to retain the best professors and projects, and increases the number of faculty members with doctorates in the institution.

This investigation also found that UFC has developed a better relationship with external public and private organizations since private institutions became involved in university activities. Even as the relationship between UFC and its foundations supports various college activities, it also confers the flexibility to negotiate with the private sector and meet market demands while contributing to the integration of the university, the community, and external organizations.

Upon the conclusion of foundation projects, UFC retains the equipment, furniture, laboratories, and classrooms built to offer those projects. Offering services to society through foundations makes possible a better learning-teaching process with an increasing number of paid internships for students as well. These internships promote student

participations in academic projects and research in ways that would otherwise not be possible.

Although most recognize the importance of private organizations and their relationship to UFC, many oppose the existence of these private institutions within the public system of higher education. The following observation by an interviewee helps to explain this perspective:

I want to be clear that I am not against foundation workers, but I believe that it is time to take foundations out of the university's campus. We should fight to have a public and free university with a public entrance examination for people who want to be staff and faculty members in order to have the same rights that we have. (male, professor)

#### Costs and Disadvantages

The data also presents evidence that certain disadvantages exist for the federal university system as a result of the establishment of private foundations and associations. The main problem explained by so many interviewees is that even if these private organizations are providing revenue to UFC, they do not provide clear financial and accounting information and UFC has no control over them to monitor the financial effects of the relationship. Many universities are actually losing control over these private institutions. Some are moving closer to offering tuition-based undergraduate programs, which the Brazilian constitution strictly prohibits in federal universities

UFC must absorb some costs in order for foundations to function within its campus. For example, UFC offer its library to students who are enrolled in foundation-sponsored specialization programs and pay tuition to those foundations. UFC also permits

its professors to teach courses for these specialized programs. As a result, these faculty members do not completely dedicate their time and energies to UFC as their contracts expect. The use of UFC's infrastructure is also a part of the costs assumed by UFC in relation to foundations which use UFC's buildings to provide classes and other services at little or no cost. All told, these costs are difficult to measure, but they appear to be significant, perhaps nearly as great as the revenue generated by the foundations.

Moreover, the presence of foundations has created stratification among colleges, departments, and professors. The colleges closest to the market are developing many more entrepreneurial activities and paying higher salaries to faculty members to supplement their UFC-based salaries. These earnings are being paid to professors by foundations and faculty associations as part of the expenses of the projects and programs in which they are involved. In contrast, colleges with fewer entrepreneurial activities pay only a small participation fee to their professors. Even within departments and colleges, faculty members will earn different salaries based on how much revenue their programs generate. As an example, in the College of Business, many professors involved with faculty association projects can easily generate 50% to 100% of their UFC salaries. One of the fundamental effects of foundations is to enable at least some faculty members in some colleges to supplement their salaries. As a result, there is increasing stratification within and between the colleges. The research for the present study also revealed that foundation officers do not receive compensation of any kind for their administrative work. Instead, they are compensated only in relation to their work on actual foundation projects.

A lack of communication among foundations was also found in the research. This issue also results in a great deal of conflict and competition among the foundations at UFC. For example, because foundations often do not know what activities the other organizations are developing, they may offer similar services to their clients and to different colleges at UFC. Adding to the confusion, UFC has different agreements with each private foundation and association within its campus.

There are also issues concerning the allocation of resources generated by foundations. Most typically, these resources are used for infrastructure investment, such as equipment and buildings. However, during election periods, the central administration allocates these resources on the basis of political strategies designed to gain votes. During this time, colleges such as Humanities, Education, and Science are more likely to receive allocations.

Finally, the data exposed another difficult problem with regard to the outcomes of the relationship between UFC and its private organizations. Many faculty members argue that professors are increasingly more available to teach specialization courses and to work on large projects than they are to participate in undergraduate teaching and related activities.

### *Research Question 2*

The second research question addresses the relationship between UFC and its foundations and associations as explained by both academic capitalism and resource dependency theory. This question aims to explore how and why UFC seeks to generate resources through private foundations and faculty associations.

The analysis of this study describes the complex relationship between a federal institution of higher education in Brazil, UFC, and the private institutions within its campus which were created primarily to support university activities. In this section, this relationship is explained based on the results of the analysis. Even though foundations and faculty associations have basically the same objectives (i.e., to support university activities by providing alternative sources of revenue), they engage in widely different entrepreneurial activities.

Within UFC, there are several different models of private organizations working within the university campus. They all have a direct relationship with UFC and they develop various entrepreneurial activities based on their areas of knowledge and expertise. Some colleges such as Law and Pharmacy and Dentistry, have a relationship with only one foundation which has just one purpose - to provide specialization courses which generate additional revenue to supplement their budgets.

UFC's central administration and other colleges such as Engineering and Business are involved in a wide variety of entrepreneurial activities with their foundations and faculty associations. They do consulting, academic research, and offer services to society and the community. They also manage financial resources from different projects, provide paid internships for students, offer opportunities to faculty members to develop research projects and teach specialization and professional master's degree courses, organize employee entrance examinations for public institutions, and have contracts with public and private organizations. This varied involvement with academic capitalism is observed by Slaughter and Rhoades, who note "We found departments very involved in

academic capitalism, but in unanticipated ways that speak to the complex and sometimes conflicted nature of academic commitment to entrepreneurial activity” (2004, pg.321).

The results of the present study also revealed a different relationship between the College of Medicine and its foundation as a result of UFC’s lack of control over private institutions. This investigation plainly indicated that the area of financial control is one of the most important problems of the relationship between UFC and its private foundations. Until recently, no unit or department has been responsible for controlling and regulating foundations within UFC. The present study found that UFC created the Internal Audit Office in 2004 in order to address these issues and problems. Prior to 2004, there were virtually no audits or controls in place regarding the accounting and finances of private foundations and associations. Because of this lack of regulation, the federal auditing system is now beginning to present certain rules and regulations at UFC. In 2002, for example, the federal auditors prohibited the foundation affiliated with the College of Medicine from receiving funds directly from the federal budget. This evolving situation will make a significant impact on the relationship between UFC and its foundations in a variety of ways.

With regard to the foundation affiliated with the College of Medicine since 2002, it now functions primarily to manage personnel (approximately 1,000 foundation employees work at the University Hospital). Because of the decision to limit its activities in this way, this particular foundation has had to eliminate almost all entrepreneurial activities developed previously with the university.

It may be helpful to explain the processes which provide the foundation for the relationship between the universities and their foundations. In the case of UFC, the present research found that these private organizations are required to have an initial memorandum of agreement with UFC in order to begin defining the details of this relationship. Other federal universities and their foundations follow the same procedure. These agreements describe the nature of the relationship and the activities in which foundations will participate.

The data demonstrated, however, that foundations have changed their objectives and activities considerably since they were created in order to follow new market trends and to remain competitive. Often, the objectives stated in foundation statutes are quite different from the activities they currently practice. A dean of a college spoke to this issue:

I was one of the creators of our foundation. In the beginning we had as a main goal only to give support to our college activities. This is the biggest benefit foundations can provide to universities. Now we have a diverse set of objectives. (male, dean of college)

In fact, the private institutions within UFC frequently engage in different activities than their original agreements specified. Currently, they try to meet market demands and provide societal needs accordingly, but UFC remains their primary partner. Despite this, private foundations are increasingly seeking to become independent from the university and the notion of meeting the demands of a global market orientation is in keeping with this effort by foundations to become more autonomous. Nonetheless, the data indicates that there is still a dual dependency in this relationship. Foundations need the university's

structure and personnel, as well as the university's name, to succeed. On the other hand, universities need foundations to generate external revenue because, as has been shown, they cannot survive under the current federal budgetary system. Thus, foundations complement the academic activities of universities while universities rely on the additional resources that foundations generate to fund their growth.

The investigation also revealed that deans of colleges have a more critical view of this complex relationship. Depending on their position and level of involvement in foundations, deans may be more or less supportive of the link between colleges and foundations. Very simply, the data indicated that when a dean is not a president of a foundation, he or she tends to be more critical of foundations.

The data also presented certain conflicts evident in this relationship. For example, tension existed between the dean and the president of one college as a result of political differences and differences over the role of the foundation. Some faculty members may think of foundations primarily as a guarantee to fund their new projects as well as a means to earn additional income. Other opinions may go beyond this fairly narrow interpretation of the role of foundations. Since UFC holds elections for president of the university and for deans of the colleges, many professors use foundations to exert pressure according to the political environment. The data demonstrated that there are often serious conflicts between foundations and their colleges. This frequently the case when the dean of a college is not the affiliated foundation's president. This issue results in a poor relationship between a given foundation and its college, making it extremely difficult for their partnership to function constructively.

On the more positive side, based on the financial information described in chapter five, this analysis confirmed that in general, UFC foundations and faculty associations are efficiently managed and enjoy financial health. This results in a very positive outcome for UFC in that these foundations have the means to provide funds in support of UFC's activities. Effective financial management at all levels of the university's system is essential for institutional success. Every level must pay careful attention to budgeting and financial issues since the institution's financial health is a reflection of the aggregate financial health of the individual units that make up the whole (Barr, 2002, p. 105).

Another important dimension found in this study is with regard to the fee that UFC charges foundations for the right to function within its system. There are questions regarding what constitutes a fair fee for each foundation. As described previously, the analysis of documents demonstrated that a policy exists regarding this fee; namely, Resolution 06/2001, which was defined by the University Council. This rule indicates only a general percentage to be charged independently of the types of contracts and projects in which foundations participate. However, some interviewees felt changes should be made and offered suggestions for doing so. One proposal was that fees should be based on different types of services and on the extent of involvement of faculty members. In a project with a high percentage of faculty involvement for example, UFC would receive a higher fee. This discussion needs to take place throughout the university community as soon as possible since the top administration is already proposing its own changes, which is significant because of the highly charged political aspect of the relationship between the administration and foundations. Indeed, interviewees noted that

two foundation and some of UFC's top administrators aggressively lobbied the President in support of Resolution 06/2001.

Another issue to be analyzed in this relationship is that of standardizing the agreements between UFC and its eight private foundations. The data indicates that the private organizations at UFC each have different agreements with the university. Some have the privilege of using university's infrastructure, and even among those who do, there are differences in the rental fee. There are also differences regarding the length of time each contract will run. Some have a five-year contract, others have a three-year contract, and still others must renew annually.

Yet another interesting point of analysis is the wide variation in the proportion of faculty members involved in each foundation as described in chapter 5. This variation is largely dependent on the depth of a given college's involvement in entrepreneurial activities, as is evidenced by the Colleges of Business, Medicine, and Technology, for example.

This variation can also be explained in terms of how open or closed the processes of foundation activities are. In the College of Business and the College of Technology, this engagement is very open, and each professor is free to bring projects and ideas to the faculty association in order to develop new forms of entrepreneurial activity. In the College of Law, the process is highly political and only a few faculty members are involved in the foundation. At the College of Agronomy, foundation activities are relatively new and the younger faculty members tend to be highly involved.

Young professors are well acquainted and very accepting of foundations - and in fact, knew about their activities before they began to work at UFC. Older professors are more reactive to the notion that foundations are only a means to bypass the law and provide additional earnings for professors. They tend to be protective of their positions, fearing that since they are closer to the ends of their careers, they may not be able to find work again should they lose their current positions. Younger faculty members, on the other hand, tend to be less concerned about the debate over foundations and more accepting of foundations as an acceptable means to supplement their salaries and further their careers through foundation activities. Clearly, while the overall relationship between UFC and its foundations is strong, it is not consistent, and there are other issues and problems as well, as has been discussed.

### *Research Question 3*

The third research question addresses the links between the private institutions within UFC and international organizations which arose in response to the pressures of globalization and the challenges of insufficient revenue.

Based on the concepts of globalization theory, the analysis included an exploration of the patterns of relationships that the private organizations within UFC have with international agencies. Specifically, the present study examined whether international agencies such as the World Bank and the International Monetary Fund influence the activities of the foundations and faculty associations at UFC. Although access to the contracts of all foundations was not possible, the data generated from those to which unlimited access was given suggest that none of the agreements with

international organizations resulted in any political influence over UFC policies or activities. In fact, international contracts provided only for funds which were used for infrastructure improvements within the university campus. In addition, UFC uses foundations to establish contracts with international institutions such as universities and research foundations.

#### *Research Question 4*

This last question addresses the possibility of the existence of foundations at federal universities as a national phenomenon. The findings with regard to this research question were very clear. Within the federal higher education system, all institutions have some type of relationship with at least one private organization which operates within their structures. In other words, at least one foundation or faculty association exists within each federal university in order to generate external funds in support of that institution's academic activities. Without question, private organizations are consistently prevalent throughout the federal universities in Brazil and can be considered a national phenomenon.

#### Recommendations

It is clear that the primary goals of private organizations within federal universities are to support academic activities such as research and teaching and to offer services to society and to the community. These organizations are a link between these universities and other external organizations, which allows them to be closer to the larger society and its needs. Based on the agreements established between foundations and

UFC, private corporations have been contracted by foundations to develop many programs and activities within UFC. The relationship that exists among UFC, its foundations, and the private sector is having a significant economic impact on both the university and the local region.

The author of the present study hopes that the study itself as well as the following recommendations will add to the scholarly discussion about the future of higher education in Brazil. In order to work independently from private organizations, specific federal legislations must address the needs of federal universities. Basically, such a change in higher education regulations could begin to provide a global budget and the freedom to hire and fire personnel. This would reduce the dependence of federal universities on the support of their foundations.

Particularly at UFC, the budget from the federal government should be decentralized. By decentralizing the budget, each unit would have its own account. According to Lang (1999), funds should be in each unit's budget and under its control (each tub has its own bottom). Every dean, vice president, or department head would have decision-making power regarding resource allocation, rather than just the president of the university. Moreover, federal resources would be divided according to a matrix of resource allocation. However, the central administration would not be responsible for the actual approval and allocation process for each unit. As Barr argued, "Under a decentralized model, each unit manager is held responsible for assuring that expenditures are being made in a prudent and effective manner" (2002, p. 33). Under this model, each unit would be guaranteed at least a portion of the institution's federal resources.

A decentralized model has some disadvantages, such as requiring a sophisticated financial information system and generating too many decision makers. It is also a more complex model to deal with. The decentralized model has not had a high level of political influence and it requires that the units at UFC share the financial responsibility for the institution as a whole.

In order to address the lack of control over foundation finances, UFC should create a unit of control within its structure. This could be a controller's office which would have the authority to investigate the processes behind the generation of new revenue by foundations and assure conformity with university regulations. In addition, these funds could be managed by the academic personnel in order to build credibility and encourage the teaching/learning regime as an institutional objective. In order to create such an office, a political effort is needed.

The outcome would be a triplicate administration with UFC, foundations, and private corporations managing the new contracts which would still exist primarily to give support to academic activities. In addition, the university would then have the ability to examine and control the flow of external resources. These recommendations could provide better control of the funds generated by foundations. They could also bring transparency to the university community regarding the financial processes behind the generation of external revenue.

It is also recommended that UFC regulate the participation of private corporations and all other partners that engage with the university through foundation contracts. There is broad consensus that the relationship between UFC and its foundations should be clear

and the overhead fee should be treated by UFC as a public resource. Foundations not only have projects with UFC's participation, but also they have projects managed with many other institutions. This helps to explain how it is that the revenue that is generated by foundation contracts does not depend exclusively on the partnership with UFC, but also depends on outside partners.

The participation of faculty members and staff in foundation projects and upper management should also be regulated by UFC in order to avoid conflicts of interest which could affect the integrity of both the management of the university and the foundations and the decisions regarding resource allocation. For example, the presidents of foundations are often the deans of college as well, clearly a situation in which transparency is problematic.

The interviews demonstrated that this relationship can result in the creation of a large number of new foundations in the federal system of higher education. This is possible because there is a great deal of competition among the departments and their affiliated foundations within federal universities for external funds. Today, some colleges pay overhead fees to foundations that are associated with other colleges. These colleges are in trouble financially because they do not have a private foundation which provides them with direct support. Instead, they must rely on unrelated foundations and are forced to pay administrative fees to them. As a result, there is a growing tendency for all colleges to create their own private institutions to in order to both save and generate resources.

The potential implication is that competition and conflict among departments, colleges, and faculty members within UFC may increase. The lack of control by UFC over the private foundations and associations may also result in a lack of institutional authority over faculty members. The danger is that the colleges whose foundations are particularly close to the market and whose revenue intake is high may determine the policies that UFC should follow. Thus, the faculty members could in effect become independent from UFC and there would be administrative confusion with so many involved in the management of the university. In sum, UFC should regulate the creation of new private institutions and exert financial control over them in order to avoid the kinds of problems discussed here.

The focus of this study has been on the relationship between UFC and its foundations. These results may have particular relevance with regard to policy for the federal higher education system in Brazil. However, it would also be useful to determine whether the findings of the present study would hold for other aspects of this relationship and in other types of public institutions, such as state and municipal universities. It would also be useful to study other mechanisms that account for these relationships.

Finally, it is hoped that this study may also have implications for new research. Scholars involved in the study of academic capitalism, entrepreneurial activities in higher education, the relationship between federal universities and foundations, and a number of other issues concerning the financial aspects of higher education, may find it helpful to use the findings of this study to identify gaps and initiate further research projects.

The evolving relationship between federal universities and the private institutions that work within their campuses can be explained by academic capitalism theory as it has developed in Brazilian public higher education. As such, this study provides additional confirmation of academic capitalism as a global occurrence in which the movement toward the market is driving universities around the world. In addition, it is hoped that this investigation will contribute to the development of new studies of the Brazilian federal higher education system, particularly in terms of the financial aspects of that system.

This study also has implications for the other theories which shaped it. Resource dependency theory was confirmed in that UFC was shown to be dependent on the external resources that its foundations generated in order to survive. It would be useful to build on this by establishing new projects to study the process in which external funds are generated as well as how public universities which partner with private organizations are impacted by their increasingly privatized nature.

In addition, this study is intended to encourage more research in general in this area. As noted previously, many scholars do not write about the relationship between foundations and federal universities because they are deeply involved in this process themselves and are also constrained by the legal aspects of supplementing their salaries outside their universities. Nonetheless, more study could help to bring about greater transparency as well as generate a more constructive national debate about how public higher education can best serve Brazil.

Hopefully, future research will complement this study and help illuminate many of the aspects of this issue which require further analysis. Perhaps additional research will propose a new model for the relationship between federal universities and private organizations, including specific legislation that provides a better framework to guide management and decision makers in these entities. Investigations that study the federal government's role in the development of academic capitalism in federal universities would also be interesting. An analysis of the impact of new legislation proposed by the Ministry of Education which is intended to better control the relationship between federal universities and foundations would be also very significant for higher education in Brazil.

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