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Outsourcing Auxiliary Services in Higher Education: An Integrated Risk Management Model

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Outsourcing Auxiliary Services in Higher Education:

An Integrated Risk Management Model

By

Alfonso A. Quinones

A Dissertation Submitted in Partial Fulfillment of the Requirements for the Degree

Of

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ACCEPTANCE

This dissertation was prepared under the direction of the ALFONSO A. QUINONES Dissertation Committee. It has been approved and accepted by all members of that committee, and it has been accepted in partial fulfillment of the requirements for the degree of Doctor of Philosophy in Business Administration in the J. Mack Robinson College of Business of Georgia State University.

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"In the pursuit of knowledge, the only true wisdom is in knowing you know nothing." –Socrates

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ABSTRACT

Outsourcing Auxiliary Services in Higher Education:
An Integrated Risk Management Model

By

Alfonso A. Quinones

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Managers can explore outsourcing as an alternative to in-house provisioning of various services. Within the realm of higher education on college campuses, institutions deliver auxiliary services directly or indirectly to students, faculty, and staff. These services typically stand apart from the core business of the institution. Outsourcing auxiliary services in higher education has, therefore, been a prevalent practice for decades, encompassing a range of services from food and housing to mental health and wellness centers. These services significantly contribute to students' life experiences and success on campus.

Financially, outsourcing auxiliary services is often viewed as a straightforward solution, driven by fiscal pressures from both the public and private sectors to cut costs, maintain tuition rates, and explore new revenue streams. However, outsourcing comes with its set of challenges, including strategic misalignment, unrealistic expectations, lack of contractor expertise, and insufficient leadership accountability. Moreover, the complex effects of outsourcing on the student life experience are challenging to assess over the long term.

In the absence of proper communication and understanding of the campus community's needs, outsourcing can become counterproductive, negatively impacting how students perceive campus life. Despite the intricacies and high stakes involved, the existing literature offers limited guidance to managers in higher education on navigating outsourcing options and overcoming barriers to successful short- and long-term solutions.

Against this backdrop, this dissertation develops a model for managing risks in outsourcing auxiliary services in higher education. The model is based on a review of relevant literature on outsourcing within higher education and across industries, most notably the IT industry. By integrating insights from diverse sources, the proposed Risk Management Model offers a comprehensive structure for handling outsourcing in higher education. To enhance its practicality, the model incorporates risk areas and items, risk resolutions and actions, and heuristics for applying resolutions to specific risks.

INDEX WORDS: *Outsourcing in Higher Education, Privatization Trends in Higher Education, Risk Management Strategies in Higher Education, Auxiliary Services in Higher Education.*

1 INTRODUCTION

1.1 Auxiliary Service And Outsourcing

In auxiliary services, deal-making can increase revenue for higher education institutions without increasing tuition or fees. These critical auxiliary services, such as food services, security, billing, collection, bookstores, and recreational health facilities, are usually unrelated to instruction or education. In this context, we formally define auxiliary services as having three key characteristics: 1) they are self-supporting, for-profit enterprises; 2) they provide essential support for higher education and the student life experience; and, 3) they play an important role in fulfilling a higher education institution's mission. Auxiliary services augment the campus experience, and when they are successful, they generate vital revenue to decrease the cost of core academic programs (NACUBO, 2003; Zeilenga, 1994).

Institutions engaged in outsourcing procure services from an external source rather than providing them through their own in-house facilities (Gupta & Herath, 2005). Outsourcing has been well documented in business, where a highly competitive market has produced suppliers that successfully offer outsourcing for almost every service or product, including core and non-core business services (Hatonen & Eriksson, 2009). With the emergence of strategic outsourcing in business, organizations began focusing on their core and non-core competencies and on defining strategies to better capitalize on their resources by outsourcing the latter (Quinn, 1999; Shy & Stenbacka, 2003). Although outsourcing is a prevalent practice in both higher education and business, higher education's outsourcing procedures have been far less documented than those in other businesses (Adams III et al., 2004).

1.2 Practical Problem Statement

Outsourcing auxiliary services can offer higher education institutions various intrinsic benefits through the service contract, including cost savings, savings on equipment investments, and additional revenue generation (Blumenstyk, 1998). In addition, outsourcing can bring industry expertise, corporate best practices, and accountable management that can add value to the student life experience (Angelo, 2005; Davies, 2005; Kerekes, 2010; Kirp, 2002; Moore, 2002). Still, challenges in outsourcing exist, including strategic misalignment among the parties involved; unrealistic expectations; lack of contractor expertise; and, lack of leadership accountability, which is a significant concern among public institutions (Bekurs, 2007; Conradson, 2014; Kerekes, 2010; Quigley & Pereira, 2011). Further, without proper communication and identification of the campus community's actual needs, outsourcing can be a counterproductive practice and be detrimental to students' quality of life (Bartem & Manning, 2001; Bekurs, 2007; Dietz & Enchelmayer, 2001).

Our literature review on outsourcing in auxiliary services shows that it has been standard practice in higher education for decades. These institutions once managed activities that have long since been routinely outsourced, including food services, bookstores, student housing, computer services, health care, wellness, security systems, web design, campus maintenance, and alumni relations (Quigley & Pereira, 2011). Today, outsourced services have further diversified to include everything from freshman orientation to substance abuse and financial planning. If higher education institutions are to succeed with service outsourcing, they must take a methodical approach to manage their outsourcing arrangements to ensure that they meet actual needs in the target areas.

Typically, larger higher education institutions operate their own auxiliary services. Current best practice among many other institutions, however, is to outsource or privatize these services in order to remain competitive and control costs while also increasing revenue. The literature suggests that outsourcing is viable if an outside agent can run a better service at a lower cost than the institution itself can provide (Quigley & Pereira, 2011). Further, while the literature offers many reasons for higher education institutions to pursue outsourcing, it also advises that they first carefully consider crucial factors such as human resources and how outsourcing affects employees, financial services quality, legal and ethical considerations, mission and culture, and management control efficiency (Phipps & Merisotis, 2005; Wekullo, 2017).

Providers of specialized university services aggressively market themselves. For years, these providers have tailored their services for higher education needs (Gilmer, 1997; Mercer, 1995), particularly in commonly outsourced areas such as food service and bookstore operations. The literature on outsourcing offers higher education administrators plentiful material focused on topics such as negotiations (Bartem & Manning, 2001; Davies, 2005), general management (Frølund et al., 2018; Gupta & Herath, 2005), general considerations (Gilmer, 1997; Kerekes, 2010; Kirp, 2002; Mercer, 1995; Zeilenga, 1994), relationships with outsourcing companies (Frølund et al., 2018; Moore, 2002), and pre-and past-outsourcing experiences (Adams III et al., 2004; Bekurs, 2007; Gehrke & Kezar, 2015; Glickman et al., 2007; Gupta & Herath, 2005; Quigley & Pereira, 2011; Wekullo, 2017; Wertz, 1995).

The literature offers mixed results on the effect of outsourcing in higher education, including some positive, some negative, and some that show no significant effect. The overall benefit of outsourcing is to reduce costs and increase efficiencies (Wekullo, 2017), but there is also no

guarantee that outsourcing will work in the long run as outsourcing providers routinely increase their service prices (Glickman et al., 2007). So, while outsourced services are often fundamental to an institution's function and student quality of life, the literature fails to address how higher education institutions can manage risks in outsourcing.

General outsourcing literature offers key information on the risks associated with outsourcing contracts, including strategic risks related to vendors' opportunistic behaviors or actions and operational risks that are caused by operation complexity over time (Aron et al., 2005). Moreover, the outsourcing industry has evolved in industries such as information technology, supply chain, and manufacturing, with significant changes in both practical and research areas (Hatonen & Eriksson, 2009) that are essential to advancing the literature on outsourcing in higher education. Even though outsourcing in higher education has been practiced for years, literature specific to its context does not represent the same level of advancement as outsourcing in other industries.

When evaluating and selecting providers, higher education institutions must review actual and future financial scenarios while also considering monitoring practices, expectations, and how to exit the contract should an unsuccessful transition occur (Wertz, 1995). Having a model for managing outsourcing risks would allow these institutions to manage the risk in contracting, manage the contract over time, and mitigate future risks that can affect student quality of life and the institution's position in the community it serves (Bekurs, 2007; Dietz & Enchelmayer, 2001; Quigley & Pereira, 2011). To this end, we have developed a *Risk Management Model* for higher education institutions. Our model includes guidelines to identify risk areas and items, risk resolutions and actions, and heuristics for resolving risks (Ali et al., 2017; Iversen et al., 2004; Mathiassen et al., 2007). Using this model will help administrators and institutions understand the

risks related to an outsourced service, better evaluate the capabilities of various contractors, choose a contractor that can best meet student needs and institutional goals, and manage the relationship with that contractor once it is established.

1.3 Research Design

In the area of outsourcing, reviewing relevant literature is a complex process. Because this is a multidisciplinary research area, relevant information comes from diverse industries and sources, and the topic is often addressed in fragmented ways. A careful, methodical approach is required to contend with these challenges and capture advanced knowledge on the specific topic of outsourcing auxiliary services in higher education (Snyder, 2019).

Utilizing the model for designing engaged scholarship suggested by Mathiassen (2017) (Table 1), we found that a systematic literature sampling was the best approach, coupled with a comprehensive, transparent analysis of the empirical findings. Hence, our review focused on evaluating and integrating previous work in these areas to develop concepts for practice and future research (Booth et al., 2016; Cooper et al., 2018; Webster & Watson, 2002; Xiao & Watson, 2019).

To create our model, we first outlined the *risk areas* to facilitate understanding of them at all levels of an institution; we then outlined *risk resolutions* related to core competencies. Hence, our risk management model includes guidelines to identify *risk areas and items*, *risk resolutions and actions*, and *heuristics* for relating resolutions to risks (Ali et al., 2017; Iversen et al., 2004; Mathiassen et al., 2007; McFarlan, 1989). We elaborated a coding cycle guided by data analysis methods (Huberman & Miles, 2002) to identify these guidelines based on the selected literature.

Table 1 Research Design (Mathiassen, 2017)

Element	*Definition*	*Specification*
Journal	The target journals define the audience and conversation surrounding the research.	• The Journal of Higher Education • Journal of Education Policy and Management • International Journal of Education Management
Title	The article title expresses the essence of the research design, with emphasis on the contribution.	Outsourcing Auxiliary Services in Higher Education: An Integrated Risk Management Model
P	The problem (P) setting represents the stakeholders' concerns in the context of a real-world problematic solution.	Higher education institutions use outsourcing for most of their auxiliary services. However, no risk management model—or any other model—exists to help guide them in successfully choosing and managing service providers.
A	The area (A) of concern represents some body of knowledge in the literature that relates to P.	Outsourcing auxiliary services in higher education institutions
F	The conceptual framing (F) helps structure collection and analyses of data from P to answer RQ; Fa draws on concept from A, and Fi draws on concepts independent of A.	• Risk Management Theory • Risk areas and items • Risk resolutions and actions • Heuristics for applying resolutions actions to risks
M	The method (M) details the approach to empirical inquiry, and specifically to data collection and analysis.	Conduct a literature review to develop the model, starting with a comprehensive search and then filtering to identify both key empirical literature on outsourcing auxiliary services in general and key literature in specific areas of auxiliary services in higher education that address outsourcing risks in some way. Develop the model based on insights from the literature.
RQ	The research question (RQ) relates to P, opens for research into A, and helps ensure the research design is coherent and consistent.	How can higher education institutions manage risks in outsourcing of auxiliary services?
C	Contributions (C) influence P and A, and possibly also F and M.	An integrated model for managing risks in outsourcing auxiliary services in higher education institutions with guidance for how to use the model in practice.

2 THEORETICAL BACKGROUND

In higher education, auxiliary services such as food services, campus stores, parking, bookstores, student housing, computer services, health care, wellness, security systems, web design, campus maintenance, alumni relations, and intercollegiate athletics are self-supporting enterprises that exist as departments within the institution. These departments produce goods or services for students, faculty, staff, and other departments and, incidentally, for the public. The distinguishing characteristic of an auxiliary services department is that it operates and is managed as a self-supporting activity. The revenue generated is part of the overall college attendance fees and is distinct from the tuition that specifically addresses the department's product or service costs. Generally, its income consistently matches or surpasses its expenses over time, although there might be occasional deficits in individual years.

With the breadth of services and support they provide, auxiliary services play an essential part in helping higher education institutions achieve their larger goals (NACUBO, 2003). Blumenstyk (1998) found that outsourcing auxiliary services can offer these institutions various benefits intrinsic to the service contract, including cost savings, savings on equipment investments, added labor expertise, and additional revenue generation.

The higher education outsourcing services market is highly competitive, and it is increasingly focused on non-core activities. Given this, practitioners and researchers alike have evaluated auxiliary services in higher education institutions (Hatonen & Eriksson, 2009). As the literature notes, many activities that institutions once managed in-house have been routinely outsourced for decades, including food services, campus stores, parking, bookstores, student housing, computer services, health care, wellness, security systems, web design, campus maintenance, alumni

relations, and intercollegiate athletics (Adams III et al., 2004; Quigley & Pereira, 2011). Today's outsourced services have further diversified and play an even broader role in campus life; they include everything from freshman orientation to substance abuse clinics and financial planning.

2.1 Funding Challenges And Privatization

The literature identifies financial constraints as the main reason that higher education institutions turn to auxiliary services outsourcing (Bekurs, 2007; Glickman et al., 2007; Gupta & Herath, 2005; Johnstone, 1999; Kerekes, 2010; Wekullo, 2017). These constraints include restrictive funding and tuition-control policies, which force public and private higher education institutions to reduce their budgets. The resulting need for additional funds is thus a primary driver of outsourcing, which can generate revenue and help institutions avoid capital investments.

When these budget restrictions are combined with the sophistication of students as consumers in the education marketplace, it exerts considerable pressure on higher education institutions to outsource various services so that they can focus more on competitiveness in their core competencies (Bekurs, 2007; Conradson, 2014; Gilmer, 1997; Glickman et al., 2007a).

These factors have led to an increase in outsourcing and the accompanying increase in private enterprise in higher education. As researchers note, institutions that create too great a role for private enterprises and their norms and characteristics on-campus risk transforming the *student* concept into a *consumer* concept (Johnson & Graman, 2015; Lerner, 2008). Further, as Gilmer (1997) found, in addition to fiscal stress, the increase in privatization on campuses results from political change and declining confidence in higher education.

Opponents of privatization, such as Kerekes (2010), argue that the increase in private enterprises on campus risks diminishing student life experiences related to community building around the educational mission; opponents also find that private enterprise growth has the greatest negative impacts on low-income groups. For example, the housing shortage in many college towns has not gone unnoticed by private enterprises. With significant upfront investment and the agreement of higher education institutions, private corporations often develop higher-end apartment complexes to fill this housing need. In some cases, universities rent out their land to pass savings to students in the short term. In the long term, however, these buildings end up being more expensive than traditional student housing, which elevates students' cost of living and has a significant detrimental impact on low-income students (Laidley, 2014).

Glickman et al. (2007) described a different complication with outsourcing at George Washington University, where the student body's dissatisfaction with the outsourced dining services related to the contractor's labor and food offerings. Further, at some fundraising events, the contractor reduced labor to increase its revenue, which impacted the university's ability to provide meaningful experiences to prominent donors (Glickman et al., 2007).

2.2 Outsourcing Benefits And Challenges

The literature shows that outsourcing services offer many benefits to institutions, including industry expertise, corporate best practices, and accountable management, by adding value to the ever-important student life experience (Angelo, 2005; Davies, 2005; Kerekes, 2010; Kirp, 2002; Moore, 2002). Researchers also found that outsourcing services can help free up an institution's assets and reduce costs, producing immediate savings in operational expenses (Harland et al.,

2005). In addition to these benefits, Herath et al. (2006) found that outsourcing can improve labor management, risk and liability, scale economies, and capital investments.

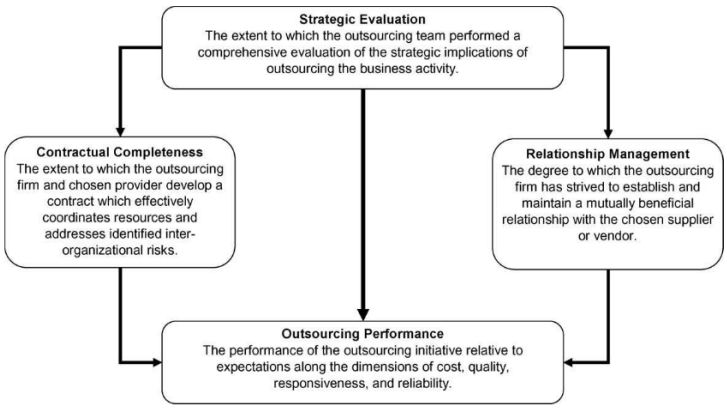
The literature also highlights challenges in outsourcing, including strategic misalignment among the parties involved; unrealistic expectations; a lack of contractor expertise; and, a lack of leadership accountability, which is a significant issue for public institutions (Eddy & Spaulding, 1996). Further, without proper communication and identification of the campus community's actual needs, outsourcing can be counterproductive and actually decrease students' quality of life due to lower-quality services, reduced collaboration, loss of in-house expertise, loss of continuity, and cost increases (Herath & Ahsan, 2006). Managing outsourcing relationships and contracts can be problematic as well (Bekurs, 2007; Dietz & Enchelmayer, 2001; Richard & Sherry, 2001).

Given the complexity of outsourcing, before they sign contracts, institutions should consider potential issues, including opportunistic behavior, vendor dependence, and possible changes in the environment (Barthélemy & Quelin, 2006).

Institutions must also have a clear understanding of their core competencies and competitive advantages and shift their management skillset from operator to contract manager (Barthélemy, 2003; Lok & Baldry, 2015). In describing the challenges and complexity of outsourcing contracts, Barthélemy et al. (2006) noted that good contracts should be relationship-detailed and be linked to specific assets, be sufficiently dense, and induce *ex-post* transaction costs. The contract should also describe the rules of the process, including flexibility for long-term uncertainty and changes, and include incentive clauses to create a structure for a healthy relationship between the parties (Barthélemy & Quelin, 2006).

Further, Barthélemy (2003) defined outsourcing's seven deadly sins as follows: 1) outsourcing activities that should be sourced in-house; 2) selecting the wrong vendor; 3) writing a poor contract; 4) overlooking personnel issues; 5) losing control over the outsourced activities; 6) overlooking the hidden costs; and, 7) failing to plan an exit strategy. When such sins are avoided and outsourcing is used in a strategic way, it can help organizations focus on their core competencies to increase their critical skills and their competitiveness in areas beyond the core business (Gupta & Herath, 2005; Quinn & Hilmer, 1994). To achieve this, Handley and Benton (2009) outlined key steps for managing outsourcing challenges, including developing and managing cooperative relationships among the parties to help ensure that they not only complete contracts but perform well in the process (Figure 1). Outsourcing requires strong communications and relationships with outsourcing partners and developing and maintaining high-level involvement so that both parties succeed and achieve a win-win situation in every scenario (Bartem & Manning, 2001).

Figure 1 Conceptual Model of Managing Outsourcing Challenges (Handley & Benton, 2009)



2.3 Other Outsourcing Literature

A literature review is often used to unify concepts from the knowledge of highly developed and advanced industries and apply it to less-developed industries (Snyder, 2019; Torraco, 2005; Webster & Watson, 2002; Xiao & Watson, 2019). Given this, our review included literature on general outsourcing for three reasons: 1) general outsourcing has well-known literature on proven tactics for managing and aligning relationships based on organizational strategy; 2) general outsourcing can use risk management as a tool to select and manage partners; and 3) other industries widely use risk management as a tool to manage operations and strategic decisions. Using outsourcing literature from more developed industries enriched our understanding and use of outsourcing in auxiliary services in higher education institutions.

The literature on strategic outsourcing enriched our findings, emphasizing suppliers' markets are imperfect and entail risks for both parties. Indeed, in some cases, the outsourcing process itself might be more complex and expensive than simply keeping or starting the operations in the house (Quinn & Hilmer, 1994). Strategic outsourcing has clear boundaries and motivations in the corporate world, and its goal is typically two-fold: to reduce costs and create a competitive advantage in organizational strategy (Quinn & Hilmer, 1994; Shy & Stenbacka, 2003). Moreover, outsourcing practice and theory have evolved over the years from cost as the main driver to the increase in skills or operational flexibility as the top priority. The literature also has increasingly promoted a cooperative approach to managing vendor relationships (Hatonen & Eriksson, 2009).

2.4 Our Positioning

For inspiration, we turned to Van de Ven's (2007) model of engaged scholarship. This model's central mission is to utilize different perspectives from key stakeholders and scholars to produce

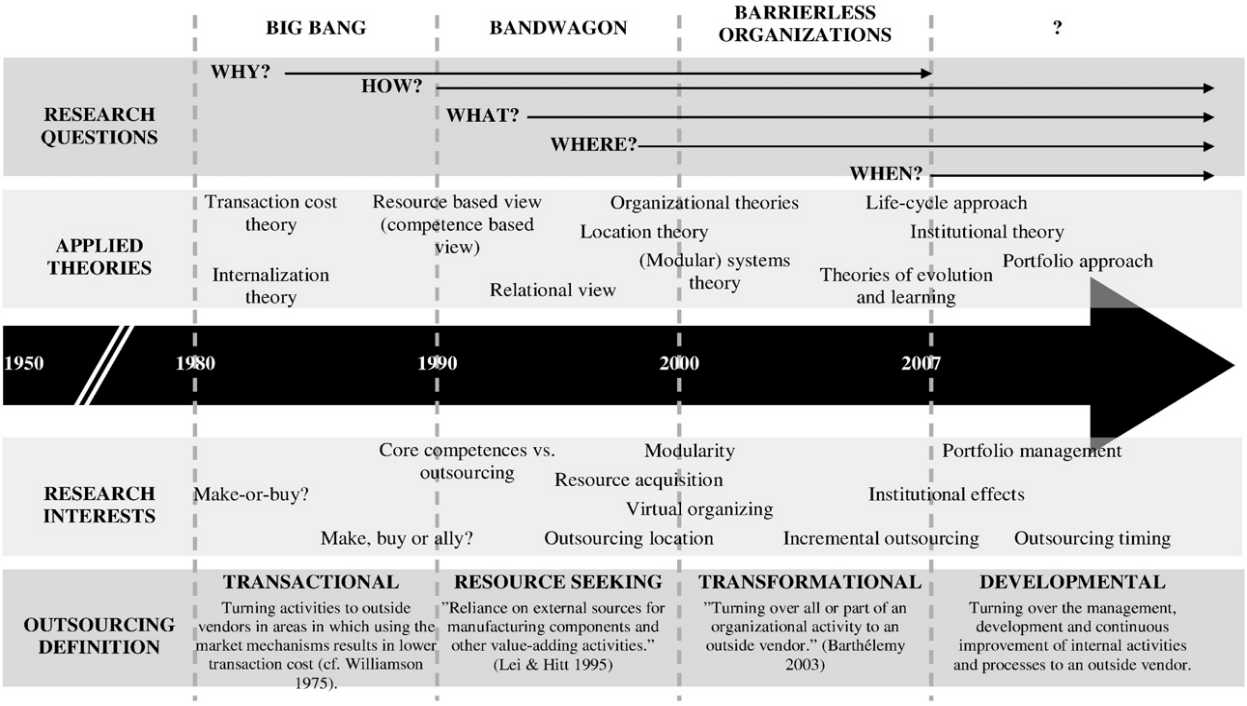
knowledge and to solve complex problems by integrating stakeholder input to produce a collaborative effect that will contribute to both theory and practice (Van de Ven, 2007). To apply the principle of engaged scholarship to our research, we used all key components of Mathiassen's (2017) template in Table 1 to evaluate real-world problems and to integrate key stakeholders. We identified our research's key components, which led to our initial research design and directed our application of engaged scholarship (Mathiassen, 2017). Finally, we examined the development of outsourcing in different industries to transfer knowledge and practice to higher education. We used this information to inform outsourcing's use as a cutting-cost tool as well as to create our Risk Management Model with related practical guidance to improve institutions' ability to acquire new capabilities and create strategic and structural change (Linder, 2004).

Research shows that to succeed with service outsourcing, higher education institutions must first take a methodical approach to determine their actual needs (Glickman et al., 2007; Johnner, 2008). Despite a thorough examination of auxiliary services in higher education literature, we found no practical tools to support such an approach. Indeed, rather than methodically examining actual and anticipated needs, multiple studies found that institutions' main motivations for outsourcing are reactive—that is, they typically pursue outsourcing in reaction to financial crises or the failure of in-house services (Adams III et al., 2004; Glickman et al., 2007; Lok & Baldry, 2015; Nicklin, 1998).

In contrast, the literature on general outsourcing shows a timeline of evolving motivation, from outsourcing to reduce costs in the early '90s to outsourcing as an integral part of strategic growth today (Espino-Rodriguez & Padron-Robaina, 2006; Hatonen & Eriksson, 2009; Shy & Stenbacka, 2003). We found no such formalized pattern of evolution to outsourcing auxiliary services in higher

education. In our view, identifying such an evolution is essential as it will delineate the path both to better risk mitigation and better decision-making, as Figure 2 shows**.** Analyzing the past to predict the future (Webster & Watson, 2002; Xiao & Watson, 2019) is essential to defining better practices and theoretical foundations, which will enrich engaged scholarship (Van de Ven, 2007).

Figure 2 Evolution of Outsourcing Research (Hatonen & Eriksson, 2009)



Further, as Figure 3 shows, the literature on general outsourcing includes a risk management framework for identifying risks and benefits (Aron et al., 2005; Harland et al., 2005). In general, outsourcing, the forms of risk, and the measurement of capabilities are clearly defined in both theoretical and practitioner journals (Aron et al., 2005; Feeny et al., 2005; Harland et al., 2005). In contrast, the literature on auxiliary services in higher education shows no documented history of using or evaluating any such tools in the outsourcing decision-making process.

Figure 3 Risk Taxonomy for General Outsourcing (Aron et al., 2005)

Type of risk	Elements that constitute the risk type
Strategic risks	Risks that result from opportunistic behavior of one or both parties (buyer and supplier).
Operational risks	Risk of suboptimal output that results from a variety of cases, including complexity of operations, geographic separation between client and vendor, and the limitations of the communications and transmission systems between the two.
Intrinsic risks of atrophy	Over time, as a company outsources an activity completely, it loses the core group of people who were familiar with the activity and have the expertise to execute the activity in-house.
Intrinsic risks of location	Caused by moving activities to remote locations. These include geopolitical risks, sovereign risk, or exchange rate risk. These are risks associated with different regions with their different sociopolitical systems and different historical contexts.

To address this, we developed a Risk Management Model based on extant literature and the approaches of more developed and rapidly evolving industries. Our model contributes to the work of both theorists and practitioners. We identify and outline the area of auxiliary services in higher education and the need to rapidly advance our own knowledge base in this area. Our work opens new avenues for future research using practical, useful tools to skillfully approach the complex problem of outsourcing auxiliary services in higher education institutions.

3 THEORETICAL FRAMING

In this chapter, we describe the theoretical framework we have used as basis for this dissertation research. As Kliem (1999) notes, outsourcing and risk management entail capturing moments in time and using them as a lens to foresee what lies ahead. Our research and resulting Risk Management Model is inspired by Kliem's model (1999), which offers an analytical approach for identifying risks in outsourcing contracts.

We are also inspired by work in information systems. Over the past 30 years, information systems literature has notably progressed in amalgamating models of outsourcing, risk management, process improvement, and project management. To establish our model, we assessed several risk management models applied to information systems and combined them with Kliem's basic principles (1999).

Information systems employ classical approaches to risk management. Managers utilize these approaches to systematically address various technology-related risks, incorporating sequential attention and interventions. These approaches include socio-technical models that encompass tasks, structures, technology, and actors (Lyytinen et al., 1998).

Lyytinen et al. (1998) detail managers' utilization of the classical models, incorporating McFarlan's portfolio approach, which emphasizes a robust connection between general management and information system management (McFarlan, 1989). Davies' contingency approach is also highlighted, guiding the selection of strategies for information system requirements by considering human constraints during the exploration of requirements (Davis, 1982). Boehm's software risk approach, coupled with the Spiral Model, excels in its capacity to accommodate existing features and adapt to modifications. This approach stands out as a strong

choice, offering a well-rounded blend of new, existing, and mixed approaches (Boehm, 1988). Lastly, Alter and Ginzberg's information system implementation approach delineates steps that form associations or potential risks within a project. This not only identifies these relationships but also outlines strategies for mitigating and reducing the associated risks. It's a comprehensive approach that addresses both the interconnected steps and the measures to effectively manage the inherent risks (Alter & Ginzberg, 1978).

3.1 Outsourcing Theory

Outsourcing can help relieve some of the burdens of complex activities, especially those residing beyond an organization's core competencies. The literature is notably scarce on outsourcing contracts and risk management in the higher education sector. This gap led us to build on the information systems, outsourcing, and risk management literature. However, the scope of such a combination is constrained by limitations in the existing literature (Aubert et al., 2005; Gefen et al., 2008; Kliem, 1999; Koh et al., 2004; Lee et al., 2012; Lonsdale, 1999), which does not address risks related to outsourcing contracts and execution. We therefore found that a methodical, prevention-focused approach could help higher education institutions to avoid escalation of outsourcing incidents and difficulties.

Outsourcing a contract is a complex process, and its appeal can be misleading given that a poorly executed end service can destroy an organization's reputation (Davies, 2005). As noted earlier, Barthélemy (2003) described critical incidents in the outsourcing process as the "seven deadly sins." Although organizations rarely report such incidents, the seven sins address common issues that are all too common (Barthélemy, 2003). Table 2 describes the lessons that Barthélemy learned in his research on these sins.

Table 2 The Seven Deadly Sins of Outsourcing and Lessons Learned (Barthélemy, 2003)

Timetable	*Deadly Sin*	*Lessons Learned*
Original idea to outsource	Outsourcing activities that should not be outsourced	Only activities that do not belong to the core business can be safely outsourced. The core vs. non-core approach can be implemented both at the firm and activity levels.
	Selecting the wrong vendor	Outsourcing clients should look for vendors that are able to provide state-of-the-art solutions and are trustworthy.
	Writing a poor contract	The contract is the main tool to establish a balance of power in outsourcing relationships. Good contracts are precise, complete, balanced, and flexible.
Beginning of the relationship	Overlooking personnel issues	Loss of key employees and lack of commitment can seriously threaten the viability of outsourcing efforts. However, good communication and ethical behavior toward employees can help avoid such problems.
	Losing control over the outsourced activity	To maintain control over outsourced activities, clients must retain a small group of qualified managers. An active management of the vendor is also crucial.
	Overlooking the hidden costs of outsourcing	Hidden costs (i.e., search, contracting, and managing costs) can threaten the viability of outsourcing efforts. Hidden costs are likely to be lower when commodities are outsourced.
Vendor switch or reintegration of tailing (plan an exit strategy of the outsourced activity)	Failing to plan an exit strategy	The end of the outsourcing contract must be planned from the outset. Building reversibility clauses into the contract is crucial.

Some practitioners realize that outsourcing advantages can turn into disadvantages once the contract has been signed. Outsourcing is a transformative process; as such, it demands a strategic implementation framework, and it should be managed and executed with a strategic, systematic

approach (Nolan & McFarlan, 1995). Selecting vendors is a complex process, and incorrectly weighting outsourcing criteria can be a starting point of failure (Wadhwa & Ravindran, 2007). In addition to having clear vendor-selection criteria, it is critical to consider compatibility, quality cost, and risk factors using an inclusive, methodical approach with all contract stakeholders (Liou & Chuang, 2010).

Managerial studies show that the relationship between vendor and contractor must be optimal, flexible, and self-incentivized (Quinn, 1999). Such a relationship is essential, especially when contracts fail or enter risky terrain (Barthélemy & Quelin, 2006).

Given the dynamism of outsourcing services, success requires careful management of the customer relationship, focusing on the psychological state of both parties involved (Koh et al., 2004). As Koh notes, the relationship must fulfill the obligations of both parties. We argue that giving practitioners a clear management model helps them more easily fulfill a contract by clarifying terms, responsibilities, and potential difficulties, as well as outlining immediate resolutions.

Table 3 describes the phases of outsourcing contracts and the risks inherent in each phase as the contracting process evolves; this material both inspired our model and served as the starting point for our coding criteria. Our work if further informed by Kliem's (1999) description of three types of risk management that are useful in the outsourcing context.

1) *Risk identification* of three areas of risk: 1a) financial risk—i.e., the cost of maintaining, negotiating, and concluding agreements; 1b) legal risk—litigious issues that may arise prior to and after negotiating an agreement; and 1c) operational risk—issues related to the ongoing management of an agreement.

2) *Risk analysis* using three basic approaches: 2a) quantitative, 2b) qualitative, and 2c) a combination of the two.

3) *Risk control*, which falls into three categories: 3a) preventive controls to mitigate the threat from exploiting a project's vulnerabilities; 3b) detective controls, which disclose an event's occurrence and preclude similar future exploitation; and 3c) corrective controls that require addressing a threat's impact and then establishing controls to preclude any future impacts.

Table 3 Sample Risks Across Outsourcing Contract Phases (Kliem, 1999)

Phases	*Risk*
Determine the business case for or against outsourcing	Using incorrect data
Search for vendors	Using a limited selected list
Select vendors	Entering biases into the selection
Conduct negotiations	Not having the right people participate in the negotiations
Consummate agreements	"Caving in" to an unfair agreement
Manage agreements	Providing minimal expertise to oversee the agreement

3.2 Risk Management Theory

Risk management theory has been widely adopted in areas such as warfare, nuclear reactors, financial investments, and information systems (Ali et al., 2017; Khan et al., 2021; Mathiassen et al., 2007). The risk concept relates to variations and unexpected outcomes; to mitigate these, we use risk management theory. In rational decision theory, the risk concept reflects the variation in the distribution of possible outcomes, likelihoods, and subject values (Arrow, 1965). When we evaluate actual risks, however, managers follow less precise probability calculations; their main

threat is the one that leads to the poorest performance, and they measure success by their ability to avoid bad outcomes in practice (Lyytinen et al., 1998).

Management requires making choices, which in turn requires taking risks. While it is possible to minimize risk, it is impossible to avoid it altogether (MacCrimmon et al., 1988). Managers rely on experiences rather than taking a more calculated approach—particularly in scenarios with limited time, where statistical parameters and measures are not always easy to build. When attempting to anticipate risk, however, a methodical approach with specific steps is the most useful.

Researchers note that organizational learning favors less risky alternatives—and thus, the status quo—in pursuit of positive outcomes; this results in a substantial learning disadvantage in relation to more risky alternatives (Cyert & March, 1963). In most organizations, however, success provides managers with more confidence in risk-taking, which can result in greater experimentation (Levitt & March, 1988). Using simulations, Denrell and March (2001) identified risk management as a trial-and-error practice in organizations that results in more learning linked to risk avoidance for gains than for losses, especially when organizations are in competitive tabs and managers have gained self-confidence after a series of successful maneuvers that can create bias in the process for future decision-making.

We previously delved into the evolution of diverse domains beyond higher education, as Figure 2 shows. Our exploration extends to the evolution of outsourcing over the years. Additionally, we have scrutinized the advancement of risk management within information systems, investigating its application in contemporary practical solutions as evidenced in the literature and tracking its subsequent developments.

We found that McFarlan's (1981) risk management framework was used as conceptualized in several highly cited research papers over the years (Ali et al., 2017; Khan et al., 2021; Lyytinen et al., 1998; Mathiassen et al., 2007), and that using three overarching risk areas and four overarching risk resolutions helps establish a clear link between the identified risk areas and their corresponding resolution domains. As such, McFarlan's framework provides a robust and flexible strategic approach to risk management within the IT industry. Resolution areas include external integration to establish connections with stakeholders; internal integration for smooth collaboration within the team; formal planning for task scheduling; and formal control focusing on the post-deployment phase.

Lyytinen et al. (1998) outlined several considerations regarding risk management, aligning them with the behavioral concept of risk in the dynamic and uncertain landscape that managers navigate. Lyytinen et al. proposed adopting a social-technical approach for mitigating software-related risks. This involves addressing questions such as: What aspects should be observed and monitored in a social-technical system regarding software risk? How can one manage observed variations in the socio-technical system through risk resolution actions? They also explored heuristics, defining a format for rules that map software risk items to resolution actions—essentially, guiding actions when specific incidents are observed.

Iversen et al. (2004) identified four generic types of approaches to risk management. Table 4 summarizes these approaches and includes examples of highly cited approaches from the literature for each type. This not only served as a comprehensive evaluation criterion for our work, but it also played a crucial role in reinforcing and substantiating our decision to choose McFarlan's (1989) risk-strategy model as template.

Table 4 Four Approaches to Software Risk Management (Iversen et al., 2004)

Type of Approach	*Characteristics*	*Assessment*	*Exemplars*
Risk list	A list of prioritized risk items	+ Easy to use + Easy to build + Easy to modify + Risk appreciation – Risk resolution – Strategic oversight	(Barki et al., 1993; Keil et al., 1998; Moynihan, 1996; Ropponen & Lyytinen, 2000)
Risk-action list	A list of prioritized risk items with related resolution actions	+ Easy to use + Easy to build + Easy to modify + Risk appreciation + Risk resolution – Strategic oversight	(Alter & Ginzberg, 1978; Boehm, 1991; Jones, 1994; Ould, 1999)
Risk-strategy model	A contingency model that relates aggregate risk items to aggregate resolution actions	+ Easy to use – Easy to build – Easy to modify + Risk appreciation + Risk resolution + Strategic oversight	(Donaldson & Siegel, 2001; Keil et al., 1998; McFarlan, 1989)
Risk-strategy analysis	A stepwise process that links a detailed understanding of risks to an overall risk management strategy	– Easy to use – Easy to build + Easy to modify + Risk appreciation + Risk resolution + Strategic oversight	(Davis, 1982; Mathiassen et al., 2000)

Mathiassen et al. (2007) extended the work of Lyytinen et al. (1998) and McFarlan (1989) by introducing an integrative contingency model for software requirement development. This model is designed to analyze risks in requirements development, incorporating elements such as requirement development techniques and heuristics. The goal is to integrate the literature on requirement development models and provide practitioners with a comprehensive framework for managing risks in requirement development projects. Figure 4 and Table 5 illustrate the approach and practitioner guidance.

Figure 4 The Proposed Systems Approach to Fit (Mathiassen et al., 2007).

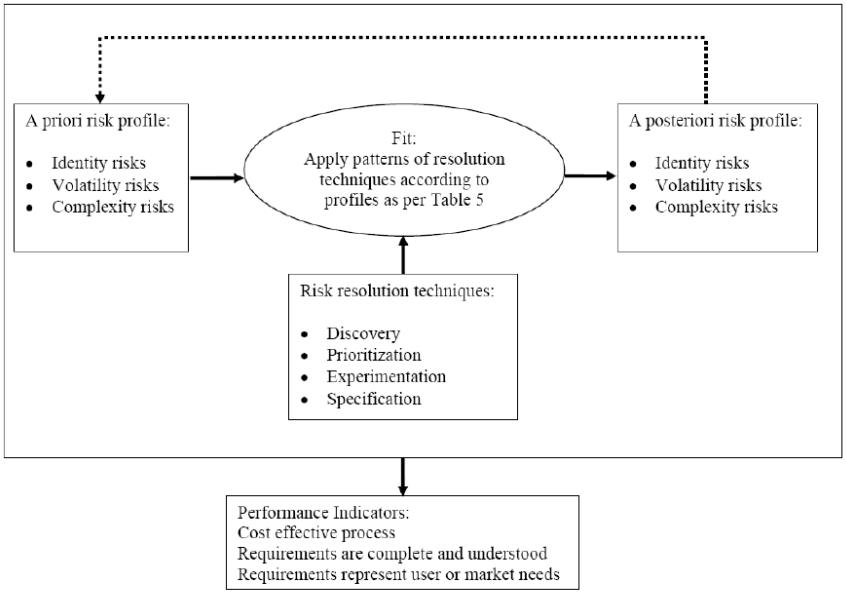


Table 5 Linking Risk Profiles to Resolution Patterns (Mathiassen et al., 2007)

Profile	*Identity*	*Volatility*	*Complexity*	*Discovery*	*Prioritization*	*Experimentation*	*Specification*
1	High	High	High	High	Low	Medium	Medium
2	Low	High	High	Low	High	High	Medium
3	High	Low	High	High	Low	Low	Medium
4	High	High	Low	High	Low	Medium	Low
5	Low	Low	High	Low	High	Low	High
6	Low	High	Low	Low	High	High	Low
7	High	Low	Low	High	Low	Low	Low
8	Low	Low	Low	Low	Medium	Low	Low

Ali et al. (2017) adopted a risk management model for cloud-based business services, drawing inspiration from McFarlan (1989) and Mathiassen et al. (2007). They extended the framework to offer practitioners a strategic risk model for effectively managing risks within the realm of cloud-based business services. This model equips practitioners with risk strategies tailored to the context, and owing to the rapid pace of technology, it provides an adaptable and intuitive framework in Table 6. The model proposes that each risk should be categorized with the appropriate emphasis—

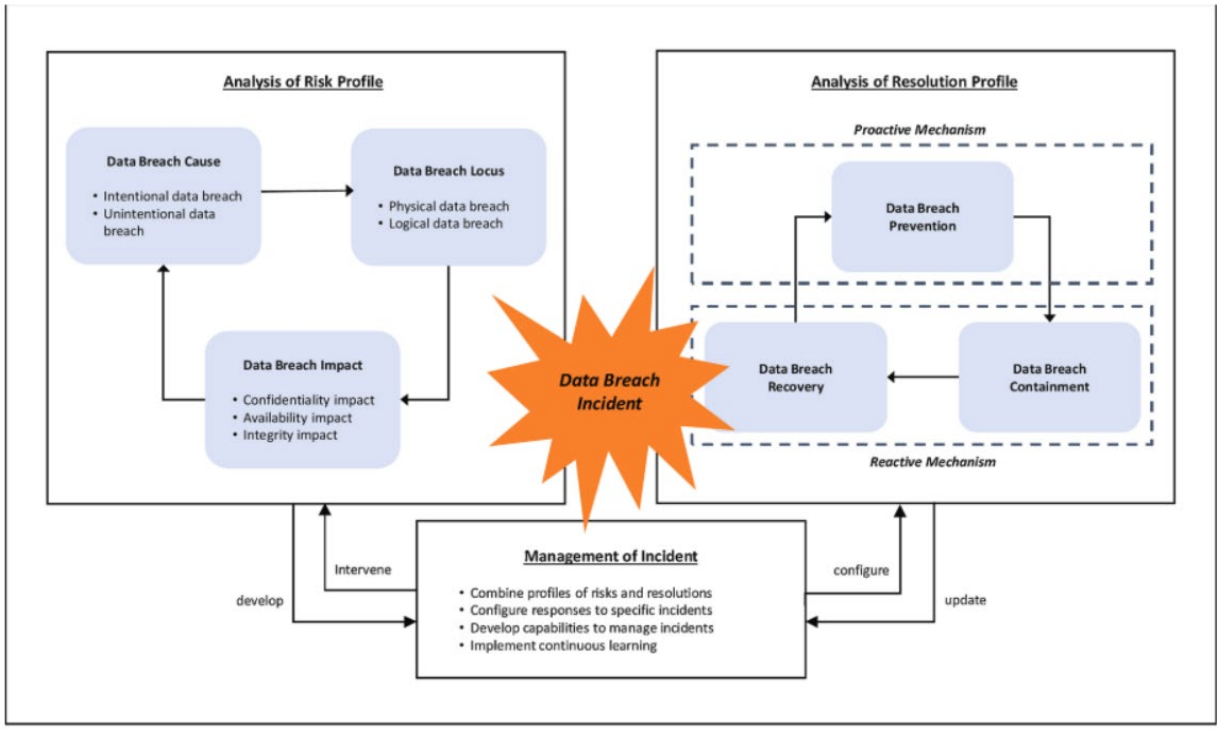
high, medium, or low—based on the resolution actions. This categorization holds significance for both practical application and theoretical comprehension (Ali et al., 2017).

Table 6 Risk Management for Cloud-Based Business Services (adapted from McFarlan, 1989)

Risk Type				Innovation Approach			
Profile	Service Risk	Technology Risk	Process Risk	Stakeholder Engagement	Technology Development	Innovation Planning	Innovation Control
1	Low	Low	High	Low	Medium	High	High
2	Low	Low	Low	Low	Low	Medium	High
3	Low	High	High	Low	High	Medium	Medium
4	Low	High	Low	Low	High	Low	Low
5	High	Low	High	High	Medium	High	High
6	High	Low	Low	High	Low	Medium	High
7	High	High	High	High	High	Low	Low
8	High	High	Low	High	High	Low	Low

Khan et al. (2021) expanded on Lyytinen's framework by synthesizing their data breach model, which builds upon the three key elements proposed by Lyytinen et al. (1998) and Mathiassen et al. (2007): risk areas and items, risk resolutions and actions, and heuristics. Figure 5 shows the adaptation, which illustrates how risk management approaches align with the causal dependencies of risky incidents, such as data breaches and losses. Resolution categories involve a strategic intervention plan to mitigate the impact of these incidents. Figure 5 also contributes to the formal decision-making process and enhances effective navigation of the environment. Together, these three components collectively constitute the planning elements of the risk management theory advanced by Khan et al. (2021).

Figure 5 Integrated Risk Model for Data Breach Management (Khan et al. in 2021)



3.3 Theoretical Framework And Model Choice

As we noted earlier, during our early literature review stages, we found no mention of a framework that offered a practical approach to outsourcing risk management in our target industry. We therefore directed our attention to the social-technical approaches suggested by Lyytinen et al. 1998, McFarlan 1981 and Iversen et al. (2004). We found these well suited to our purposes and widely used in information systems literature on risk management, outsourcing, and organizational change management. This framing is also used in research areas that are more impactful and developed than higher education, so using the approach can help to advance knowledge.

Accordingly, our review and resulting model is rooted in IT risk management theory, with a focus on outsourcing in general and in auxiliary services in particular. We explored various risk management approaches (Table 4), honing in on a risk-strategy model that is easy to use and

provides strategic oversight over risks, resolutions and the links between them. This model underscores in a compact format how changes in social-technical components can impact processes, emphasizing the potential for failure or loss. We also relied on Kliem's perspective on the significance of risk management in outsourcing agreements, which illuminates the associated administrative challenges. As outlined in Table 3, Kliem's risk management assessment helped to shape our proposed model. Hence, drawing on insights in risk management and the review of extant literature, our framework outlines three interactive stages and their subcategories for outsourcing auxiliary services in higher education: risk areas and items (operational risk, contracting risk, and financial risk); the related resolutions and actions (stakeholder relationship actions, value proposition actions, financial arrangement actions, and provider selection actions); and heuristics to align them. Figure 6 shows the general structure of our risk management approach, offering a schematic analysis of resolutions and profiles applied to outsourcing incidents. Together with Table 7, Figure 6 summarizes the model's primary categories and subcategories, outlining the heuristics that govern the risk areas and resolutions actions.

Figure 6 Our Risk Management Model for Auxiliary Services

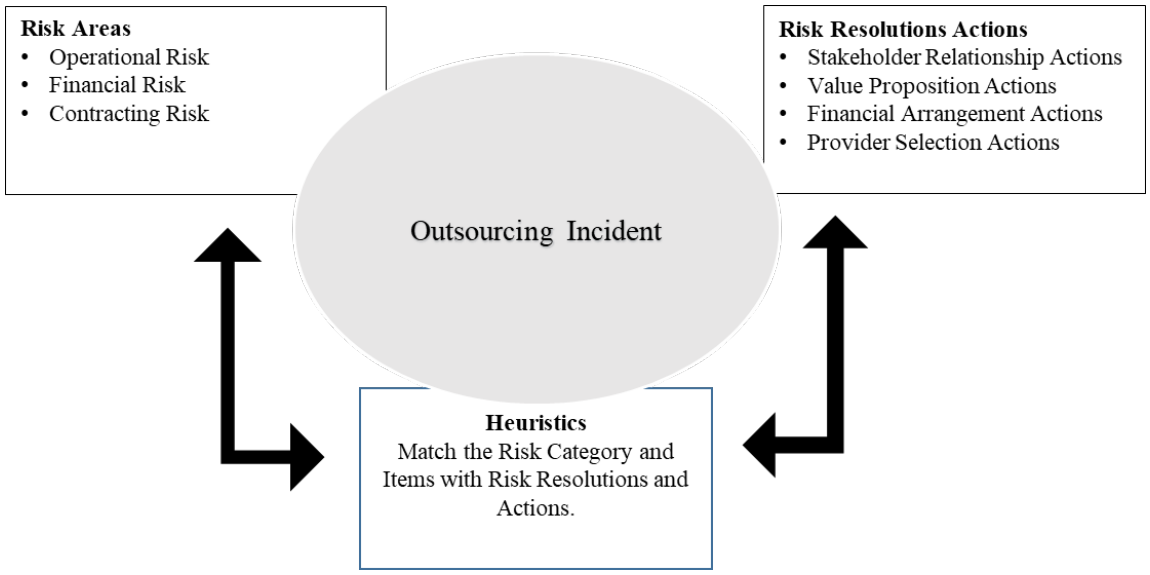


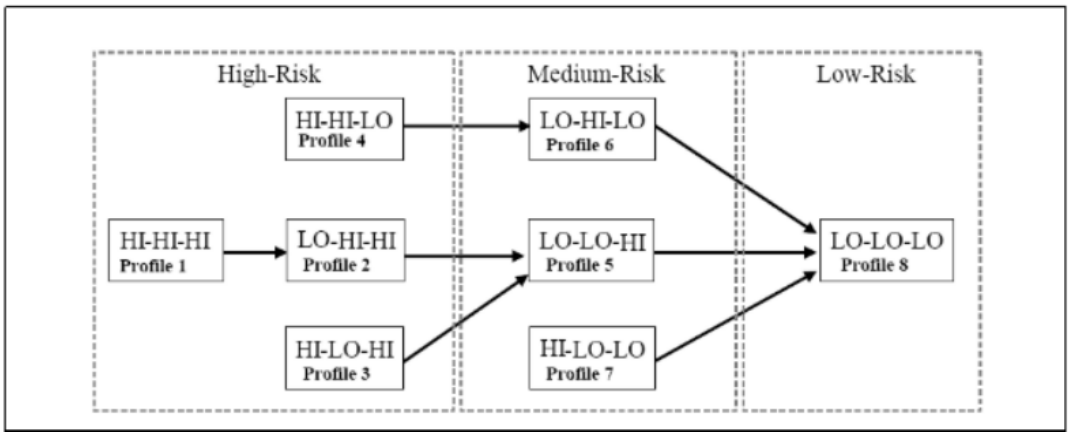
Table 7 Our Risk Management Model with Category Definitions.

<table>
<tr><th>Risk Areas</th><th>Risk Resolutions</th><th>Heuristics</th></tr>
<tr><td rowspan="2">Operational risks: Risk items related to the vendor and management of the contract.</td><td>Stakeholder Relationships Actions: Resolution actions that establish stakeholder goals and activities and how they interact with each other in relation to the contract.</td><td rowspan="4">Matching each Risk category with prioritized Risk Resolutions’.</td></tr>
<tr><td rowspan="2">Value Proposition Actions: Resolution actions that adjust and evolve quality measures and use them to evaluate and monitor the outsourced services in relation to the contract.</td></tr>
<tr><td rowspan="2">Financial risks: Risk items related to the cost of negotiating and maintaining the contract.</td></tr>
<tr><td>Financial Arrangement Actions: Resolution actions that establish financial measurements and formal controls to evaluate and monitor the financial performance of contracts.</td></tr>
<tr><td>Contracting risks: Risk items related to the contract prior to and after negotiation.</td><td>Provider Selection Actions: Resolution actions that establish terms and conditions for providers and evaluate their performance before and during the contract.</td><td></td></tr>
</table>

Although other papers (Ali et al., 2017; Mathiassen et al., 2007) have applied a risk-strategy approach based on the initial model of McFarlan (1989), the novelty of our research is to use engaged scholarship to apply and detail this general approach to risk management of auxiliary services in the higher education sector. Also, we eventually chose the risk-strategy approach to guide our research by carefully considering the other three approaches described in Iversen et al. (2004) (Table 4). The risk list approach helped us develop intermediate insights in the form of risk lists based on extant literature. However, while such lists can be practically useful for risk identification and assessment, they lack insights into how risks are addressed through various

resolution techniques. As a result, we delved deeper into the risk-action list approach, encompassing risk items for auxiliary services in higher education with related resolution actions. While we found the risk-action list approach valuable, it lacked a strategic perspective with easy to grasp oversight of the key risk areas and resolution types as provided by the risk-strategy approach. We also briefly considered the risk-strategy analysis approach, which comprehensively and in great detail integrates risk areas and items, risk resolutions and actions, and heuristics, well beyond the three risk areas and four risk resolutions afforded by the risk-strategy approach. However, the complexity of using this approach as described in detail in Iversen et al. (2004) made us stick to the risk-strategy approach. Finally, to further elaborate our use of the risk-strategy model approach, we found the graphical illustration of transitions between eight archetypical risk profiles in Mathiassen et al. (2007) very useful, see Figure 7.

Figure 7 Transformation between Archetypical Risk Profiles (Mathiassen et al., 2007)



4 RESEARCH METHOD

To advance knowledge on outsourcing auxiliary services in higher education, a literature review should be both complete and focus on relevant literature for the area of interest. As Table 8 shows, we used Webster and Watson's (2002) and Xiao and Watson's (2019) methods and implemented their suggestions. To synthesize findings in a systematic, transparent, and reproducible way, we used a systematic literature review. This approach is considered the gold standard in medical sciences; despite all of its advantages, however, systematic literature reviews are not yet common in business research (Snyder, 2019). Our systematic literature review aimed to capture all the relevant literature based on our proposed theoretical framework; our goal was to explicitly use the review for our research questions, to minimize bias, and to provide reliable findings upon which conclusions can be based and practical decisions made (Moher et al., 2009; Snyder, 2019; Torraco, 2005).

4.1 Identifying The Literature

In the area of outsourcing in higher education, reviewing relevant literature has become an incredibly complex process. Because this is a multidisciplinary research area, the information comes from diverse industries and sources, and the topic is often addressed in fragmented ways. As we mentioned before, our preliminary analyses suggested that using a systematic literature review is the best-suited research methodology for our topic, coupled with a comprehensive, transparent analysis of the findings. Our review focused both on evaluating the past work in these areas and on developing concepts for future research (Booth et al., 2016; Cooper et al., 2018; Webster & Watson, 2002; Xiao & Watson, 2019).

To identify the literature, we combined the methods of Webster and Watson (2002), Mathiassen et al. (2007), Cooper et al. (2008), Xiao and Watson 2019 and Snyder (2019). Emphasis was placed on academic publications and practitioner journals that delve into outsourcing within higher education and broader contexts. The latter is considered to contribute richness and glean best practices from more advanced industries. Our systematic search targeted insights in three key areas: what is known about outsourcing in higher education (Vanhorn-Grassmeyer & Stoner, 2001; Wekullo, 2017), experiences with campus outsourcing services (Glickman et al., 2007; Gupta & Herath, 2005), and, relationships with outsourcing providers and strategies for working with them (Dietz & Enchelmayer, 2001; Moneta & Dillon, 2001). We used Webster and Watson's (2002) method to systematically search and filter relevant articles in leading academic and practitioner journals; we also reviewed the citation lists of the selected papers. Table 8 describes and summarizes our process, which includes the following four steps.

In step 1, we conducted a broad search in the Georgia State University library's online database to identify relevant articles on outsourcing auxiliary services in higher education. On January 31, 2022, we did a broad search on: *"outsourcing in universities," OR "outsourcing in college," OR "outsourcing in campus"* to identify 346 articles. We also conducted a similar search using the Web of Science database, which yielded 5 additional papers. That same day, we conducted a second broad search in the Georgia State University library's online database to identify relevant articles on the privatization of auxiliary services in higher education. In this case, our search was on: *"privatization in higher education" OR "privatization in universities," OR "privatization in college," OR "privatization in campus."* Through this search, we identified 1,536 articles. We then did a similar search using the Web of Science database, which yielded 9 additional articles.

To add more richness to our research, we then did a search on *"outsourcing"* in the top 50 journals in the *Financial Times* list using the Georgia State University library's online database. From this, we identified 81 articles. By including *"outsourcing in general"* in our search, we were able to gain advanced knowledge by learning from industries that were further along in the outsourcing area. Finally, we searched the Web of Science database, filtering for articles with *"outsourcing"* in the title; this led to a total of 138 articles. Our step 1 searches led to a total of 2,115 articles.

In step 2, we conducted a cursory review of these papers and found that many had little relevance to our research question. We therefore manually filtered the paper titles and abstracts for relevancy. This resulted in 378 papers that appeared to be closely related to our work.

In step 3, we read each of the 378 papers, removing duplicates and assessing each paper's relevance to our research question. At the end of this process, we had 42 articles.

Finally, in step 4, we listed all references cited in the 42 papers. This resulted in 1,318 new articles. We then filtered these articles using steps 2 and 3 above, resulting in 50 papers. When adding these to the 42 articles identified earlier, we had our final total of 92 papers.

Table 8 Our Four-Step Process for Literature Identification

Steps and Sub steps	*Number of Articles*
Step 1. Broad search on "*outsourcing in higher education*" OR "*outsourcing in universities*" OR "*outsourcing in college*" OR "*outsourcing in campus*" (January 31, 2022). Using the Georgia State University database, we identified **346 articles.** Using the Web of Science database, we identified **5 articles.** **Step 1a.** Broad search on "*privatization in higher education*" OR "*privatization in universities*" OR "*privatization in college*" OR "*privatization in campus*" (January 31, 2022). **Step 1b.** Broad search of *"outsourcing"* in the titles of papers in the *Financial Times* top 50 journals list to collect articles related to auxiliary service in other industries. Using the Georgia State University database, we identified **81 articles**. **Step 1c.** Broad search on *"outsourcing"* in titles of articles with more than 100 citations related to auxiliary service in other industries. Using the Web of Science database, we identified **138 articles.** Using the Georgia State University database, we identified **1,536 articles.** Using the Web of Science database, we identified **9 articles.**	**2,115**
Step 2. Manually filtered papers by reading all titles and abstracts of **2,115 articles** to ensure that they relate to outsourcing in general and auxiliary services in higher education.	**378**
Step 3. Manually filtered **378 articles** by removing duplicates and reading all articles to ensure they relate to our research question. This resulted in **42 articles** from the listed references.	**42**
Step 4. Identified references within the **42 articles**; this resulted in **1,318 new articles**. Using Step 2 and 3 criteria, we selected **50 new articles** from the listed references.	**50**
Total number of reviewed articles	***92***

4.2 Analyzing The Literature

To analyze the articles, we followed the recommendation of Webster and Watson (2002) and developed a conceptual framework (as described in Section 3) and coding scheme based on literature focused on three areas: risk management theory in leading journals, outsourcing in

auxiliary services, and leading articles on outsourcing. To improve reliability in coding, we uploaded our final literature selections (92 articles) to NVivo 14; these selections were reviewed by me and my advisor. This allowed us to execute the coding process and maintain a chain of evidence to further increase the reliability of our findings. Once we selected the articles for review, we employed a method for coding inspired by Myers (2019). We established a coding scheme in advance based on the conceptual framing described in Section 3.3. This served as our methodological guide, allowing us to transition from coding the theory to ultimately generating a comprehensive model.

As we delved into the initial open coding, focusing on basic descriptive concepts, our goal was to consistently compare and contrast our data to identify similarities. Concepts began to surface organically from the data, and our objective remained to approach the context with an open mind, avoiding preconceived ideas to ensure the integrity of the process, given the potential influence of our experience in the field.

Our first analysis step was to identify occurrences of risk areas and risk resolutions together with heuristics, and interesting insights (Table 9). We began by using open coding in the text to identify relevant quotes (Myers, 2019). We categorized each of the occurrences as follows:

1) Heuristics: 1a) preventive, 1b) detective, and 1c) corrective.

2) Interesting: 2a) reasons to outsource, 2b) reasons not to outsource, 2c) other

3) Risk areas: 3a) operational risk, 3b) financial risk, and 3c) contracting risk.

4) Risk resolutions: 4a) operational risk resolution, 4b) financial risk resolution, and 4c) contracting risk resolution.

Table 9 First Analysis Step

Codes	*Categories*	*Papers*	*Quotes*	*References*
Heuristics	Recovery	2	2	(Aron et al., 2005; Conradson, 2014)
	Prevention	11	21	(Allen et al., 2002; Angelo, 2005; Araz et al., 2007; Bekurs, 2007; Buttleman, 1998; Conradson, 2014; Davies, 2005; Doctrow et al., 1996; Feeny et al., 2005; Handley & Benton, 2009)
	Mitigation	6	6	(Allen et al., 2002; Angelo, 2005; Araz et al., 2007; Feeny et al., 2005; Handley & Benton, 2009)
Interesting	Reasons to outsource	24	61	(Adams III et al., 2004; Al-Hammad et al., 2010; Allen et al., 2002; Bartem & Manning, 2001; Bekurs, 2007; Conradson, 2014; Crnkovic & Pozega, 2007; Ender & Fahleson, 1994; Ferris, 1991; Gilmer, 1997; Gilroy et al., 2007; Girth et al., 2012; Glickman et al., 2007; Gupta & Herath, 2005; McIvor, 2009; Moneta & Dillon, 2001; Moore, 2002; Mudambi & Venzin, 2010; Palm, 2001; Quigley & Pereira, 2011; Wadhwa & Ravindran, 2007; Wertz, 1997; Wertz, 2000; Zeilenga, 1994)
	Reasons not to outsource	11	19	(Al-Hammad et al., 2010; Allen et al., 2002; Aron et al., 2005; Bartem & Manning, 2001; Bekurs, 2007; Conradson, 2014; Ferris, 1991; Gupta & Herath, 2005; Harland et al., 2005; Moore, 2002; Pulley, 2000)
	Other	59	157	(Abramson, 1994; Adams III et al., 2004; Al-Hammad et al., 2010; Allen et al., 2002; Angelo, 2005; Araz et al., 2007; Aron et al., 2005; Bartem & Manning, 2001; Barthélemy, 2003; Barthélemy & Quelin, 2006; Bekurs, 2007; Bhagwati et al., 2004; Buttleman, 1998; Cachon & Harker, 2002; Conradson, 2014; Crnkovic & Pozega, 2007; Davies, 2005; DeCapua, 2006; Doctrow et al., 1996; Ender & Fahleson, 1994; Espino-Rodriguez & Padron-Robaina, 2006; Feeny et al., 2005; Ferris, 1991; Gilmer, 1997; Gilroy et al., 2007; Girth et al., 2012; Glickman et al., 2007; Gupta & Herath, 2005; Handley &

				Benton, 2009; Harland et al., 2005; Hatonen & Eriksson, 2009; Herath & Ahsan, 2006; Johnstone, 1999; Kaganoff, 1998; Kerekes, 2010; Kirp, 2002; Kremic et al., 2006; Krone, 1995; Li & Choi, 2009; Linder, 2004; Lombardi, 1998; McIvor, 2009; Mercer, 1995; Moneta & Dillon, 2001; Mudambi & Venzin, 2010; Narayanan et al., 2011; Nijman et al., 2019; Phillips & et al., 1996; Phipps & Merisotis, 2005; Pulley, 2000; Quigley & Pereira, 2011; Quinn & Hilmer, 1994; Rothaermel et al., 2006; Tanner & Gwinn, 2004; Vanhorn-Grassmeyer & Stoner, 2001; Wadhwa & Ravindran, 2007; Wallenburg, 2009; Wertz, 1997; Zeilenga, 1994)
Risk areas	Operational risk	40	136	(Adams III et al., 2004; Allen et al., 2002a; Araz et al., 2007; Aron et al., 2005; Bartem & Manning, 2001b; Barthélemy, 2003; Barthélemy & Quelin, 2006; Bekurs, 2007; Buttleman, 1998; Conradson, 2014; Davies, 2005; DeCapua, 2006; Dietz & Enchelmayer, 2001; Eddy & Spaulding, 1996; Ender & Fahleson, 1994; Espino-Rodriguez & Padron-Robaina, 2006; Feeny et al., 2005; Ferris, 1991; Gilmer, 1997; Glickman et al., 2007; Gupta & Herath, 2005; Harland et al., 2005; Herath & Ahsan, 2006; Johnstone, 1999; Kremic et al., 2006; Liou & Chuang, 2010; Lombardi, 1998; McIvor, 2009; Moneta & Dillon, 2001; Moore, 2002; Palm, 2001; Phipps & Merisotis, 2005; Pulley, 2000; Rothaermel et al., 2006; Martin Van Der Werf, 2000; Vanhorn-Grassmeyer & Stoner, 2001; Webb et al., 1997; Wertz, 1997; Wertz, 2000; Zeilenga, 1994)
	Financial risk	38	88	(Adams III et al., 2004; Allen et al., 2002; Araz et al., 2007; Aron et al., 2005; Barthélemy, 2003; Barthélemy & Quelin, 2006; Bekurs, 2007; Buttleman, 1998; Conradson, 2014; Davies, 2005; DeCapua, 2006; Dietz & Enchelmayer, 2001; Doctrow et al., 1996; Eddy & Spaulding, 1996; Ender & Fahleson, 1994; Espino-Rodriguez & Padron-Robaina, 2006; Ferris, 1991; Gilmer, 1997; Girth et al., 2012; Glickman et al., 2007; Gupta & Herath, 2005; Harland et al., 2005; Herath & Ahsan, 2006; Johnstone, 1999; Kerekes, 2010; Kremic et al.,

				2006; Moneta & Dillon, 2001; Nicklin, 1998; Nicklin, 1997; Peisch, 1995a; Phillips & et al., 1996; Phipps & Merisotis, 2005; Van Der Werf, 1999; Martin Van Der Werf, 2000; M Van Der Werf, 2000; Wadhwa & Ravindran, 2007; Wertz, 1997; Zeilenga, 1994)
	Contracting risk	60	232	(Abramson, 1994; Adams III et al., 2004; Allen et al., 2002a; Angelo, 2005; Araz et al., 2007; Aron et al., 2005; Bartem & Manning, 2001c; Barthélemy, 2003; Barthélemy & Quelin, 2006; Buttleman, 1998; Cachon & Harker, 2002; Conradson, 2014; Davies, 2005; DeCapua, 2006; Dietz & Enchelmayer, 2001; Eddy & Spaulding, 1996; Ender & Fahleson, 1994; Espino-Rodriguez & Padron-Robaina, 2006; Feeny et al., 2005; Ferris, 1991; Fuchsberg, 1989; Gilmer, 1997; Gilroy et al., 2007; Girth et al., 2012; Glickman et al., 2007; Gupta & Herath, 2005; Handley & Benton, 2009; Harland et al., 2005; Herath & Ahsan, 2006; Johnstone, 1999; Kaganoff, 1998; Kerekes, 2010; Kirp, 2002; Kremic et al., 2006; Laidley, 2014; Li & Choi, 2009; Mercer, 1995; Moneta & Dillon, 2001; Moore, 2002; Mudambi & Venzin, 2010; Mudambi & Tallman, 2010; Nicklin, 1997; Nolan & McFarlan, 1995; Nuñez, 2009; Palm, 2001; Phipps & Merisotis, 2005; Quigley & Pereira, 2011; Quinn & Hilmer, 1994; Rothaermel et al., 2006; Tanner & Gwinn, 2004; Martin Van Der Werf, 2000; Wadhwa & Ravindran, 2007; Wallenburg, 2009; Webb et al., 1997; Wertz, 1997; Wertz, 2000; Wohl, 2007; Wood, 2000; Zeilenga, 1994)
Risk resolutions	Operational risk resolutions	40	109	(Allen et al., 2002a; Angelo, 2005; Araz et al., 2007; Aron et al., 2005; Barthélemy, 2003; Barthélemy & Quelin, 2006; Bekurs, 2007; Buttleman, 1998; Conradson, 2014; Davies, 2005; Dietz & Enchelmayer, 2001; Doctrow et al., 1996; Eddy & Spaulding, 1996; Ender & Fahleson, 1994; Feeny et al., 2005; Gilroy et al., 2007; Glickman et al., 2007; Gupta & Herath, 2005; Handley & Benton, 2009; Harland et al., 2005; Herath & Ahsan, 2006; Johnstone, 1999; Kaganoff, 1998; Kerekes, 2010; Kirp, 2002; Li & Choi, 2009; Linder, 2004; Mercer, 1995; Moneta & Dillon, 2001; Peisch, 1995; Phipps &

				Merisotis, 2005; Quinn & Hilmer, 1994; Sullivan, 1995; Van Der Werf, 1999; M Van Der Werf, 2000; Wallenburg, 2009; Wertz, 1997; Wertz, 2000; Wood, 2000; Zeilenga, 1994)
	Financial risk resolution	29	66	(Allen et al., 2002a; Angelo, 2005; Araz et al., 2007; Aron et al., 2005; Barthélemy, 2003; Barthélemy & Quelin, 2006; Bekurs, 2007; Conradson, 2014; Doctrow et al., 1996; Eddy & Spaulding, 1996; Ender & Fahleson, 1994; Feeny et al., 2005; Gilroy et al., 2007; Gupta & Herath, 2005; Harland et al., 2005; Herath & Ahsan, 2006; Johnstone, 1999; Kaganoff, 1998; Kerekes, 2010; Laidley, 2014; Moneta & Dillon, 2001; Phipps & Merisotis, 2005; Pulley, 2000; Quinn & Hilmer, 1994; Van Der Werf, 1999; Wallenburg, 2009; Wertz, 1997; Wertz, 2000; Zeilenga, 1994)
	Contracting risk resolution	41	166	(Allen et al., 2002a; Angelo, 2005; Araz et al., 2007; Aron et al., 2005; Bartem & Manning, 2001c; Barthélemy, 2003; Barthélemy & Quelin, 2006; Conradson, 2014; Davies, 2005; Dietz & Enchelmayer, 2001; Doctrow et al., 1996; Eddy & Spaulding, 1996; Ender & Fahleson, 1994; Espino-Rodriguez & Padron-Robaina, 2006; Feeny et al., 2005; Glickman et al., 2007; Gupta & Herath, 2005; Handley & Benton, 2009; Harland et al., 2005; Kerekes, 2010; Kremic et al., 2006; Li & Choi, 2009; Moneta & Dillon, 2001; Nicklin, 1997; Nolan & McFarlan, 1995; Palm, 2001; Peisch, 1995b; Phipps & Merisotis, 2005; Quigley & Pereira, 2011; Quinn & Hilmer, 1994; Rothaermel et al., 2006; Sullivan, 1995; Tanner & Gwinn, 2004; M Van Der Werf, 2000; Vanhorn-Grassmeyer & Stoner, 2001; Wadhwa & Ravindran, 2007; Wallenburg, 2009; Webb et al., 1997; Wertz, 1997; Wertz, 2000; Wood, 2000)

After completing the first step, me and my advisor engaged in discussions about the initial results and to establish the next step. This led to a second analysis of the literature to further refine our findings. The second step involved axial coding, where the focus was on refining or developing concepts to capture key resolutions across the three risk areas. As summarized above in Table 7,

we outlined four risk resolutions, and developed definitions of each of the concepts in our foundational framing.

In the third analysis step, our focus centered on a detailed analysis of risk areas and items (Table 10) and risk resolutions and actions (Table 11). The objective was to identify and draw connections between specific risk items and resolution actions to fully shape our model.

Having defined risk areas and items as well as risk resolutions and actions, the final step was to identify and articulate the heuristics that link them. These heuristics serve as guiding principles to align the identified risks with their respective resolutions. Here, risk items denote adverse outcomes, while resolution actions represent approaches to avert or mitigate these risks. Our heuristics are designed to establish connections, allowing managers to promptly identify potential risks and their potential impact. This enables them to explore and assess suitable resolutions, aiding in the prevention, mitigation, or informed acceptance of risks in the future. To identify and develop these heuristics as summarized in Table 12 below, we combined the identified heuristics in the literature (Table 9) with the heuristics in MacFarlan's (1989) model and its previous adaptations (Ali et al., 2017; Khan et al., 2021; Lyytinen et al., 1998; Mathiassen et al., 2007) to consider each link between the assessment of a specific risk area (high, low) and the emphasis on each resolution action (high, medium, low).

5 RISK AREAS AND ITEMS

To help assess operational, financial, and contractual risks, we provide detailed risk items for each of these areas based on our review of the literature on outsourcing of auxiliary services in higher education (Table 10).

5.1 Operational Risk Items

We identify these risk items as pertaining to the provider and the effective management of the contract. We have identified six operational risk items in the context of outsourcing in higher education, as described in detail below and summarized in Table 10.

Employee resistance to contractors and the occurrence of culture shock to both students and employees

As the outsourcing process commences, natural resistance among employees can arise, leading them to decline cooperation with the new contractors (Adams III et al., 2004; Barthélemy & Quelin, 2006; Buttleman, 1998; Davies, 2005; DeCapua, 2006; Martin, 2010; Pulley, 2000; Richard D Wertz, 1997). In the context of higher education, where resistance to change is inherent, this challenge can be compounded. This resistance can even extend to the student body, with certain student life practitioners viewing outsourcing as detrimental to the student experience. This, in turn, can result in a sense of shock and identity loss among both newly employed staff and students (Allen et al., 2002; Bartem & Manning, 2001; Davies, 2005; DeCapua, 2006; Eddy & Spaulding, 1996; Glickman et al., 2007; Gupta & Herath, 2005; Kremic et al., 2006; Palm, 2001; Pulley, 2000; Martin Van Der Werf, 2000; Webb et al., 1997; Zeilenga, 1994).

Ignoring previous and new employee agreements and work conditions

This lack of clarity and stability could lead to misunderstandings, conflicts, and a diminished sense of commitment among employees, negatively impacting the company's reputation and hindering its ability to attract and retain skilled professionals. Before moving forward with the outsourcing process, aligning all employees, ensuring transparent communication about the conditions, and establishing a sense of job security is crucial. This strategic approach plays a pivotal role in mitigating potential risks and disruptions to the contract (Barthélemy & Quelin, 2006; DeCapua, 2006; Feeny et al., 2005; Herath & Ahsan, 2006; Kremic et al., 2006; Quinn, 2000; Martin Van Der Werf, 2000; Webb et al., 1997; Richard D Wertz, 1997). Neglecting these considerations could lead to employees departing from the higher institution, often taking critical information with them. (Aron et al., 2005; Feeny et al., 2005). This could have a detrimental impact, particularly on the initial stages of the contract, potentially causing disruptions.

Neglecting alignment in contracts for short-term and long-term objectives

The risk of neglecting alignment in contracts for both short-term and long-term goals encompasses a range of potential negative outcomes, impacting strategic direction, operational efficiency, stakeholder relationships, and overall organizational resilience. It is crucial for businesses to prioritize alignment in contract development to mitigate these risks and foster sustained success. Developing a comprehensive and adaptable performance measurement framework for the contract is an ongoing and evolving process that should persist throughout the contract’s duration (Barthélemy, 2003; Bekurs, 2007; Dietz & Enchelmayer, 2001; Feeny et al., 2005; Harland et al., 2005; Moneta & Dillon, 2001; Quinn, 2000).

Ambiguity in measurements of contracts and responsibilities

Both parties involved must possess well-defined metrics to effectively assess the success of the arrangement. It's imperative to consider a broader spectrum of indicators beyond financial measures within the contract's scope, as it's equally critical to ensure alignment between the contractors' objectives and the higher education institution's goals (Allen et al., 2002; Bartem & Manning, 2001; Barthélemy, 2003; Bekurs, 2007; Conradson, 2014; Glickman et al., 2007; Wertz, 1997).

Not having a robust performance measurement system for a partnership

A robust performance measurement system holds advantages for both parties involved. It establishes a strong link between operational execution, service quality, and financial alignment (Araz et al., 2007; Conradson, 2014; Ferris, 1991; McIvor, 2009). Neglecting this connection can result in inconsistencies within the contract. Operational performance may clash with unpredictable decisions driven by financial factors, ultimately impacting the higher education institution (Conradson, 2014; DeCapua, 2006; Harland et al., 2005; Lombardi, 1998; Moneta & Dillon, 2001; Palm, 2001). It's essential to strike a harmonious balance between these dimensions to foster a successful partnership.

Attrition of employees initially involved in the contract

Employee attrition, particularly among those initially involved in a contract, poses several challenges and risks to an organization. The departure of key personnel can have a range of negative impacts, lastly, after the contract is operational and alignment is established, the systems should remain accessible to both parties and not be individualized solely based on employees. This

approach is crucial because a successful operation can be compromised if leadership undergoes changes (Aron et al., 2005; Conradson, 2014).

5.2 Financial Risk Items

There are several risk items associated with the financial issues of negotiating and maintaining the contract (Table 10). We have identified five financial risk items in the context of outsourcing in higher education, as described below.

Decrease in income or earnings

As discussed in the dissertation, when higher education institutions outsource their services, there's a potential risk of revenue decrease due to the outsourced operation no longer falling under their direct control. The vendor's involvement could divert a significant portion of funds that were originally allocated to the higher education institutions (Adams III et al., 2004; Conradson, 2014).

The risk of reputation for financial goals

Additionally, there's a growing concern about the pressure on higher education institutions to outsource activities that were not originally intended for outsourcing. To achieve cost savings, some institutions might opt for external providers, risking the quality of student life experiences and leading to reputational damage and irreversible reputational risks once students and employees notice the negative impact (Dietz & Enchelmayer, 2001; Kerekes, 2010; Nicklin, 1998).

Decrease in employee wages and benefits

Once the contract is established and certain employees are integrated into the vendor's workforce, a thorough review of wages becomes essential. This step is critical, particularly for public institutions where wages might be lower than the national average. Vendors often offer higher wages and benefits, which could potentially disrupt the financial stability of the higher education institution (Gupta & Herath, 2005; Harland et al., 2005; M Van Der Werf, 2000).

Rising expenditures and the inclusion of undisclosed expenses

As the contract evolves, two challenges in this context can arise within higher education institutions. Firstly, the cost of additional services may surpass the expenses associated with the original in-house activities before outsourcing (Aron et al., 2005; Barthélemy & Quelin, 2006; Bekurs, 2007; Buttleman, 1998; Eddy & Spaulding, 1996; Girth et al., 2012; Herath & Ahsan, 2006; Kremic et al., 2006; Wertz, 2000; Zeilenga, 1994). Secondly, the vendor's organizational structure, which prioritizes operational efficiency over student life, can lead to unanticipated costs for preserving a positive student experience. In some cases, vendors might capitalize on the institution's need for these services, exploiting the situation to increase costs (Espino-Rodriguez & Padron-Robaina, 2006).

Diminished cost management or control

In conclusion, implementing an open and honest cost control system that simulates and explores cost efficiencies between the vendor's activities can be beneficial for both parties (Ferris, 1991; Glickman et al., 2007; Herath & Ahsan, 2006; Kerekes, 2010; Nicklin, 1997; Peisch, 1995a; Rothaermel et al., 2006; Wertz, 1997). This approach, characterized by transparency and open

financial activities, has the potential to foster collaboration and enable swift adjustments to carefully monitored activities.

5.3 Contracting Risk Items

Risk items tied to contracting, both prior to and after negotiation, have significant implications for managing the contract (Table 10). We have identified five contracting risk items in the context of outsourcing in higher education, as described below.

Unclear employee situations and a shift in organizational culture

When initiating the outsourcing process, careful attention must be given to employees' perceptions. Transparent communication is essential to prevent unresponsiveness, loss of productivity, and resistance to potentially beneficial opportunities, all of which can negatively impact student life (Abramson, 1994; Adams III et al., 2004; Barthélemy & Quelin, 2006; Buttleman, 1998; Davies, 2005; Dietz & Enchelmayer, 2001; Ender & Fahleson, 1994; Feeny et al., 2005; Gupta & Herath, 2005). Moreover, employees may undergo a cultural shift in their work environment, influencing their behavior towards the institution and disrupting daily activities (Allen et al., 2002; Bartem & Manning, 2001; Davies, 2005; DeCapua, 2006).

Limited oversight of contractual terms overtime

The outsourcing contract must balance being robust, flexible, and tightly specified. It should include detailed conditions and metrics for service quality and financial performance. Given the challenge of altering established contracts or transitioning to new vendors, it's crucial to establish terms that can adapt and incorporate amendments over time (Bartem & Manning, 2001; Barthélemy, 2003; Davies, 2005; Eddy & Spaulding, 1996; Espino-Rodriguez & Padron-Robaina,

2006; Feeny et al., 2005; Ferris, 1991). Additionally, the contract should mitigate potential opportunistic behaviors from the vendor, whether financial or operational, stemming from the institution's dependency on their services. Flexibility in contract terms can help prevent such issues (Aron et al., 2005; Barthélemy & Quelin, 2006; Buttleman, 1998; Feeny et al., 2005).

Inappropriate service provider selection

Selecting the right provider is a critical step, and the alignment between the parties and their processes must be well-defined. Vendor selection and criteria establishment should be carefully deliberated, acknowledging the institution's business needs and aligning with the vendor's mission and practices. Realistic expectations, honesty, and long-term relationships are crucial aspects (Barthélemy & Quelin, 2006; Davies, 2005; Dietz & Enchelmayer, 2001).

Ineffective stakeholder relations and partnerships

The significance of the vendor-contractor relationship cannot be overstated. In our research, this relationship emerges as a pivotal component in our proposed risk management strategies. Forming a team of professionals experienced in contract management is pivotal for success. Authors like Barthélemy & Quinn (2006) underscore the importance of adapting human assets by having practitioners with the expertise to negotiate and manage contracts, ensuring a healthy long-term relationship, especially since this involves new talents different from those previously managing in-house activities.

Lack of clarity in client-provider partnership expectations

As the relationship between higher education institutions and vendors evolves, the risk of unclear terms and methodologies can arise. This can stem from differences between the individuals negotiating the contract versus those executing it or from unclear expectations that lead to continuous back-and-forth discussions, potentially losing sight of the contract's original intent. The accountability process between the parties becomes strained when both assume fault and blame each other due to unmet expectations. Clarity is crucial, with well-defined roles and detailed conditions to prevent such ambiguity and ensure successful collaboration (Bartem & Manning, 2001; Barthélemy, 2003; Barthélemy & Quelin, 2006; Conradson, 2014; Davies, 2005; DeCapua, 2006; Dietz & Enchelmayer, 2001; Eddy & Spaulding, 1996; Ender & Fahleson, 1994; Feeny et al., 2005).

Table 10 Risk Areas and Items

Risk Area	*Definition*	*Risk Items*
Operational Risk	Risk items related to managing the provider and operation of the contract	1. Employee resistance to contractors and the occurrence of culture shock to both students and employees (Adams III et al., 2004; Allen et al., 2002b; Aron et al., 2005; Bartem & Manning, 2001c; Barthélemy, 2003; Buttleman, 1998; Davies, 2005; DeCapua, 2006; Eddy & Spaulding, 1996; Glickman et al., 2007; Gupta & Herath, 2005; Herath & Ahsan, 2006; Kremic et al., 2006; Palm, 2001; Pulley, 2000; Martin Van Der Werf, 2000; Webb et al., 1997; Wertz, 1997; Zeilenga, 1994). 2. Ignoring previous and new employee agreements and work conditions (Barthélemy & Quelin, 2006; DeCapua, 2006; Feeny et al., 2005; Herath & Ahsan, 2006; Kremic et al., 2006; Quinn, 2000; Martin Van Der Werf, 2000; Webb et al., 1997; Wertz, 1997) (Aron et al., 2005; Feeny et al., 2005). 3. Neglecting alignment in contracts for short-term and long-term objectives (Barthélemy, 2003; Bekurs,

		2007; Dietz & Enchelmayer, 2001; Feeny et al., 2005; Harland et al., 2005; Moneta & Dillon, 2001; Quinn, 2000). 4. Ambiguity in measurements of contracts and responsibilities (Allen et al., 2002a; Araz et al., 2007; Bartem & Manning, 2001; Barthélemy, 2003; Bekurs, 2007; Conradson, 2014; Ferris, 1991; Glickman et al., 2007; McIvor, 2009; Wertz, 1997). 5. Not having a robust performance measurement system for a partnership (Conradson, 2014; DeCapua, 2006; Harland et al., 2005; Lombardi, 1998; Moneta & Dillon, 2001; Palm, 2001). 6. Attrition of employees initially involved in the contract (Aron et al., 2005; Conradson, 2014).
Financial Risk	Risk items related to the financial issues of negotiating and maintaining the contract	1. Decrease in income or earnings (Adams III et al., 2004; Conradson, 2014). 2. The risk of reputation for financial goals (Dietz & Enchelmayer, 2001; Kerekes, 2010; Nicklin, 1998). 3. Decrease in employee wages and benefits (Gupta & Herath, 2005; Harland et al., 2005; M Van Der Werf, 2000). 4. Rising expenditures and the inclusion of undisclosed expenses (Aron et al., 2005; Barthélemy & Quelin, 2006; Bekurs, 2007; Buttleman, 1998; Eddy & Spaulding, 1996; Espino-Rodriguez & Padron-Robaina, 2006; Girth et al., 2012; Herath & Ahsan, 2006; Kremic et al., 2006; Wertz, 2000; Zeilenga, 1994). 5. Diminished cost management or control (Ferris, 1991; Glickman et al., 2007; Herath & Ahsan, 2006; Kerekes, 2010; Nicklin, 1997; Peisch, 1995; Rothaermel et al., 2006; Wertz, 1997).
Contracting Risk	Risk items related to managing the contract prior to and after negotiation.	1. Unclear employee situations and a shift in organizational culture (Abramson, 1994; Adams III et al., 2004; Allen et al., 2002; Bartem & Manning, 2001; Barthélemy & Quelin, 2006; Buttleman, 1998; Davies, 2005; DeCapua, 2006; Dietz & Enchelmayer, 2001; Ender & Fahleson, 1994; Feeny et al., 2005; Gupta & Herath, 2005). 2. Limited oversight of contractual terms overtime (Aron et al., 2005; Bartem & Manning, 2001; Barthélemy, 2003; Barthélemy & Quelin, 2006; Buttleman, 1998; Davies, 2005; Eddy & Spaulding, 1996; Espino-Rodriguez & Padron-Robaina, 2006; Feeny et al., 2005; Ferris, 1991).

		3. Inappropriate service provider selection (Barthélemy & Quelin, 2006; Davies, 2005; Dietz & Enchelmayer, 2001). 4. Ineffective stakeholder relations and partnerships (Barthélemy & Quelin, 2006). 5. Lack of clarity in client-provider partnership expectations (Bartem & Manning, 2001; Barthélemy, 2003; Barthélemy & Quelin, 2006; Conradson, 2014; Davies, 2005; DeCapua, 2006; Dietz & Enchelmayer, 2001; Eddy & Spaulding, 1996; Ender & Fahleson, 1994; Feeny et al., 2005).

6 RISK RESOLUTIONS AREAS AND ACTIONS

To help address operational, financial, and contractual risks, we provide detailed actions for each of the risk resolutions areas: stakeholder relationship actions, value proposition actions, financial arrangement actions, and provider selection actions (Table 11). We based these resolution actions on our review of the literature on outsourcing of auxiliary services in higher education.

6.1 Stakeholder Relationship Actions

The resolution actions establish stakeholders' goals, future activities, and actions and how they affect and interact with each other (Table 11). We have identified four resolutions related to stakeholder relationships.

Acknowledge and incorporate service providers from beyond the realm of higher education

Many higher education institutions predominantly belong to the public sector, as private institutions also exhibit behaviors and organizational structures conducive to education, research, and student life. This results in a unique environment focused on promoting knowledge and academic excellence. This model has been considered ideal for centuries. However, when these institutions decide to outsource, they enter unfamiliar territory and often resist private-sector approaches. They may not view vendors as partners capable of enhancing the student experience. Recognizing vendors as integral partners in improving the student experience should be a crucial part of the process, given their role as key contributors to the student's educational journey (Allen et al., 2002a; Dietz & Enchelmayer, 2001; Phipps & Merisotis, 2005).

Guarantee effective communication among all relevant stakeholders

Stakeholders within the realm of higher education constitute a vast and intricate network. Services such as student life, housing, facilities, faculty, athletics, IT, library, wellness, donors, and financial aid, among others, are all interconnected. They rely on one another and play an integral role in shaping students' life experiences and academic journey. Any decision to outsource a service that could impact any of these interconnected processes must involve the stakeholders linked to them. The political environment within higher education is often intricate and demands clear communication. It necessitates active engagement and requires buy-in from all parties involved to ensure a successful outsourcing contract, both in its preparation and its implementation (Allen et al., 2002; Dietz & Enchelmayer, 2001; Glickman et al., 2007; Moneta & Dillon, 2001; Nicklin, 1997; Pulley, 2000).

Foster a common set of values in collaboration with stakeholders

Effectively communicating with all stakeholders and gaining their support also necessitates the establishment of shared values among them. Mere communication alone is insufficient. The team responsible for the outsourcing process must strategically align their values and goals with those of the influential stakeholders and key drivers of the activities slated for outsourcing (Allen et al., 2002; Bartem & Manning, 2001; Dietz & Enchelmayer, 2001; Harland et al., 2005; Kerekes, 2010; Moneta & Dillon, 2001; Nicklin, 1997; Wood, 2000). This alignment of shared goals can streamline the outsourcing process and reduce the risk of disengagement and service disruptions, which could ultimately impact the reputation of the higher education institution and the student experience.

Nurture a partnership with the service provider that benefits both parties

Partnerships are built upon relationships, and it's crucial to convey the culture of the higher education institution to its business partners. True collaboration thrives when it creates a win-win situation for all stakeholders, with a profound impact on the student life experience (Araz et al., 2007; Bartem & Manning, 2001; Bekurs, 2007; Dietz & Enchelmayer, 2001; Ender & Fahleson, 1994; Feeny et al., 2005; Li & Choi, 2009; Linder, 2004; Moneta & Dillon, 2001; Moore, 2002; Wertz, 2000). Considering the institution's financial needs, often the primary driver behind student life experiences and sometimes the source of disruptions on campus, it becomes imperative to maintain a positive stance in the relationship to ensure it positively impacts the students. This critical point should be carefully managed during the outsourcing initiation and contract management process. Embracing a sustainable relationship and assuming a strategic partnership role in the relationship are key drivers of success.

When it comes to integration, the most crucial consideration should revolve around surveying and engaging with the partner. Both parties must actively participate in these activities. Additionally, the alignment of shared values and joint efforts in marketing and public relations should be a collaborative endeavor. It is of utmost importance that the parties function as a cohesive unit, working together as integrated institutions. We cannot overstate the significance of presenting a united front when it comes to enhancing the student life experience, as it plays a pivotal role in the success of this partnership.

6.2 Value Proposition Actions

Resolution and formal control measures should be established to set Key Performance Indicators (KPIs) for assessing and monitoring outsourced activities' quality and service performance (Table

11). We have identified four actions related to value propositions, as described below. This ongoing evaluation allows for adjustments and evolution in the outsourced functions. These actions adjust and evolve quality measures and use them to evaluate and monitor the outsourced services in relation to the contract.

Define the value proposition actions for outsourcing

Applying the resource view theory, which suggests that each organization possesses unique, valuable, and rare competitive advantages, especially those characteristics that differentiate it from others and contribute to its competitiveness in the market (Barney, 1991), it is essential to understand the source and intrinsic value of these advantages and how they adapt to both internal and external environments.

By evaluating these characteristics within both the vendor and the higher education institution, a symbiotic relationship can be cultivated, greatly benefiting the higher education institution. The core proposition here is to harness the strengths of the vendor to enhance the student life experience, relying on their unique capabilities to do so (Angelo, 2005; Espino-Rodriguez & Padron-Robaina, 2006; Mudambi & Tallman, 2010).

However, special attention must be given to avoid situations where the higher education institution compels the vendor to adopt practices that fall outside their competitive advantage and scope, as this can potentially disrupt the contract and have adverse effects.

Implement a system of mutual accountability between the client and the provider

Accountability remains a relatively uncharted territory within the context of higher education institutions and outsourcing partnerships. Few authors in this field delve into accountability from a comprehensive perspective, encompassing both the vendor and the higher education institution. While some propose that accountability should primarily be addressed within the contract, our research has revealed that accountability in both directions is not extensively studied or well-documented during the outsourcing process. This underscores a knowledge gap in understanding and effectively managing the complexities of these relationships.

Adopting a strategic investment approach rather than treating it solely as a purchasing decision is advisable to bridge this gap. This entails aligning the interests and terms of both parties, establishing clear goals, understanding the escalation process, and entrusting experienced individuals with the management of the relationship. Furthermore, providing clear incentives for success on both sides is crucial in achieving mutual accountability throughout the outsourcing process (Bartem & Manning, 2001; Bekurs, 2007).

Vigilantly oversee the operations of the provider

After the KPIs have been predefined in the RFP and contract, monitoring the contract becomes dynamic and evolving for both parties involved. It is crucial to focus on these measurements to adapt performance measurement as the contract evolves.

Some KPIs may become less relevant as time passes or as the desired results are achieved. Therefore, it is essential to monitor the outcomes of these KPIs closely, enabling both parties to identify areas for improvement and potentially transform these measurements into more fixed KPIs

or use them as a basis to project new KPIs that can enhance the contract's effectiveness (Araz et al., 2007; Aron et al., 2005; Davies, 2005; Feeny et al., 2005; Moneta & Dillon, 2001; Peisch, 1995; Phipps & Merisotis, 2005; Quigley & Pereira, 2011). This adaptive approach ensures that the contract remains aligned with changing circumstances and effectively meets its objectives.

Strategically manage outsourced operations to enhance and expand the core competencies of the client

The primary objective of outsourcing is to enhance and expand the core competencies of the client organization (Kremic et al., 2006; Peisch, 1995; Quinn & Hilmer, 1994; Tanner & Gwinn, 2004; Wallenburg, 2009). This approach allows the client organization to concentrate on its fundamental strengths and capabilities while leveraging the specialized expertise of third-party vendors to manage other aspects of the business. This should be the central focus of any outsourcing contract.

Throughout this dissertation, we emphasize in multiple sections that solely considering financial factors can be risky. Even though financial considerations are important, it is crucial to immediately reallocate resources previously used for non-core competencies to the core competencies. Attempting to plug financial gaps without this strategic reallocation can lead to mistakes and failures in the outsourcing contract.

6.3 Financial Arrangement Actions

Resolutions and actions with formal controls are essential for establishing financial measurements and Key Performance Indicators (KPIs) to assess and oversee the contract's financial performance (Table 11). The specific nature of the contract arrangements plays a crucial role in determining the appropriate measurements. These measurements can vary depending on the circumstances, with

some contracts linked to management fees per sale, profit-sharing arrangements, straight profit and loss agreements, or even combinations of these models. We have identified the three major actions related to financial arrangements, as described below.

Practice cost control with financial incentives and penalties

The importance of this lies in creating financial incentives that include bonuses and rewards, ensuring budget accountability, conducting expenditure audits, and implementing contractual penalties when necessary (Angelo, 2005; Barthélemy & Quelin, 2006; Davies, 2005; Doctrow et al., 1996; Eddy & Spaulding, 1996; Harland et al., 2005; Li & Choi, 2009; Moneta & Dillon, 2001; Peisch, 1995; Phipps & Merisotis, 2005; Quigley & Pereira, 2011; Quinn, 2000; Van Der Werf, 2000; Vanhorn-Grassmeyer & Stoner, 2001; Wood, 2000). Fairness in the measurement systems is crucial to promote transparency and clear communication regarding the objectives. This involves setting clear target metrics and data exchange mechanisms to analyze the data continually, allowing for ongoing operational improvements and flexibility in the contract terms to accommodate necessary adjustments.

Create wage structures that are in sync with both the client and the providers

As part of the integration process mentioned earlier, it is crucial to ensure alignment between the parties, including the wage structures of the vendor and the higher education institution (Allen et al., 2002; Wertz, 2000). The objective is to maintain the same position structure as existed before the contract, whether the activities were self-operated or managed by another vendor. If the new outsourcing company intends to modify this structure, it should provide strong justifications and

reasoning to establish consistency with the higher education institution. Any proposed wage increases or changes should be thoroughly justified and aligned with the institution's objectives.

Adjust human resources to align with financial arrangement actions

After the contract is established, it becomes crucial to adapt the human assets involved in its management (Barthélemy, 2003; Eddy & Spaulding, 1996; Feeny et al., 2005; Gupta & Herath, 2005; Li & Choi, 2009; Moneta & Dillon, 2001; Quinn, 2000; Quinn & Hilmer, 1994; Sullivan, 1995; Vanhorn-Grassmeyer & Stoner, 2001; Wertz, 2000; Wood, 2000). This adaptation involves determining the necessary skill sets and talent required for overseeing the contract, which may differ from what was needed when the activity was managed in-house.

Adapting human assets encompasses various aspects, including managing the vendor's financial and operational activities, addressing changes in the contract, and establishing a strong working relationship. This relationship-building is essential for reducing uncertainty, minimizing extra costs, and mitigating potential damage to the reputation of the higher education institution in case of contractual failures.

Financial arrangement actions must also be managed meticulously to prevent tensions that could jeopardize the contract. Therefore, the adaptation of human assets is a critical factor in ensuring the sustainability of the contract, especially when contractual or self-enforcement clauses fail to resolve conflicts.

6.4 Provider Selection Actions

Provider selection actions focuses on resolution actions that establish terms and conditions that align with the contractor's activities both before and during the contract (Table 11). This entails

defining criteria and ensuring alignment with providers. We have identified six resolution actions related to provider selection.

Generate a request for proposals (RFP) that includes well-defined evaluation criteria and both stringent yet adaptable terms

One of the pivotal documents in the outsourcing proposal is the RFP, alongside the contract itself. The RFP outlines the provider selection actions process and the criteria for selection. It is the outcome of a strategic evaluation of the higher education institution, offering detailed operational guidelines and a clear delineation of the roles and responsibilities of each party involved. Essentially, it answers the question: "Who is responsible for what?" (Angelo, 2005; Dietz & Enchelmayer, 2001; Doctrow et al., 1996; Wertz, 1997). The National Association of College and University Business Officers (NACUBO) and the National Association of College Auxiliary Service (NACAS) offer comprehensive guidance to their members for creating this document, including selection criteria, templates, and informal courses to aid in the process. However, since each organization's needs are unique, a comprehensive model like the one we suggest is necessary to navigate the risk management of the contract effectively.

Establish clear quantitative and qualitative evaluation criteria

Defining parameters for measuring the effectiveness of the contract is a critical activity, as it determines how well the contract is managed and how the vendor performs. Each higher education institution must establish measurements that encompass both quantitative and qualitative aspects (Angelo, 2005; Feeny et al., 2005; Harland et al., 2005; Peisch, 1995; Phipps & Merisotis, 2005; Wertz, 2000). These metrics should align with the institution's predefined objectives and should

be designed into the RFP and vendor selection process. Monitoring should cover various aspects, including cost savings achieved, the quality of deliverables, customer and employee satisfaction, revenue growth, and return on investment (ROI). By having clear and comprehensive performance metrics, institutions can effectively evaluate and manage their outsourcing contracts, ensuring that they meet their goals and deliver value.

Develop contracts with incentives and clauses that enable self-enforcement.

Incorporating incentive-based contracts with self-enforcement clauses is common in sectors like construction and project management within information systems and technology. As our research suggests, adapting these practices to the higher education context can be beneficial (Barthélemy, 2003; Davies, 2005; Wertz, 1997). Self-incentive clauses in contracts aim to motivate one or both parties to fulfill their contractual obligations by offering various incentives. These incentives can include financial bonuses, rewards based on performance, sustainability goals, profit-sharing arrangements, penalty clauses, or royalty increases, among others. The goal is to encourage compliance and the achievement of mutually agreed-upon objectives.

On the other hand, self-enforcement clauses enable contracts to be enforced without resorting to external intervention, such as legal proceedings. These clauses often include dispute resolution mechanisms and ensuring agreement compliance. Examples of such mechanisms include mediation clauses, escalation procedures for resolving conflicts, negotiation clauses, arbitration provisions, sunset clauses, and termination conditions. These tools help prevent conflicts and guide the parties involved toward self-resolution, fostering a more efficient and effective contract management process.

Craft comprehensive and adaptable win-win contract terms

Maintaining flexibility within the contract is crucial to adapting to evolving needs and ensuring a sustainable, win-win situation for all parties involved (Barthélemy, 2003; Dietz & Enchelmayer, 2001; Doctrow et al., 1996; Peisch, 1995; Quinn, 2000; Sullivan, 1995). Contracts should be designed to accommodate changes over time, as the higher education landscape and business environment can be dynamic.

By allowing for flexibility, contracts can be adjusted to address emerging challenges, incorporate new objectives, and better align with the evolving needs of both the higher education institution and the service provider. This adaptability is essential for maintaining a successful, long-term partnership and ensuring that the contract remains relevant and beneficial to all stakeholders.

Ensure the capacity to deliver cost efficiencies through economies of scale

Outsourcing in higher education institutions often aims to achieve economies of scale by tapping into higher-skilled labor and best practices (Barthélemy, 2003; Conradson, 2014; Herath & Ahsan, 2006; Phipps & Merisotis, 2005). Vendors in this context are typically multinational corporations with a wide range of contracts worldwide. This global reach allows them to access better pricing for goods and services, tap into more competitive labor markets, utilize advanced IT solutions, and implement higher standards and sustainable practices in their operations. These advantages can significantly contribute to higher education institutions delivering improved services and enhancing the overall student life experience.

Specify the exit strategy

The conclusion of an outsourcing contract should be strategically planned and outlined in both the contract itself and the broader strategy of the higher education institution (Angelo, 2005; Barthélemy, 2003; Doctrow et al., 1996). This strategic planning becomes especially crucial when the institution considers ending the contract. It allows for a well-thought-out exit strategy, providing options for the institution to either bring the outsourced activities back in-house or seek a new vendor through a competitive process should the need arise. Having these options ensures flexibility and a smoother transition in case the contract needs to be terminated. Indeed, the time required for processing and renewing contracts can be over a year, especially in the context of outsourcing in higher education, emphasizing the need for meticulous planning and efficient turnaround in case the contract faces challenges or requires termination. This readiness ensures that the student life experience remains uninterrupted and protects the institution's reputation. Swift and well-considered actions during the conclusion stage can significantly safeguard the institution's and its students' interests.

Table 11 Risk Resolutions Areas and Actions

Risk Resolutions Areas	*Definition*	*Resolution Action*
Stakeholder Relationship Actions	Resolution actions that establish stakeholder goals and activities and how they interact with each other in relation to the contract	1. Acknowledge and incorporate service providers from beyond the realm of higher education (Allen et al., 2002; Dietz & Enchelmayer, 2001; Phipps & Merisotis, 2005). 2. Guarantee effective communication among all relevant stakeholders (Allen et al., 2002; Dietz & Enchelmayer, 2001; Glickman et al., 2007; Moneta & Dillon, 2001; Nicklin, 1997; Pulley, 2000). 3. Foster a common set of values in collaboration with stakeholders (Allen et al., 2002; Bartem & Manning, 2001; Dietz & Enchelmayer, 2001; Harland et al., 2005; Kerekes, 2010; Moneta & Dillon, 2001; Nicklin, 1997; Wood, 2000). 4. Nurture a partnership with the service provider that benefits both parties (Araz et al., 2007; Bartem & Manning, 2001; Bekurs, 2007; Dietz & Enchelmayer, 2001; Ender & Fahleson, 1994; Feeny et al., 2005; Li & Choi, 2009; Linder, 2004; Moneta & Dillon, 2001; Moore, 2002; Wertz, 2000).
Value Proposition Actions	Resolution actions that adjust and evolve quality measures and use them to evaluate and monitor the outsourced services in relation to the contract.	1. Define the value proposition actions for outsourcing (Angelo, 2005; Espino-Rodriguez & Padron-Robaina, 2006; Mudambi & Tallman, 2010). 2. Implement a system of mutual accountability between the client and the provider (Bartem & Manning, 2001; Bekurs, 2007). 3. Vigilantly oversee the operations of the provider (Araz et al., 2007; Aron et al., 2005; Davies, 2005; Feeny et al., 2005; Moneta & Dillon, 2001; Peisch, 1995; Phipps & Merisotis, 2005; Quigley & Pereira, 2011). 4. Strategically manage outsourced operations to enhance and expand the core competencies of the client. (Kremic et al., 2006; Peisch, 1995a, 1995; Quinn & Hilmer, 1994; Tanner & Gwinn, 2004; Wallenburg, 2009).

Financial Arrangement Actions	Resolution actions that establish financial measurements and formal controls to evaluate and monitor the financial performance of contracts.	1. Practice cost control with financial incentives and penalties (Angelo, 2005; Barthélemy & Quelin, 2006; Davies, 2005; Doctrow et al., 1996; Eddy & Spaulding, 1996; Harland et al., 2005; Li & Choi, 2009; Moneta & Dillon, 2001; Peisch, 1995; Phipps & Merisotis, 2005; Quigley & Pereira, 2011; Quinn, 2000; M Van Der Werf, 2000; Vanhorn-Grassmeyer & Stoner, 2001; Wood, 2000). 2. Create wage structures that are in sync with both the client and the providers. (Allen et al., 2002; Wertz, 2000). 3. Adjust human resources to align with financial arrangement actions (Barthélemy & Quelin, 2006; Eddy & Spaulding, 1996; Feeny et al., 2005; Gupta & Herath, 2005; Li & Choi, 2009; Moneta & Dillon, 2001; Quinn, 2000; James Brian Quinn & Frederick G. Hilmer, 1994; Sullivan, 1995; Vanhorn-Grassmeyer & Stoner, 2001; Wertz, 2000; Wood, 2000).
Provider Selection Actions	Resolution actions that establish terms and conditions for providers and evaluate their performance before and during the contract	1. Generate a request for proposals (RFP) that includes well-defined evaluation criteria and both stringent yet adaptable terms (Angelo, 2005; Dietz & Enchelmayer, 2001; Doctrow et al., 1996; Wertz, 1997). 2. Establish clear quantitative and qualitative evaluation criteria (Angelo, 2005; Feeny et al., 2005; Harland et al., 2005; Peisch, 1995; Phipps & Merisotis, 2005; Wertz, 2000). 3. Develop contracts with incentives and clauses that enable self-enforcement (Barthélemy, 2003; Davies, 2005; Wertz, 1997). 4. Craft comprehensive and adaptable win-win contract terms (Barthélemy, 2003; Dietz & Enchelmayer, 2001; Doctrow et al., 1996; Peisch, 1995; Quinn, 2000; Sullivan, 1995; Wertz, 2000). 5. Ensure the capacity to deliver cost efficiencies through economies of scale (Barthélemy, 2003; Conradson, 2014; Herath & Ahsan, 2006; Phipps & Merisotis, 2005). 4. Specify the exit strategy (Angelo, 2005; Barthélemy, 2003; Doctrow et al., 1996).

7 AN INTEGRATED MODEL

Our model combines research from general Risk Management Theory, as inspired by our review of the literature on outsourcing of auxiliary services in higher education. It includes analysis of risky outcomes (Arrow, 1965), analysis of opportunities to address risky outcomes (Lyytinen et al., 1998), and planning of how to apply resolution tactics to risky activities (Ali et al., 2017; Mathiassen et al., 2007). As a basis for this, we consider common issues in outsourcing in higher education and information systems (Barthélemy & Quelin, 2006; Davies, 2005; Kliem, 1999; Miller & Lessard, 2007).

7.1 Model Overview

We define our risk areas and items in Table 10 drawing inspiration from the general theory of contracting and outsourcing. Our review of the literature on outsourcing of auxiliary services in higher education also guides our definition of risk resolutions and actions in Table 11. We base our initial coding describe in chapter 3.4 by systematically refining our conceptualization of risks and resolutions based on the literature.

As we detailed above in chapter 3.4, we drew on the McFarlan (1989) framework to synthesize our findings and concepts. As such, we adopt an integrative risk management approach widely used in software and information systems development. A similar approach has been used in relation to innovation of cloud services (Ali et al., 2017), software risk management (Lyytinen et al., 1998), data breach management (Khan et al., 2021), and development requirements (Mathiassen et al., 2007). The model suggests 2^3=8 risk profiles based on a high-low scale of three foundational risk areas, where each risk profile (Table 12**)** prioritizes four foundational resolution

actions on a high-medium-low scale that can be employed during the establishment and management of an outsourcing contract.

Table 12 Managing Outsourcing Risks in Higher Education (adapted from McFarlan 1989)

Risk Areas and Items				*Risk Resolutions and Actions*			
Profile	Operational Risk	Financial Risk	Contracting Risk	Stakeholder Relationship Actions	Value Proposition Actions	Financial Arrangement Actions	Provider Selection Actions
1	High	High	High	High	High	Low	Medium
2	Low	High	High	High	Low	High	Medium
3	High	Low	High	High	High	Low	Medium
4	High	High	Low	High	High	Medium	Low
5	High	Low	Low	High	High	Low	Low
6	Low	High	Low	High	Low	High	Low
7	Low	Low	High	Low	High	Low	High
8	Low	Low	Low	Low	Medium	Medium	Low

We developed this comprehensive risk management model for contracts related to auxiliary services at higher education institutions. As such, the model incorporates heuristics to guide the application of resolutions areas to different risk areas by addressing eight risk profiles and offering specific risk resolution strategies for each as an adaptation of McFarlan's (1989) risk management framework. In doing so, our model extends the application of the original risk management framework beyond software and information systems projects to managing outsourcing contracts in the context of higher education.

Hence, as our key contribution, we extend and adapt McFarlan's (1989) framework and demonstrate its application in a new context grounded in extant literature. It is, therefore, crucial to highlight our model's benefits in improving risk mitigation, decision-making, and overall efficiency in contract management within the realm of auxiliary services in higher education. We achieve this by providing practical tools to identify risk areas and items (Table 10) and practical

risk resolutions actions for each item (Table 11). This enables higher education professionals to manage risks in their outsourcing activities.

7.2 Model Rationale

In his paper on managing risks in outsourcing agreements, Kliem (1999) identifies three key areas of risk: Legal, financial, and operational. These risk categories are not mutually exclusive, as they often overlap in various ways. Additionally, the significance of these risk areas can vary in each phase of the contract.

Kliem emphasizes that the legal aspect of risk involves potential issues related to contractual agreements, compliance, and legal obligations. Financial risks pertain to the economic aspects of the outsourcing arrangement, including cost overruns, budget constraints, and financial stability. Operational risks are associated with the day-to-day execution of the outsourced activities and may involve factors such as process efficiency, technology failures, and workforce issues.

It's crucial to recognize that these risk areas are interconnected, and their impact can evolve throughout the different stages of the outsourcing contract. Addressing these risks requires a comprehensive understanding of the intricacies involved in each domain and adapting risk management strategies accordingly.

Our priority criteria were formulated through the utilization of established heuristics, which serve as the primary tool for comprehending and assessing risk management, taking into consideration first operational requirements. When outsourcing services, the significance of criticality and maintaining control in typically essential activities cannot be emphasized enough. Our focus is

directed towards essential services, with priority given to operational risk areas, ensuring comprehensive coverage of vital activities takes precedence over addressing other potential risks.

Our secondary risk priority pertains to financial risk considerations, typically arising from the impact of operational activities or the volatility of services. These risks are identified through the analysis of various factors associated with contracts. In our specific context, emphasis is placed on implementing effective and proactive measures to mitigate operational vulnerabilities and ensure the allocation and stability of both contractors and vendors.

Finally, in our context, contracting risk often arise from adverse events linked to operational occurrences and their financial implications. Market conditions, legal factors, alterations in market dynamics, legal or regulatory advancements, financial instability of contracting parties, and unforeseen events affecting the project are all contributing factors to contracting risk.

Due to the lack of clarity in the literature regarding the order in which these risks should be implemented within our context, and given that our concept can be innovative in nature for the purposes of this dissertation, we believe that while an overlap does exist in the risk areas, the priority of addressing the system can fluctuate and interdepend on the project's stage. The determination of stages can be made by both the contractor and the vendor at different points. The priority requires a prioritization order wherein focus in activities is distinctly identified. It is crucial to note that each action is not inherently less important than the other; rather, they demand more attention based on specific scenarios and details. Therefore, following these criteria and context, we prioritize the resolution of operational risks, followed by financial risks, and then contracting risks.

Using a high-low scale for assessing operational, financial, and contracting risk defines the eight risk profile. Table 12 summarizes these and our suggestions for relating them to risk resolution and actions. We adapted the following heuristics from Mathiassen et al. (2007) and based on our review of the literature on outsourcing of auxiliary services in higher education. Given that each risk profile comprises three distinct risks—operational, financial, and contracting—our model builds upon the following heuristics:

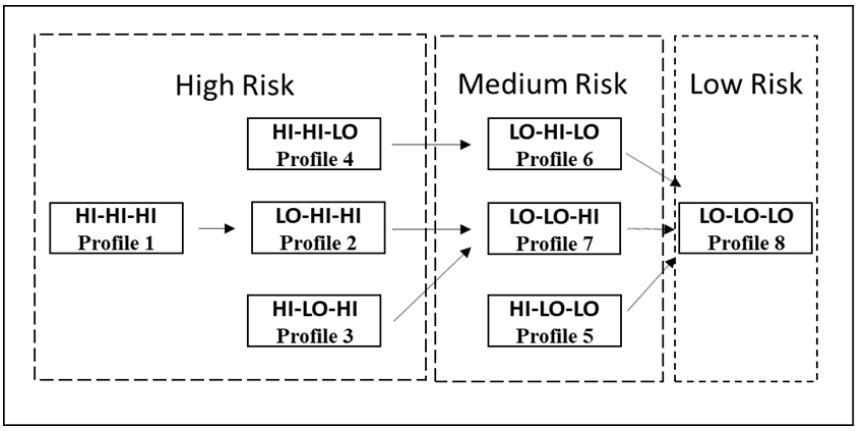
- ✓ When addressing *high operational risks*, the model focuses on *stakeholder relationship actions* and *value proposition actions*.
- ✓ When addressing *high financial risks*, the model focuses on *stakeholder relationship actions* and *financial arrangement actions.*
- ✓ When addressing *high contracting risks*, the model focuses on *value proposition actions* and *provider selection actions.*
- ✓ If *two or more risks are high*, the model addresses high risks in the following priority: *operational risks* → *financial risks* → *contracting risks*.

As a result, our model emphasizes preventing unfavorable consequences from excessive focus on a singular resolution area. Instead, in addition to placing high emphasis on some areas and low on others, it advocates for a well-rounded approach that also places moderate importance on specific resolution areas. For instance, within profiles 4 and 8, the balanced approach involves giving medium emphasis to the value proposition actions and financial arrangement actions. Similarly, in profiles 1, 2 and 3, a medium focus is directed toward provider selection actions. Our balanced approach aims to mitigate risks and optimize outcomes.

Consequently, the proposed model suggests that as risks are successfully managed through the application of resolution actions aligned with the risk profiles in Table 12, an outsourcing situation will transition between various archetypical risk profiles. This dynamic process is visualized in

Figure 7. To comprehensively understand the model, one should therefore combine Figure 7 and Table 12.

Figure 7. Sequence of Addressing Risk Profiles (adapted from Mathiassen et al. 2007)



7.3 High Risk Profiles

Profiles 1 to 4 are classified as high-risk profiles due to their inclusion of two or more high-risk areas (Table 12**,** Figure 7).

Profile 1

The profile encompasses three high risk areas (HI-HI-HI). Following our heuristics of prioritizing when two or more risks are high, our primary focus is on mitigating operational risks. That places high emphasis on managing stakeholder relationship actions and value proposition actions (Table 12).

Emphasizing stakeholder relationship actions entails carefully cultivating them to ensure alignment throughout the process, and emphasizing value proposition actions entails ensuring that the contractor's current mission and status remain unchanged. Additionally, the profile

recommends allocating medium attention to provider selection actions, which aims at reaffirming the characteristics of the contractor from the beginning of the process, and low attention to addressing financial arrangement actions. This prioritization is based on the understanding that operational risks are of utmost importance in high-risk situations, given their substantial impact on the outcome of the services provided.

When the operational risks are appropriately addressed, a risk assessment will move to profile 2 (Figure 7).

Profile 2

This profile encompasses two high risk areas (LO-HI-HI). Following our heuristics of prioritizing when two or more risks are high, our primary focus is on mitigating financial risks. That places high emphasis on managing stakeholder relationship actions and financial arrangement actions (Table 12).

Stakeholder relationship actions entail carefully cultivating them to ensure alignment throughout the process, and when emphasizing financial arrangement actions, we consider the current contract's performance in terms of profitability as crucial. The profile suggests allocating a medium level of attention to addressing provider selection actions and a low level to value proposition actions. This prioritization stems from the understanding that operational risks are largely covered in Profile 1, and the primary objective is establishing a healthy financial contract.

When the financial risks are appropriately addressed, a risk assessment will move to Profile 7 (Figure 7).

Profile 3

The profile encompasses two high risk areas (HI-LO-HI). Following our heuristics of prioritizing when two or more risks are high, our primary focus is on mitigating operational risks. That places high emphasis on managing stakeholder relationship actions and value proposition actions (Table 12).

Emphasizing stakeholder relationship actions entails carefully cultivating them to ensure alignment throughout the process, and emphasizing value proposition actions entails ensuring that the contractor's current mission and status remain unchanged. Additionally, the profile recommends allocating medium attention to provider selection actions, which aims at reaffirming the characteristics of the contractor from the beginning of the process, and low attention to addressing financial arrangement actions. This prioritization is based on the understanding that operational risks are of utmost importance in high-risk situations, given their substantial impact on the outcome of the services provided.

When the operational risks are appropriately addressed, a risk assessment will move to Profile 7 (Figure 7).

Profile 4

The profile encompasses two high risk areas (HI-HI-LO). Following our heuristics of prioritizing when two or more risks are high, our primary focus is on mitigating operational risks. That places high emphasis on managing stakeholder relationship actions and value proposition actions (Table 12).

Emphasizing stakeholder relationship actions entails carefully cultivating them to ensure alignment throughout the process, and emphasizing value proposition actions entails ensuring that the contractor's current mission and status remain unchanged. Additionally, the profile recommends allocating medium attention to addressing financial arrangement actions and low attention to provider selection actions, which aims at reaffirming the characteristics of the contractor from the beginning of the process. This prioritization is based on the understanding that operational risks are of utmost importance in high-risk situations, and that the current contract's performance in terms of profitability is crucial.

When the operational risks are appropriately addressed, a risk assessment will move to Profile 6 (Figure 7).

7.4 Medium Risk Profiles

Profile 5-7 involve medium risk as they include one high risk area, which suggests that the challenges mostly involve covering that risk area and items.

Profile 5

The profile encompasses one high risk area (HI-LO-LO). Following our heuristics of prioritizing when operational risk is high, our primary focus is on mitigating operational risks. That places high emphasis on managing stakeholder relationship actions and value proposition actions (Table 12).

Emphasizing stakeholder relationship actions entails carefully cultivating them to ensure alignment throughout the process, and emphasizing value proposition actions entails ensuring that the contractor's current mission and status remain unchanged. This prioritization is based on the

understanding that operational risks are of utmost importance in high-risk situations, given their substantial impact on the outcome of the services provided.

When the operational risks are appropriately addressed, a risk assessment will move to Profile 8 (Figure 7).

Profile 6

The profile encompasses one high risk area (LO-HI-LO). Following our heuristics of prioritizing when financial risk is high, our primary focus is on mitigating financial risks. That place high emphasis on managing stakeholder relationship actions and financial arrangement actions (Table 11).

Stakeholder relationship actions entail carefully cultivating them to ensure alignment throughout the process, and when emphasizing financial arrangement actions, we consider the current contract's performance in terms of profitability as crucial. This prioritization stems from the understanding that operational risks are largely covered in Profile 1,3,4 and 5 and the primary objective is establishing a healthy financial contract.

When the financial risks are appropriately addressed, a risk assessment will move to Profile 8 (Figure 7).

Profile 7

The profile encompasses one high risk area (LO-LO-HI). Following our heuristics of prioritizing when contracting risk is high, our primary focus is on mitigating contracting risks. That places high emphasis on managing value proposition actions and provider selection actions (Table 12).

Emphasizing value proposition actions entails ensuring that the contractor's current mission and status remain unchanged, when emphasizing provider selection actions, which aims at reaffirming the characteristics of the contractor from the beginning of the process.

When the contracting risks are appropriately addressed, a risk assessment will move to Profile 8 (Figure 7).

7.5 Low Risk Profile

A low risk profile consistently involves low risk areas (LO-LO-LO), which can include either the effective execution of our heuristic propositions or a small-scale outsourcing operation characterized by clear and well-defined success criteria.

Profile 8

This profile encompasses low risk (LO-LO-LO). Following our heuristics of prioritizing when all risks are low, our primary focus is on observing all risks. That places a medium emphasis on managing value proposition actions and financial arrangement actions (Table 12).

Emphasizing medium actions in the value proposition involves ensuring that the contractor's existing mission and status remain unaffected. When focusing medium on financial arrangements, we prioritize the current contract's profitability performance.

Once operational, financial, and contracting risks are addressed, and profiles 1-7 are applied, all involved parties are familiar with the process through past experiences. This familiarity facilitates easy solutions and rapid implementation of improvements as necessary, until high-risk areas resurface. (Figure 7).

8 DISCUSSION

Outsourcing auxiliary services in higher education offers a relief for institutions, allowing them to focus on their core competencies. It also provides a platform for potential business innovation, as service providers can bring in the best industry practices and economies of scale (Bekurs, 2007; Blumenstyk, 1998; Conradson, 2014; Gilmer, 1997; Glickman et al., 2007; Hatonen & Eriksson, 2009). Higher education has evolved into a highly complex landscape, where additional services beyond academic offerings contribute significantly to the overall value of institutions. Today, key services such as food and residence services, have become integral parts of the student life experience, enhancing their ability to thrive (Abramson, 1994).

Certain institutions have committed to offering outstanding services, achieving success in the market by understanding that academic excellence is not the only pinnacle of institutional achievement. Additionally, political pressures, cultural nuances, and power dynamics within higher education institutions can sometimes pose barriers to achieving excellence in auxiliary services. However, this industry operates differently, and the higher education culture may not provide the same platform that the private sector can leverage (Conradson, 2014). While higher education culture is an excellent foundation for education enrichment, it may be counterproductive for auxiliary services (Allen et al., 2002).

8.1 The Model And Its Use

Our research is focused on aiding institutions in managing auxiliary services through the implementation of the Risk Management Model aimed at improving outsourcing management within the higher education industry. Initially, we leverage the Kliem's (1999) framework, which encompasses risk identification, risk analysis, and risk control (Table 3). This framework served

as the foundational platform for establishing our coding of extant literature, as described in Table 9.

Risk identification acts as the launchpad for initiating and identifying our risk areas and items (Table 10). Subsequently, we employ risk analysis to determine risk resolution actions (Table 12). To streamline the process, we establish these actions in a practical manner that comprehensively covers the scope of our research and shares commonalities with other industries (Ali et al., 2018; Iversen et al., 2004; Khan et al., 2021).

Finally, we utilize risk control as a tool to establish criteria seamlessly integrating both identification and analysis. We implement heuristics to address scenarios involving both elements, especially in the evolving landscape of auxiliary services in higher education. Our proposed Risk Management Model aims to align risk areas and items with corresponding resolution actions, forming the core of our risk control strategy. The heuristics mapping is summarized in Table 12 and Figure 7. While other authors have proposed similar models in different contexts (Ali et al., 2017; Mathiassen et al., 2007), we suggest our model offers two important contributions within the higher education context: 1) the model presents user-friendly patterns, dynamically illustrating how to match risk areas and resolution actions for effective outsourcing management; and, 2) the model includes a detailed explanation of the application of risk management by identifying the main tools (risk items and resolution actions) applicable to higher auxiliary services in higher education.

We acknowledge that our model is not fully detailed and may overlook specific details relevant to the complex and constantly changing environment where higher education institutions are situated.

However, the validity of the model is grounded in a thorough literature review and supported by our practical experience in the field.

We found it necessary to underscore the challenges expected when applying our model, specifically those associated with user bias. As mentioned earlier, the unique ecosystem of higher education institutions introduces factors beyond the scope of our research. We don't view this as a limitation; instead, we propose that adjustments to the model may be essential. This requires empirical work to customize our approach to specific institutions and environments. As a practitioner, I strongly recommend that considerations of political power, funding issues, and other intrinsic factors in the institutions where the model is applied must be appropriately considered by its users. This includes aspects related to bias awareness and the understanding of the situation, where some risk assessments and resolutions may need modification.

Building upon our earlier elaborations, we highlight three key challenges implementing the model into specific contexts:

1. *Bias in Communities Opposed to Outsourcing*: The model may face resistance from communities or stakeholders who harbor skepticism or opposition to outsourcing in higher education. This bias could stem from concerns about job displacement, cultural nuances, or a general mistrust of external influences. Addressing and mitigating these biases will be crucial for successful implementation. Other research endeavors have offered valuable perspectives on these issues (Glickman et al., 2007; Kerekes, 2010; Laidley, 2014).

2. *Political Opposition from Positions of Power*: Political dynamics within higher education institutions can pose a significant challenge. Individuals in positions of power may resist the

adoption of the model due to conflicting interests, differing visions, or fear of losing control. Navigating and addressing these political challenges will require strategic communication and a nuanced understanding of the institutional power landscape (Barthélemy & Quelin, 2006; Eddy & Spaulding, 1996; Herath & Ahsan, 2006).

3. *Funding Challenges in Implementing the Model*: Implementing any strategic model requires financial resources. Funding challenges could arise from budget constraints, competing priorities, or a lack of perceived immediate return on investment. Securing adequate funding and demonstrating the long-term benefits of the model will be essential to overcoming this challenge (Bekurs, 2007; Glickman et al., 2007; Gupta & Herath, 2005; Johnstone, 1999; Wekullo, 2017).

In acknowledging these challenges, we underscore the necessity for a comprehensive approach encompassing strategies for bias mitigation, political navigation, and securing requisite financial support in higher education. While our model does not explicitly address these challenges, we recognize them as necessary pre-contractual considerations. As such, we see our model as a platform for establishing awareness of these concerns and to showcase that the challenges can be addressed, and the model can be modified to adapt to the needs of higher education institutions. Accordingly, we also encourage other researchers to delve deeper into pre-contract scenarios by establishing heuristics for how our model can be useful in scenarios with stakeholder bias, political uncertainty, and funding constraints.

8.2 Theoretical Implications

The hypothetical nature of the model suggests the need for researchers to develop it further for theoretical and practical applications. While offering a theoretical and well-founded solution for

managing outsourcing auxiliary services in higher education, we encourage other researchers to explore and expand upon the model based.

The initial challenge lies in preparing a pre-contractual platform, with the Request For Proposal (RFP) being a crucial part of this process. While widely used and accepted in the procurement world, the RFP often neglects political influences. Delving into this aspect is essential for providing a theoretical foundation to navigate challenges highlighted in our model, specifically, as a strength of our model lies in its ability to address stakeholder relations effectively. We propose using our model as a base to facilitate the RFP and incorporating our heuristics to create a robust path towards a successful contract, contributing significantly to positive outcomes.

The second challenge involves translating our model into practice through experiments and empirical studies. Examining conditions where our model has been applied and identifying patterns of use through case studies will be crucial. Practitioners applying the model and case studies of its usage can help validate and refine the model in real-world scenarios.

Utilizing the adopted Engage Scholarship approach (Van de Ven, 2007) can validate the application of heuristics and their combination in resolving risks within different contexts. Both consulting and action research present excellent opportunities to advance both internal and external validity of the model.

8.3 Practical Implications

The versatility of this model proves invaluable in various applications, particularly in the realm of higher Education. Although our findings may not explicitly indicate an abundance of literature supporting the specific conditions and uses proposed by this model, it does underscore the diverse

approaches institutions adopt in utilizing auxiliary services. Larger establishments may opt to establish their own auxiliary services, foregoing the need for outsourcing, while smaller colleges might find outsourcing services to be a more practical solution.

Our literature review and research also shed light on instances, such as in Florida law, where universities resort to outsourcing services to streamline their operations. In light of these observations, we contend that our model transcends specific classifications, as we don't perceive these findings as limitations. Instead, we assert that the model can be applied in nuanced ways across different classifications. We present an open framework, encouraging the addition of items related to risk areas and proposing more actionable resolutions.

We are confident that the versatility of this model extends across factors like institution size, type, and geographic location, providing adaptable solutions for a wide range of scenarios.

Our model is applicable both on the vendor side and within established auxiliary services in higher education institutions. Although our literature coverage regarding vendors in this category may not be comprehensive, we confidently affirm that our model offers the necessary richness for successful implementation in higher education settings and vendor engagements. The varying needs of institutions across different stages can be accommodated, and the model serves as a complement to partnerships, fostering synchronization between both parties during the execution of contracts.

We recognize that our examination predominantly relies on academic literature related to outsourcing in general and in higher education in particular. The results reveal key practices for overseeing outsourced services in higher education, accompanied by guidance on navigating the

process. Our contribution encompasses a comprehensive model that delineates risk areas, suggests resolution actions, and incorporates implementation heuristics. To simplify this knowledge and make it practically useful, we have amalgamated heuristics by merging Table 12 and Figure 7 in our model.

As such, the Risk Management Model defines risks with a foundational understanding of common areas where risks may arise, and offering a detailed framework of actions towards resolving these risks. Our model is readily applicable in practical scenarios with minimal adjustments to context or scope. Furthermore, it can be easily extended to areas not initially covered, requiring only minor modifications of model details while maintaining its foundational architecture.

9 CONCLUDING REMARKS

We conducted a systematic literature review, delving into articles from scholarly and practical journals, including top-tier publications. The culmination of this effort was a synthesis of our findings into a model specifically crafted to manage risks in higher education auxiliary services. This model intricately links patterns of risk items with corresponding resolution actions, aiming to empower practitioners to effectively apply the model in contract management.

Our study seamlessly connects theoretical concepts with practical applications, specifically transferring knowledge from IT to higher education. Theoretically, we present a comprehensive risk management model that expands existing knowledge and opens new research avenues. Practically, our model offers a systematic approach to outsourcing, addressing and mitigating risks in auxiliary services. The incorporation of heuristics makes it a foundational tool for managing auxiliary services, directly addressing our research question on effective risk management of outsourcing services in higher education.

Our research extends the scope of outsourcing by tailoring the Risk Management Model for higher education incidents, building upon McFarlan's (1981) framework. Unlike previous studies focused on impacts and reasons, we proactively seek to prevent and respond to incidents. As such, the model guides institutions in addressing challenges and executing outsourcing contracts, while its foundation in a systematic review provides a solid foundation for future research. Moreover, our behavioral perspective on risk management, with risks, resolutions, and heuristics for higher education outsourcing, offers initial practical utility and opens avenues for future research and additional risk management models.

We understand the importance of recognizing potential gaps and biases in our literature review. Our search has focused on academic and higher education practitioner journals, and we acknowledge that it may not cover all sources comprehensively. Limited by the selected keywords (Table 8), our study, nevertheless, presents a wealth of information that significantly contributes to the ongoing discourse on outsourcing in higher education. Beyond adding value to the conversation, our research establishes a strong foundation for further exploration in this dynamic field.

Our model zeroes in on auxiliary services in higher education with a comprehensive approach, including food services, campus stores, parking, bookstores, student housing, computer services, health care, wellness, security systems, web design, campus maintenance, alumni relations, and intercollegiate athletics. We're mindful of the evolving landscape, leaving room for inclusion of emerging services to ensure adaptability through future research. While certain services may currently be outside our scope, we acknowledge that their implications often intersect with our primary focus areas.

We addressed the literature using the approach recommended by Webster & Watson (2002), Xiao & Watson (2019), and Snyder (2019) to enhance our understanding of outsourcing in higher education. To that end, we designed the literature review with the goal of proposing a risk management model using heuristics to link risks to resolutions. While this approach focused on defining risk areas in higher education, it also provided a limited perspective on outsourcing in the industry, considering the extensive knowledge available in the literature.

Against this backdrop, we hope that auxiliary services managers in higher education will find our Risk Management Model inspiring and adapt it as suggested to their specific contexts, and that other researchers will further develop and complement the model through empirical studies.

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VITA

Alfonso A. Quinones possesses a proven track record of strategic leadership within the hospitality and higher education realms, offering valuable expertise to various organizations. Currently serving as the Resident District Manager at Bon Appétit Management Company at the prestigious Massachusetts Institute of Technology (MIT), he adeptly oversees operations spanning retail, catering, and residential dining. Leading a sizable team to success, Alfonso manages a substantial budget with finesse.

Throughout his career, Alfonso has been instrumental in driving significant business growth, particularly in the aftermath of the COVID-19 pandemic, and expanding operations during his tenure at the University of Colorado. His dedication to excellence is evident in his robust educational background, which includes a Doctor of Business Administration with a focus on "Outsourcing in Higher Education: Risk Management Model," an Associate in Occupational Studies from The Culinary Institute of America, a Master in Business Administration from Universitat de Barcelona, and a Bachelor in Business Administration from Universidad Jorge Tadeo Lozano.

Alfonso is committed to fostering genuine partnerships and implementing best practices to achieve organizational objectives. With a unique blend of hands-on experience and academic rigor, he is exceptionally positioned to excel in roles demanding a deep understanding of both theoretical principles and practical operations.