

**Contract Research in Strategic Management:  
Unique Contributions or Just More Economics Research?**

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## **Contract Research in Strategic Management: Unique Contributions or Just More Economics Research?**

If you pick up any mainstream strategy journal, you can clearly see that management scholars are busy examining contracts in a variety of theoretical and empirical studies (for e.g. Barthelemy & Quelin 2000; Mayer & Argyres 2004; Malhotra & Murnighan 2002; Argyres, Bercovitz & Mayer 2007). But, why do strategy researchers study contracts? Some believe that these documents filled with legalese only come out of the filing cabinet in the most extreme case, as when an exchange goes awry and the parties have to go to court to settle the dispute (Macaulay 1963). Others feel that contracts are unnecessary or even hazardous for the exchange if the two parties in a business relationship trust each other (Gulati 1995; Dyer & Singh 1998; Ghoshal & Moran 1996; Malhotra & Murnighan 2002; Zollo et al. 2002). If these documents are truly a last resort for enforcement or can get in the way of business transactions, then maybe strategy researchers are wasting their time and precious journal space investigating how they are designed....but, of course this is not the entire story.

In reality, contracts are ubiquitous in the real world of business, as they are used to formalize interfirm relationships by defining the rules and roles of the exchange, laying out important contingencies, and acting as enforcement mechanisms (Macaulay 1963). So, although contracts may not be used in a small subset of trust-based business exchanges ([reference here](#)), their use is prevalent enough in business relationships to command the attention of business scholars. Additionally, these documents commonly range from a simple purchase order to a complex blueprint for the co-development of a new technology or process. It is particularly these more complex contracts that provide a framework for the exchange between the two partners (Llewellyn 1931). As a result, these documents, which embody the exchange, offer an

opportunity for business researchers to examine why particular clauses are included, how the terms of the agreement impact the relationship between the parties, and how the framework contributes to the success or failure of the exchange. Additionally, although many contract templates are written by lawyers, it is common in information-rich industries, such as IT services, for managers or engineers to negotiate the contract themselves, with lawyers only reviewing the contracts if the transaction is novel or more complicated than previous exchanges.<sup>1</sup> By removing lawyers from the negotiation process, managers can use contracts strategically to plan a more successful exchange with their partner. That is, managers can purposefully choose to include particular safeguards in a contract to prevent potential opportunistic behavior or promote cooperation depending on the characteristics of the task that is the subject of the exchange. Finally, other researchers have suggested that managers use contracts in even more unorthodox ways, such as for a repository of learning that occurs during a series of exchanges (Mayer & Argyres 2004) or as a relationship management tool (Mayer & Weber 2008; Mayer, Weber & Macher 2008). These novel uses for contracts make them even more interesting for strategy researchers, because these uses can directly impact the relationship between the exchange partners and thus connect to the ultimate dependent variable in strategy—firm performance.

We argue that strategy researchers are not wasting their time studying contracts; much to the contrary, we argue that this is a very promising topic, which provides a unique view into inter-firm relationships that is not available in pre-existing data sets common in other areas of strategy research. By examining how managers really use these documents in their day-to-day business, strategy researchers can uncover guidelines for managers that help them make their exchanges, exchange relationships and ultimately their firms more successful.

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<sup>1</sup> Data from personal interview between one of the authors and a former chief technology officer of an Internet technology firm.

Having made the case that contracts are a worthwhile topic for business research, a second question remains regarding contracting research in the field of strategy: Are strategy researchers contributing novel insights to our understanding of contracts beyond those produced by economics? Since most contract researchers in the field of strategy were trained in the discipline of economics, it would not really be surprising if strategy studies closely resemble the economics investigations. The question becomes, however, if both economics and strategy are examining the same questions, using the same theories and methods, is strategy research really adding anything to our understanding of contracts? In this chapter, we attempt to answer that question by developing a map of the world of contract research and comparing and contrasting the areas in this map that both fields are researching, as well as the methods and theories that they are using to reach their conclusions. By identifying the areas unique to each field, as well as any subtle differences in common areas, we will be able to assess the uniqueness of strategy researchers' collective contribution to our understanding of contracts.

### **Classifying the World of Non-legal Contractual Research**

In order to determine if strategy contract research is adding value above and beyond that of economics research, it is necessary to break down the literature in two different ways. The first division arises from the two different sources of this literature: economics and strategy<sup>2</sup>. The second distinction arises from the fact that there are two distinct types of contract research being produced by these camps: theoretical and empirical. These two divisions of the field create a 2x2 matrix in which to examine a variety of variables that will help us determine if the contract

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<sup>2</sup> A third camp emerged in our examination, which is derived from work published in journals that span these two fields, including *Management Science*, *Journal of Economics and Management Strategy* and *Managerial Decision Economics*. These works cannot clearly be classified in one or the other category, so we created a third category designated as hybrids. This sample is smaller than

research in the field of strategy is offering a unique contribution (see Figure 1). Using this classification system,

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Insert Figure 1 about here

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as well as a map of contracting research that we develop, we determine the types of research that are studied within the theoretical world of economics and strategy, as well as the empirical world in these two fields. In doing so, we seek to ask the questions of whether these research streams are differentiated or not. If they are, we seek to understand the source of this differentiation and how future work in the field of strategy can best serve to further it, leading to even more significant contributions to our understanding of contracts from the field of strategy.

### ***Two Distinct Camps of Contract Research: Economics & Strategy***

Although some consider strategy to be a subset of economics, two fundamental distinctions can be made between these two fields. First, economics is itself a pure social science, developing a distinct body of theory that specifically explains a wide variety of economic behavior. Strategy, on the other hand, is a multi-disciplinary field employing theories from a variety of social science disciplines (including economics, sociology and psychology), which specifically seeks to understand firm performance. Second, the field of neoclassical economics largely concentrates on explaining the economically efficient behavior of rational actors. In contrast, strategy focuses on the aspects that explain firm performance, given that individuals are boundedly rational. These fundamental differences between these two disciplines should distinctly shape the direction of contract research that each is conducting. However, the question

emerges as to whether this actually occurred or if these two bodies of research simultaneously co-developed, with strategy solely using economic theory to examine contracts?

In order to answer this question, we must examine the history of the development of each field's body of contract research. In doing so, it becomes quite clear that economics researchers were the first to generate a body of non-legal contract research, producing theoretical contract research since the 1960's (for e.g. Alchian & Demsetz 1973; Jensen & Meckling 1976) and empirical contract studies since the 1980's (for e.g. Joskow 1985, 1987, 1990; Crocker & Reynolds 1993). Specifically, the first economic contract research emerged from the property rights perspective, which espouses the efficient assignment of property rights in contracts. This work began with the publication of Coase's theorem in 1960, continued with notable works from Demsetz in 1967 and Alchian and Demsetz in 1973, and still flourishes today (for e.g. Arruñada, Garicano & Vázquez 2001; Elfenbein & Lerner 2003). Following the property rights vein, Cheung's empirical contract paper appeared in *The Journal of Law and Economics* in 1969. This work examined how the tradeoff between transaction costs and risk aversion impacted the payment structure in the contract. This empirical work was then followed by a string of theoretical papers on agency theory beginning in the 1970's (for e.g. Ros, 1973; Jensen & Mecklin, 1976; Harris & Ravi, 1979) and continuing through today (for e.g. Lafontaine & Masten 2002; Elfenbein & Lerner 2003). However, the vast majority of the contracting research in the field of economics was conducted in the last 30 years, with the advent of transaction cost economics (TCE) (Williamson 1975, 1985). This perspective specifically gave contracts a governance role in the hybrid category between market and hierarchy, which not only highlighted the importance of contracts, but also provided the means to analyze them. Soon, empirical studies based on the TCE perspective flourished in this field (for e.g. Joskow 1985,

1987, 1990; Crocker & Reynolds 1993). These studies specifically examined how the characteristics of the transaction affected the contract design. These three streams of economics research based on agency theory, TCE and property rights still continue to flourish in the field of economics today.

In contrast, both theoretical and empirical contracting research in the field of strategy appeared in the early 1990's, ten to twenty years later than that in economics. Because many strategy scholars who study contracts have some level of training in the discipline of economics, contract studies in strategy also developed from the economic theory of TCE. The research in this field began with the appearance of Parkhe's 1993 empirical paper in *The Academy of Management Journal*. This study used transaction cost economics and ideas from game theory to determine the governance structure of alliances. It was followed three years later by a paper in *Organization Studies* by Garcia-Canal (1996), which again used TCE to examine governance choice of alliances with increasing complexity. These two papers were followed by a four year lull in contracting research in the strategy field, which ended when a flurry of empirical research, again largely embracing TCE, emerged from 2000 to the present (See Figure 2). On the theoretical side, Choi, Lee and Kim published a paper in 1999 in *The Journal of*

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Insert Figure 2 about here

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*International Business and Strategy* examining the effect of contractual uncertainty on governance structure. Again, there was a four year break in activity in strategy contract studies, ending with the development of the seven theoretical papers in our sample produced from 2004 to the present.

As evidenced by the lag between their onsets, the bodies of contract research in economics and strategy developed independently. However, there is still the potential for significant overlap between these streams in two ways. First, some of the researchers working in strategy and management departments publish in both economic and strategy journals, leading to the possibility that the studies appearing in strategy journals are essentially economic studies. Second, most strategy researchers studying contracts were trained in the base discipline of economics, so they are likely to view contracts with an economics lens, potentially producing the same insights as researchers in economics departments. As a result, there is still a real concern as to whether these researchers have just found new outlets for economic-based contract research in strategy journals or if they are going beyond their economic training to ask questions relevant to the field of strategy.

### ***Two Distinct Types of Contract Research: Theoretical & Empirical***

In addition to two distinct branches of contract research, there are also two distinct types of contract studies: theoretical and empirical work. In contract theory papers, economic or strategy researchers use formal models, deductive logic or inferences from case studies to derive propositions about contracts. In contrast, contract scholars conducting empirical work use data from actual contracts, surveys or experiments to test hypotheses. There are two main reasons to separate these two types of data in our analysis. First, by definition, the methods used for theoretical and empirical papers are very different. If the theoretical and empirical papers were grouped together in our analysis, it would be difficult to determine the actual methodological trends for economics and strategy as this grouping would artificially inflate some of the

categories. Second, given that it is often difficult to obtain actual contract data, researchers might face constraints regarding the topics that they can study empirically. In contrast, theoretical work will not face those limitations, and may be able to cover either a different selection or a broader range of topics. If these two types of work were clustered together, these patterns would be obscured.

### **Mapping the World of Non-legal Contract Research**

In order to answer the question of whether contracting research in strategy is creating any value beyond that of economics studies, it was necessary to create a map of the world of contract research to determine if the two fields are studying the same phenomena. In order to create this map, we cataloged the entire population of contract research in strategy as well as a representative sample of the contract work in economics. To build the strategy sample, we first canvassed the strategy journals for contract-related publications: *Academy of Management Journal*, *Academy of Management Review*, *Strategic Management Journal*, *Organization Science*, *Management Science*, *Strategic Organization*, *Administrative Science Quarterly*, *Journal of International Business Studies*, *Journal of Management*, *Journal of Management Studies*, and *Journal of Management Inquiry and Organization Studies*. Following this step, we then went to the ISI Web of Science to locate any articles outside of our initial sample that cited Parke 1993, the first known contract paper in a strategy journal. Finally we searched for additional publications and working papers by examining CVs of people known to publish contract work in the strategy field, as well as finding the papers they cited and who cited their papers. We also searched the past four years (2004-2007) of the *Academy of Management Meeting Program* for other papers that may have not been found from these previous searches.

Because strategy contract work has only recently proliferated, we are confident that we have a sizable sample of the population of strategy contract research. For the economics sample, we were faced with a different challenge, because this body of work is so vast, we were not able to build a population-level sample. Instead, we took a representative sample of both the theoretical and empirical contract work in economics. To create this sample, we canvassed the following economic journals for contract-related research: *RAND Journal of Economics*, *Journal of Law Economics & Organization*, *Quarterly Journal of Economics*, *American Economic Review*, and *Journal of Economics and Law*. We also included any publications in these journals that cited the Parke paper, or were cited in the Baker, Gibbons & Murphy (2004) working paper on alliances, which provides a detailed overview of the agency theory and property rights streams of economic contract research. We also then searched the CVs of the authors identified in these searches for working papers.

In conducting both the strategy and economics study searches, we discovered that there are three journals which did not fit neatly into either the strategy or the economics branch, as they publish works from both of these fields. These three journals were labeled hybrids, and include: *Management Science*, *Journal of Economics and Management Strategy* and *Managerial Decision Economics*. Once this sample was assembled and coded<sup>3</sup>, it became apparent that the research from these two camps breaks down into five distinct areas (see Figure 3).

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Insert Figure 3 about here

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<sup>3</sup> Many of these papers contained multiple theories, methods, etc. and were coded as containing each of these potential characteristics so the numbers in each category will not necessarily add up to the sum of the papers from each branch.

The first three links in this map examine how characteristics internal and external to the exchange impact the contract design, which then impacts the exchange or relationship performance, which then impacts the performance of the firm. The fourth link examines how previous exchange or relationship performance influences current contract design, while the fifth link examines how contract design directly impacts firm performance. Each of these links in the map of the world of non-legal contract research is examined in detail below:

- ***Link 1-Effective contract design as a function of exchange, firm or industry characteristics:*** Link 1 examines the elements of successful contract design as a function of transaction, firm, agent or industry characteristics. In these studies, it is common to examine how the presence of particular characteristics from these different levels influences the inclusion of a particular type of clause in the contract. Work that examines this link includes studies looking at how transaction characteristics affect contract duration (Joskow 1987) and how relationship and transaction characteristics affect the make or buy decision (Mayer & Solomon 2006).
- ***Link 2-Transaction/relationship performance as a function of contract design:*** In Link 2, the performance of the transaction or the exchange relationship is studied as a function of the elements of contract design. Here, researchers study how the inclusion of particular contract design elements in the contracts influences the transaction profits, exchange success, or the partners' satisfaction with the relationship. Examples of studies in this area include an experiment examining the impact of formal contracts on cooperation (Lazzarini, Miller & Zenger 2004) and another experimental study examining how binding contracts affected the development of trust (Malhotra & Murnighan 2002).

- Link 3-Firm performance as a function of transaction/ relationship performance:**

While firm performance is a function of many things, this particular stream of contract work examines how it is impacted by the performance of the exchange or the interfirm relationship that results from the contract. Studies in this link examine how the relationship that developed between the partners as a result of the contract, or the performance of the transaction governed by the contract impacts the financial success of the firm. One study in this area examined the effect of the contract design on the transaction performance, and then the transaction performance on firm survival (Azoulay & Shane 2001).
- Link 4-Contract design as a function of transaction/relationship performance:** This stream of research examines how previous transaction performance or prior dealings with the same firm impacts the design of the contract. This feedback loop on future contract design is the subject of the stream of research that examines whether contracts and trust are complements or substitutes, and generally looks at how detailed or long future contracts are as a result of prior interaction between the exchange partners. Studies in this area include a paper on the effects of prior relationships on the contract (for e.g. Poppo & Zenger 2002; Corts & Singh 2004).
- Link 5-Firm performance as a function of contract design:** In these studies, the effect of contract design for a particular exchange on the performance of the firm is examined. In this research stream, the dependent variable is largely a firm-level financial measure, such as return on sales (ROS) or profit. Studies in this area include a paper in which the effect of tying in franchise contracts on the net income of the firm is examined (Michael 2000).

In determining whether strategy research on contracts is providing a unique contribution to the understanding of contracts, it is necessary to examine which of these links is being investigated by economics and strategy, where the overlap occurs and the potential subtle differences that may exist between these groups. As we will show, strategy researchers are answering different questions and looking at similar questions in different ways than researchers in economics.

### **Theoretical Contract Papers: Are Strategy & Economics Making Different Contributions?**

In examining the theoretical contract papers of strategy, economics and hybrid journals, three things become very clear. First, there are very few contract theory papers in the field of strategy (8), as compared to the vast number in the field of economics. As a result, we are not comparing absolute numbers in this section, but are reporting trends in the work in these fields. Second, economics and hybrid theoretical papers tend to exhibit the same patterns and will therefore be reported as a single economics group in this section, except in the rare cases in which their characteristics diverge. Finally, and most importantly, although strategy has not produced a large body of theory work at this time, contract researchers in this field are definitely examining very different topics from economics researchers in very different ways. This revelation is most clearly seen by examining where the different work falls within the map of contract research that we previously developed. As is evident from Figure 4, the economics and hybrid contract research clearly maps onto Links 1 (effect of internal and external characteristics on contract design) and 5 (effect of contract design on firm performance), while the strategy research is confined to Links 2 (effect of contract design on relationship or transaction) and 4

(effect of prior interactions on contract design). It is notable that neither of these fields generated studies that fall into Link 3 (effect of transaction/relationship performance on firm performance).

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Insert Figure 4 about here

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This very distinct separation illustrates that strategy scholars are using their theory papers to advance knowledge in the areas of how the contracts impacts the transaction or relationship performance and how these prior interactions feedback to affect future contract design, with emphasis on the latter as six of the eight papers fall in this category. The papers in Link 4 primarily tend to focus on how trust resulting from prior relationships or learning from prior experience with the same partner affects the level of detail or the type of clauses included in the present contract (Choi, Lee & Kim 1991; Mayer & Argyres 2004; Grandori & Furlotti 2005; Woolthuis, Hillebrand & Nooteboom 2005; Grandori & Furloti 2007; Puranam & Vanneste 2008). The other two papers in this sample look at the reciprocal relationship, examining how the contract design affects the success of the relationship for the current transaction (Argyres & Mayer 2007; Weber & Mayer 2007). This area is much less explored, and provides an opportunity for future research for strategy contracting research scholars.

In addition to asking different questions, theory papers in strategy and economics differ in the way that they ask these questions. Economic theory papers primarily rely on the three standard theories: Agency theory, transaction cost economics, and property rights. In contrast, strategy theory papers examine contracts primarily through the TCE lens (5 of the 8 papers), with only a couple using the resource-based view (2). This difference in the use of theory is largely based on the fact that TCE assumes that transaction costs will arise during the execution of the

contract, while both agency theory and the property rights view suggest that optimal behavior will occur if either the incentives or property rights assignment are optimal. The TCE view offers a more realistic view of how firms actually conduct business, which the strategy researchers desire to understand; while agency theory and property rights theory are more appropriate the economists' pursuit of optimal behaviors of rational individuals. This explanation does not elucidate, however, why economists use TCE to examine contracts. The answer actually lies in how each of these camps uses TCE to examine contracts. Economics researchers use TCE to determine the first best safeguard to mitigate a contractual hazard (for e.g. Hubbard & Weiner 1986) while strategy researchers use TCE not only to overcome hazards, but also to examine how safeguards can be used to overcome problems of bounded rationality in the contracting process (Choi, Lee, & Kim 1999), how transaction costs in addition to learning affect the level of detail in the contract (Mayer & Argyres 2004), or how the contractual safeguards required by TCE can be framed to best manage the relationship between the two exchange parties (Weber & Mayer 2007). These very different applications of TCE fit with the purpose of each field, as well as their prevailing views of rationality.

Strategy researchers are also using different methods in theory research than their economic counterparts. In our sample, we see that contract theory work in both economic and hybrid journals primarily feature formal mathematical models, while strategy theory papers feature deductive reasoning based on case study data. This split is again a reflection of the basic difference between the two fields. In economics, it is perfectly reasonable to make the strict assumptions necessary to derive a formal model. This model does not necessarily have to conform to real world conditions as explaining business behavior as it occurs in firms is not the purpose of this field. In strategy, however, explaining this real-life behavior is exactly the

purpose of the field. Therefore using formal mathematical models with strict assumptions that may be difficult to map onto real-world contexts is less prevalent in strategy research.<sup>4</sup> The formal economic models of contract design are rarely cited in strategy literature on contracts, even though they may address the same issues as strategy research. Part of the issue may be that the assumptions of the formal models are difficult to apply in empirical work on contract design.

When examining the theoretical work of both of these groups, there are some remarkably similarities as well as differences. First, the predictors used to develop contract theory in both fields are similar. Both strategy and economics researchers rely primarily on transaction characteristics to predict effects on contract design and performance. Additionally, firm characteristics and relationship characteristics are used by both camps, but to a lesser extent. The one difference among the use of theory predictors is that economics and hybrid studies also use industry level predictors in building theory, while strategy contract research does not.

Another striking difference between contract theory research in economics and strategy is the topics that these theories address. Strategy contract researchers focus primarily on contractual completeness (including the detail which roles and contingencies are specified) as the topic of their theory. As a result, it appears that strategy contract researchers are primarily interested in how prior relationships affect the level of detail in the contract (Mayer & Argyres 2004; Grandori & Furlotti 2005; Argyres & Mayer 2007; Grandori & Furlotti 2007). In contrast, we see that economics and hybrid theory papers focus on very different areas of contract design. In fact, this is one place where we actually see hybrid and economic studies diverge. The majority of economics studies examine how payment terms are structured in the contract, while the hybrid studies examine whether the firm chose an outsourcing contract or not. Additionally, we see a

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<sup>4</sup> There are several researchers trying to change this trend as the use of formal models in strategy is rising, but this trend has not yet found its way into the contract design literature in strategy.

broad distribution of a few economic and hybrid contract theory papers across all of the individual areas of contract design as well. This leads us to conclude that although a lot of contract theory researchers in economics examine payment structure and make or buy decisions, there is also a broad interest in the other elements of contract design, including such topics as duration, exclusivity, and renegotiation.

The final topic for comparison between theory papers in these different camps involves their use of trust and links to performance. In the papers that we have in this sample, trust is only used three times, all in strategy theory papers. This result leads to two observations. First, economics and hybrid theory papers are not examining trust as either a predictor or a main topic. Second, although strategy is beginning to examine trust as both a predictor and a main topic, there is a lot of room for future research on this topic. Examining if or how each of these theory camps links their work to performance produces a somewhat different pattern. In this case, all of the camps have at least one link to performance. However, the way in which performance is defined is very different in each case. Strategy, with the greatest number of links to performance (6 studies), focuses exclusively on transaction or relationship success, which is consistent with its general focus on the impact of prior relationships on contracts and the reciprocal relationship of contracts on relationships. In contrast, both economics and hybrid theory papers tend to examine links to firm financial performance (2 studies), which is consistent with the focus in these camps on the impact of contract design on firm performance.

After comparing and contrasting economics, hybrid and strategy contract theory papers, we can strongly conclude that strategy researchers are making unique contributions to the understanding of contracts through this type of research. Although we see some similarities in the fact that both camps primarily use TCE as the lens to examine contracts and use firm,

transaction and relationship characteristics as predictors, these studies have little else in common. Strategy researchers use very different methods to examine very different topics and to link them to very different performance measures than economics researchers. In addition, in the map of contracting research that we developed, while economics and hybrid studies examine Link 1 (effect of internal and external characteristics on contract design) and Link 5 (effect of contract design on firm performance), strategy contract theory focuses exclusively on Link 2 (effect of contract design on relationship or transaction success) and Link 4 (effect of prior relationships on contract design). These very distinct areas of research further highlight the fact that strategy and economics researchers are asking very different questions in examining contracts.

### **Empirical Contract Papers: Are Strategy & Economics Making Different Contributions?**

An examination of the empirical contract work generated by the strategy and economics fields leads us to very different conclusions than those derived from looking at the theoretical studies. First, the field of strategy has made greater strides in producing empirical contract work as compared with theoretical studies, generating 26 empirical papers as compared to only 8 theory papers. As such, we were able to compare this population level sample to a representative sample of 24 economics papers and 13 hybrid papers, and can provide actual comparisons between the groups. Second, the hybrid articles do not closely cluster with the economics or strategy work, so this group will be treated separately for this analysis. Finally, the empirical research conducted by strategy and economics is far more similar than the theoretical work, so a more in-depth comparison is necessary to determine if the strategy empirical research is adding any additional value beyond that of economics work.

As with the theoretical work, the first comparison that we made concerned the areas of the contract research map. Figure 5 reveals that there is significant overlap of the empirical work of strategy and economics in Link 1 (the effect of internal and external characteristics on contract design), with strategy generating 22 of these papers and economics producing 21 studies. These numbers represent the bulk of empirical work in both of our samples, so the empirical work of from both strategy and economics is largely covering the same general topic. To a lesser extent, strategy also examined Link 2 (the effect of contract design on transaction/relationship success) and Link 4 (the impact of prior relationships on contract design), with 6 and 8 papers in each, respectively. Economics on the other hand, did not generate more than 2 papers in any other link in the map. The hybrid journals were also not clustered in one particular link, and were thus not assigned to a particular link in the map. With the exception of the few Link 2 and Link 4 papers, it appears that strategy and economics research appears to examine the same general topics when studying contract design.

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Insert Figures 5 & 6 about here

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In order to understand if this is in fact the case, we conducted a more detailed analysis of empirical contract research in strategy to understand if this conclusion is an accurate reflection of the activity in this field. Figure 6 clearly shows that when the empirical work in strategy is broken down into three periods, an interesting trend is revealed. In the period prior to 2001, a fledgling period for contract research in strategy in only 3 strategy papers were generated, two papers examined some aspect of contract design, while another combined both contract design and its impact on transaction performance. In the next period representing the very beginning of

the intense period of empirical contract research in strategy, there is a significant uptick of activity in Link 1 (7 studies), with the appearance of a paper in both Link 2 and Link 4. Finally, in the last period representing even more growth in empirical contract research in strategy, the activity in Link 1 holds relatively steady with 8 papers being produced, while the papers examining Link 1 in combination with another area, Link 2 and Link 4 increased dramatically (4, 5 & 6 papers in each, respectively).

From this graph the conclusion can be drawn that in the early days of empirical research activity in the field of strategy, the focus was initially on the same topics as the work in economics, and even intensified as interest in this topic grew. However, since 2005, the work in this field has begun to diversify to other areas of interest to the field of strategy. This transition to greater diversity in strategy contract research can be traced to two events. First, as the economics-trained strategy contract researchers began to populate business school faculties, they were exposed to additional social science theories beyond economics. Second, these strategy contract researchers have trained a second generation of contract scholars, who have been exposed these other social science theories as part of their training. As this exposure to additional social science theories continues, we predict that this trend of more diverse contract research in the field of strategy will continue.

Additionally this same analysis was conducted for the economics sample, with very different results. In the economics sample, with the exception of 3 papers that either combine contract design with another element or examine Link 2 or Link 4 exclusively, the entire rest of the sample examines Link 1. This trend does not change over the three periods examined. Although the initial analysis pointed to the conclusion that strategy and economics are largely investigating the same issue, on closer examination, it appears that although strategy and

economics may have examining the same topics the research in the strategy field has recently branched off in a different direction.

Although it is reassuring to know that strategy is beginning to differentiate itself from economics by investigating new topics, the question still remains as to whether the research that both economics and strategy conducted on contract design (Link 1) provides the same insights. Although these two fields are examining the same topic, it is possible that they are still posing different questions by using diverging theories, methods, independent variables or dependent variables. However, if researchers in both areas tend to use the same lenses and methods to examine the same issue, we can safely conclude that strategy researchers are not adding value to the understanding of contracts through their empirical research.

First, we examined the theories used in economics, strategy and hybrid empirical work (See Figure 7). As with theoretical research, empirical contract studies in economics tend to use TCE (12 studies), agency theory (10 studies) and property rights theory (4 studies), while hybrid studies use TCE (8 studies) and agency theory (5 studies). In contrast, strategy researchers primarily employ transaction cost economics (21 studies) in their empirical research. Additionally, strategy studies also used the resource-based view lens in contract research as well (5 studies), although this is much less common than using TCE.

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Insert Figure 7 about here

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This analysis demonstrates that although these groups are both examining contract design, they are largely using different lenses to examine the topics. The one exception to this trend is the use of TCE by both camps. Again this similarity requires a closer look at the way in

which this theory is being used by both camps. As in the theoretical work, the field of economics uses TCE to determine the most efficient safeguards in order to avoid contractual hazards and allow the exchange to occur (for e.g. Joskow 1985, 1987, 1990). As discussed in the previous section, this is the first best option, so this application of TCE is consistent with the purpose of the field of economics. The use of TCE in empirical contract studies in the field of strategy is less clear, however. To understand how this theory was used, the studies utilizing TCE in the field of strategy were classified as either a traditional application of TCE (defined by using transaction characteristics to predict contractual safeguards) or an extension of TCE (studies using TCE in conjunction with other theories to address novel issues). This analysis yielded 12 traditional studies as compared to 9 extensions. These studies were then broken down into the three periods previously used to analyze the areas of study in the contract research map (Pre-2001, 2001-2004 & 2005-2008). The results can be seen in Figure 8. This analysis shows that traditional applications of TCE dominated in the early period and are still widely used today. This finding is not necessarily good news for strategy contract researchers because these traditional applications of TCE are in strategy studies examining contract design. As such, both economics and strategy research in this area have the potential to be virtually identical, leaving little room for strategy to be making a unique contribution. The good news, however, is that extensions of TCE were just as popular in the later periods. This result suggests that at least some of the work in contract design using the TCE lens is substantially different than the economics studies of this same type.

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Insert Figure 8 about here

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Another way in which empirical contract research in strategy may differ from that in economics is in the methods used to analyze the data. Here the results show greater similarity than when looking at the use of theory. As Figure 9 illustrates, both of these fields rely heavily on regression analysis (23 studies in economics, 21 studies in strategy), with economics sometimes combining this method with a formal mathematical models or case studies. Therefore, economics is actually offering more value in this area. In examining the type of data used for these regressions, it also becomes clear that both camps also use both actual contract data and surveys about equally in these analyses (See Figure 10). Therefore, although contract data is somewhat difficult to obtain, both economics and strategy researchers seem to be able to acquire this data as frequently as they conduct surveys of managers involved in the contracting process. As a result, strategy researchers do not seem to be bringing anything new to the table from a methodological perspective, in the way that they are analyzing data for their empirical contract studies in the exact same way as economics researchers.

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Insert Figures 9 & 10 about here

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Some differences begin to emerge when the independent variables used in empirical contract research are examined. In this analysis, it becomes clear that both camps use transaction characteristics most often (and at almost equal levels: 16 studies for economics, 18 studies for strategy and 10 for hybrid research) and also use firm characteristics with equal frequency (10 studies each in economics & strategy, and 7 hybrid studies) (See Figure 11). However, strategy research also uses relationship characteristics as independent variables (13 studies), which tend not to be used by economics and hybrid researchers (3 & 4 studies, respectively). The use of this

class of independent variables is a novel contribution to our understanding of contracts, as it provides information on how relationships affect contracts.

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Insert Figures 11 & 12 about here

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In terms of contract design, a major topic in both fields, there are significant differences that highlight the value added by strategy research in this area (See Figure 12). Hybrid researchers primarily examine payment structure (5 studies), while economics researchers focuses on both payment structure (12 studies) and control rights (4 studies). In contrast, strategy researchers focus on contractual completeness (4 studies), contractual complexity (5 studies) as well as payment structure, but to a lesser extent than in economics (5 studies). These results suggest that even if strategy researchers are using a TCE lens to examine how transaction characteristics are impacting contract design, they still may be making unique contributions to our understanding of contracts. That is, even with all of these similarities in the studies, strategy researchers will primarily be examining how these elements impact different dependent variables than economics researchers. There is a very small area of overlap (5 studies) in which all of the elements of the study coincide in both economics and strategy. This result suggests that strategy researchers are making a unique contribution to the understanding of contracts, in spite of all of the similarities between their studies and those from the field of economics.

As with the theoretical contract work, the use of trust is also interesting to examine in empirical contract research. First, as with the theoretical contract work, there is little use of trust in empirical contract literature. In fact, strategy is the only field that actually used trust more than once as an independent variable (3 studies) and as a control variable (5 studies). Again, this

dearth of trust in the empirical contracting literature in the strategy field offers an opportunity for strategy research to further differentiate their body of work from economics researchers.

The final area to examine in empirical contract research is the use of performance. Empirical studies offer two different ways in which performance may be used in a study. First, performance can be used as a dependent variable, and thus operationalized. This topic can also just be linked to the results of the study through discussion, although not formally tested in the paper. We examined both performance operationalizations and these operationalizations in combinations with links to performance. Both yielded the same pattern, with the combined category having stronger results (see Figure 13). These results suggest that as with the theoretical studies, strategy research utilizes links to transaction success (7 studies) and partner satisfaction (4 studies). Unlike the theoretical work, however, economics does not tend to link to performance (1 study), while hybrids seem to mention different forms of performance (firm level-survival or financial success, transaction success or efficiency: 1 study apiece). These results suggest that tying contracts to performance at the transaction or relationship level is another unique contribution made by strategy researchers to our understanding of contracts.

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Insert Figure 13 about here

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After conducting this analysis on the empirical contract work in strategy, economics and hybrid journals, it is clear that empirical research in the field of strategy is adding unique value, but the distinction between the studies is finer here than in theoretical work. Strategy researchers conducting empirical contract work are commonly using the same theory (TCE) and the same method (regression using contract or survey data) to examine the same area (the effect of internal

and external characteristics on contract design) as economics researchers. Although this 10,000 foot view suggests that strategy is only creating more of the same type of research being conducted in economics, a closer examination reveals that a majority of these studies are actually adding unique value to our understanding of contracts. That is, although strategy researchers are using economic tools, they are often examining different dependent variables in the area of contracts design. Additionally, they are often using TCE in creative ways by combining this lens with other social science lenses to be able to address novel areas in contract research. These researchers are also adding relationship characteristics as independent variables in their regression analysis, leading to new insights about contracts. Finally, strategy research works to link contracts to transaction performance and relationship success. These links are crucial to the field of strategy, and also offer a unique contribution to the non-legal contracting literature.

### **Strategy's Unique Contributions to Understanding Contracts**

We believe that these analyses strongly support the argument that strategy researchers are building on work in economics and making unique contributions to our understanding of contracts above (see Figure 14 for a summary of the similarities and differences between economic and strategy contract research). These contributions range from researching new topics in contracting to injecting new methodologies for theoretical papers (i.e., diversifying beyond informative mathematical models). These valuable additions to our understanding of contracts fall into three main areas: understanding the impact of the contract on the exchange relationship or transaction success, examining the feedback loop of prior interactions on the contract design, and understanding how transaction, firm, and relationship characteristics affect the contract.

Insert Figure 14 about here

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The contract studies that examine how the contract itself impacts the success of the transaction or the exchange relationship (Link 2) are a very valuable contribution to contract research. This research opens up a whole new area of exploration, which the field of economics generally ignores. It also provides a tangible link between contract design and firm performance, the ultimate dependent variable in strategy research. In addition to charting a new course in contract research, researchers conducting these studies are also developing relationship and transaction performance measures that may potentially be used by future contract researchers in an effort to understand performance at this level. These measures include: relationship satisfaction scales, project completion time, and project profitability. These studies will help to push contract research forward by allowing future researchers to be able to quantify the impact of contracts on exchange relationships and transaction performance. Finally, the theoretical work in this area contributes from a methodological standpoint, in that it introduces the case study method for deriving contract theory (e.g., Mayer and Argyres, 2004), which is not common in theoretical contract research in economics.

The studies investigating the feedback loop from prior interactions to contract design (Link 4) are also providing immense value to the study of contracts above and beyond the pure economic insights. Like the studies in Link 2, this work spearheads a new direction in contract research that is also not pursued in economics contract research. Additionally, like the studies in Link 2, researchers also bring the case study methodology to the table in theoretical research in this area, which is a sharp contrast to the rigorous mathematical models used by economics researchers in developing their contract theory. As suggested earlier, strategy's use of case studies results from the desire of strategy to understand how business occurs in the real world,

while economics reliance on mathematical model underscores its goal of explaining economic behavior of rational actors who respond to clearly delineated incentives. Finally, the empirical studies in this area offer a unique contribution in that they use relationship characteristics as independent variables to predict contract design. Economic studies of contracts do not generally assess the impact of the relationship on the contract (Crocker and Reynolds (1993) is an exception as they look at a history of opportunism).

Finally, strategy researchers have made unique contributions in understanding how internal and external characteristics impact contract design. As illustrated above, both economics and strategy researchers investigate this topic using the same empirical methods, so it is not as if strategy researchers are blazing a new trail in contract research in this area. What they are doing, however, is asking different questions. As the data demonstrate, the majority of economics papers seek to understand how transaction characteristics impact the payment structure in the contract (typically fixed fee versus cost-plus or some other variable payment scheme). In contrast, strategy researchers are attempting to understand how both transaction and relationship characteristics impact contractual completeness and complexity. Therefore, even though these two fields are working in the same area, strategy is making a unique contribution by asking different questions in that area than those asked in economics studies. Additionally, although both fields utilize transaction cost economics as the lens to examine contracts in this area, strategy offers a unique perspective by combining this theory with other perspective, such as the resource-based view or learning, to extend or complement the core theory. This work is a direct response to the call by Williamson (1999) to extend TCE by doing just that.

### **Enhancing Strategy's Contribution: Setting a Theoretical & Empirical Strategy Contract Research Agenda**

Now that our analysis has uncovered the unique contributions that strategy contract researchers are making above and beyond those of economics contract researchers, it is necessary to create an agenda for future strategy contract research that will simultaneously serve the needs of the field and continue to further differentiate this body of work from economics contract research. Before attempting to set such an agenda, it is important to understand what areas of study are most important to the field of strategy. We see that linking contract design to firm performance is very important because this link forms the basis for competitive advantage, the concept at the heart of strategy. Therefore, strategy contract researchers should focus on generating research in the first three links in the map: 1) the impact of internal and external characteristics on contract design, 2) the impact of the contract design on transaction or relationship performance, and 3) the impact of transaction or relationship performance on firm performance. Additionally, since strategy researchers are interested in the real-life behavior of firms, it is important to acknowledge other forces on the design of contracts and performance at the relationship, transaction and firm levels. This influence is largely injected in this map by the presence of Link 4, the feedback loop of prior interactions on contract design. Although there are other avenues through which prior interactions could impact relationship, transaction and firm performance besides through contract design, the contract is a central element of governance and thus a central factor in understanding relationship as well as transaction governance.

There is only one link remaining in the contract research map, a direct impact of contract design on firm performance (Link 5), which is only currently examined by research published in economics and hybrid journals. This link involves both contract design and firm performance, two very important concepts in strategy, but is the inclusion of both of these concepts enough to make this area of research important to the field of strategy? We would argue that it is not, and

that this assessment is based on fundamental differences between the fields of economics and strategy. Although both of these concepts are central to contract research in strategy, strategy researchers believe that contract design can only have an impact on firm performance through transaction or relationship performance. This belief arises from the fact that in the field of strategy optimal contract design is inherently contingent on the transaction or exchange relationships, which are fraught with boundedly rational and opportunistic economic actors. These actors mean that even if the contract is optimal *ex ante*, this may not be the case *ex post*, and the contract may have to be renegotiated leading to additional transaction costs. Economics, on the other hand, views optimal *ex ante* contract design as leading to optimal firm performance because the rational economic actors. Therefore, this direct connection between contract design and firm performance requires an assumption of rationality, while the field of strategy instead assumes bounded rationality. As such, there is little use for strategy researchers to examine this link in the contract research map. Furthermore, the work examining this connection from contract design to firm performance in economics and hybrid journals is only theoretical. That is, this topic is only explored using rigorous mathematical models using strict assumptions that do not necessarily describe the real world. The lack of empirical work on this topic suggests that real-world data may conform to these assumptions. The bottom line is that it is difficult to link contract design directly to firm performance, irrespective of transaction attributes, as this would imply that there is some dominant form of contract. Most strategy researchers fall in line with Williamson's (1999) call to look at how firms differ in their capabilities and resources (and the transactions they undertake) in examining the effectiveness of their governance choices.

Now we turn to the progress that has been made in some of these key areas for strategy researchers examining contracts. Figure 15 shows that both economics and strategy have made

significant strides in examining the impact of internal and external characteristics on contract design (Link 1). Economics has contributed to our knowledge in this area primarily through empirical studies using a TCE lens to understand how transaction, industry and firm characteristics impact the payment structure of contracts (for e.g. Chisolm 1997; Kalnins & Mayer 2004). This is important area to understand, and in fact has also been studied empirically by strategy researchers to a lesser extent (for e.g. Reuer, Shenkar & Ragozzino 2004). In addition to examining this particular question, strategy researchers examining this link largely use TCE in combination with other theories or concepts (for e.g. RBV, learning) to understand how relationship, transaction and firm characteristics impact contractual detail, complexity and completeness (for e.g. Barthelemy & Quelin 2000; Argyres, Bercovitz, & Mayer 2007). Additionally, economics researchers have also examined these links in theoretical papers. This theory is largely built through rigorous mathematical models, and for the reasons already discussed, are less relevant for strategy researchers' understanding of contracts.

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Insert Figure 15 about here

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After this careful examination, it is clear that there is a mature empirical contract literature examining the link from internal and external characteristics to contract design. There are still some significant gaps in this area, however. First, strategy theory does not address this area at all. It is very important for strategy theorists to push forward into these areas, as the economics research in this area needs work in order to test the implications of the some of the mathematical models. Instead, the case study methodology employed in other theoretical strategy work would serve the field of strategy well in this area to uncover potential new directions for empirical research to explore. Second, many other dependent variables exist in

contract design outside of payment structure, complexity and completeness. These variables, including such topics as penalty clauses, contracting costs, and contract renegotiation are very interesting topics that deserve further attention. Finally, as seen in the trend of combining TCE with other theories and concepts to extend its predictions to new areas, new theories should be incorporated in studies in this area. For example, recent work complements TCE with psychological theories to predict when positive or negative framing of contractual safeguards would best serve the exchange (Weber & Mayer 2007). Many more possible combinations exist that would uncover new questions to ask in this area, however, it is very important that these novel combinations produce empirically tractable predictions that can be tested with real-world data (for e.g. Mayer, Weber & Macher 2007). Strategy needs to pay close attention to the need to generate empirically testable theory that has strong relevance for organizations without sacrificing the rigor that is the hallmark of economics research.

Progress on the impact of contract design on transaction or relationship success is a very different story, however. Although there is both theoretical and empirical strategy research in this area, this work has only begun to tap the potential of this topic (with only two theoretical papers and six empirical papers). Four of the six empirical studies are done in combination with an examination of how internal and external characteristics impact contract design. That is, these studies largely examine Link 1 and Link 2 in combination, with only 2 of the 4 studies solely focusing on this specific topic area. The researchers conducting these studies use two different methodologies regression analysis of survey data (4 studies) or experiments (2 studies). In these regression studies, partner satisfaction was used to measure relationship performance (Poppo & Zenger 2002), while project margin (Mayer & Nickerson 2005) and fulfillment of strategic objectives (Parkhe 1993) were used to measure transaction performance. Additionally, one other

study did not actually measure either of these, but only tied their findings for Link 1 to better relationship performance in Link 2 (Mayer, Weber & Macher 2007). The experimental studies measured agent effort level in assessing transaction performance (Bottom et al. 2000) and trust level using the trust game to determine relationship success (Malhotra & Murnighan 2002). Finally, the two theory papers examine how aligning having negotiators with specific knowledge stores negotiate the contract clauses requiring that knowledge improves exchange performance (Argyres & Mayer 2007) and the second discussing how choosing the framing of safeguard clauses that fit best with transaction characteristics leads to better exchange performance and relationship success (Weber & Mayer 2007).

This close examination of these studies illustrates several opportunities for expansion on current topics in this area as well branching out into new directions. First, there is a general need for more research in this area, as these few studies represent a promising start, but do not allow researchers to make well grounded conclusions about the relationship between contract design and transaction or relationship success. Therefore, the first imperative is for strategy contract researchers to conduct more basic research, both theoretical and empirical, in this area. Second, there is an opportunity for strategy researchers to employ different methods than the traditional regression analysis in this area. First, experiments, which have been used here although just in two studies, provide a way around the complication of finding actual transaction or relationship level performance data. This type of data is very hard to obtain from firms, and usually has to be gathered through surveys instead, which runs the risk of introducing hindsight bias because these surveys are not administered while the exchange is commencing, but usually long afterwards. With an experiment, this type of data can be directly assessed through actions (Trust game or project values) or survey instruments immediately following the exchange. These performance

measures increase the reliability of these measures leading to the ability to draw stronger conclusions in this area. Finally, case studies provide an additional opportunity for researchers to uncover the processes underlying these effects. This type of theoretical work would greatly add to our understanding of how contract design impacts transaction or relationship success.

The progress on understanding how relationship or transaction success impacts firm performance is even bleaker than that in the previous area. In our population level sample of strategy contract papers, no studies exist in this area. There are a couple of potential reasons for this outcome. First, firm performance measures are difficult to link to specific exchanges. Second, studies directly targeting this link do exist in the larger strategy literature, but are not specifically linked to contracts, and therefore lie outside of our sample. One example of this type of study is a paper by Kale, Dyer and Singh (2002) that examines how firms with dedicated strategic alliance functions experience higher than normal stock market returns than announcements from firms without this function. This paper links specific transactions in the form of alliances to firm performance in the form of abnormal stock returns.

The dearth of contract literature in this area leads to one major imperative for strategy contract researchers; generate research linking contract design to specific exchange outcomes to firm performance (research examining the core links in strategy). In order to accomplish this goal, it is necessary for strategy researchers to be creative. First, researchers can seek out firms with several contractual relationships that actually gather information on project margin or relationship satisfaction. This data can then be combined with external data sources to generate firm performance measures. By linking these data sets together, strategy researchers can begin to make that leap between contract design and firm performance. This approach creates two major issues however: 1) Methodological issues of endogeneity would have to overcome by using a

two stage model, and 2) Getting access to this type of data is extremely difficult as firms are reluctant enough to provide even their contract data. Given these two issues, the second being the major hurdle, we have an additional suggestion for researching this area. Again, experiments may be the answer to examining the multiple links between contract design and firm performance. This real-life scenario can be paralleled in the classroom by creating firms (or teams of students) that contract with other teams for a particular task. The project margins and relationship satisfaction levels could be measured following the completion of these projects. Then, if these projects continue over the semester or quarter, the “firm profits” could be tabulated and compared. This artificial situation would overcome the data availability issues that currently plague research in this area. While this is not a substitute for getting actual contract data, it would be an excellent complement that would inform behavior under carefully controlled conditions.

Finally, an examination of the work examining the feedback loop from prior interactions to contract design reveals a growing body of contract literature. This area contains the debate in the field of strategy raging between economics-based and sociology-based contract researchers about whether trust and contracts are complements or substitutes. As introduced in the beginning of this chapter, sociologists tend to believe that trust and contracts are substitutes for each other and that increasing trust either eliminates the need for contracts or diminishes the content contained within them (Gulati 1995; Dyer & Singh 1998; Ghoshal & Moran 1996; Malhotra & Murnighan 2002; Zollo et al. 2002). In contrast, a group of economics-based researchers believe that contracts and trust complement each other leading to more information being included in the contract as the firms feel more free to divulge this information in a trusting relationship (Poppo

& Zenger 2002; Lui Ngo 2004; Argyres, Bercovitz, & Mayer 2007). In our sample, 15 papers address this issue, 8 empirical and 7 theory.

Although this area represents a growing literature, more studies are needed in this area as well. The difference though is that we feel that the new studies should take a different course than the previous one. That is, instead of continuing to contribute to the debate about *if* contracts and trust are complements or substitutes, we feel that strategy researchers should ask different questions: *when, how* and *under what circumstances* are contracts and trust complements or substitutes. In our sample, Vanneste & Puranam (2007) start this trend by examining how governance-related clauses tend to act more like substitutes with trust and tend to decline in usage as prior interactions increase, while technology clauses act more like complements to trust as they increase in length and usage with greater prior interactions. This type of work exemplifies the new direction that work in this area should pursue in order to increase our understanding of the impact of prior relationships on contract design.

In conclusion, this chapter set out to determine whether or not contract research in the field of strategy created unique value or if it was just more economics research being published in new outlets. After a thorough analysis of the current population of contract work in strategy as well as a comparison to a representative sample of economics papers, we strongly believe that strategy researchers are making unique contributions in many different ways. They are examining new areas, and asking new questions in areas in which economists are conducting research as well. They are also bringing new methods to the table in theoretical research, as well as using different independent variables in their empirical work. They also are combining the dominant lens in contract research, TCE, with other theories to push the boundaries of what TCE can examine. With all of these contributions under their belts, however, strategy researchers

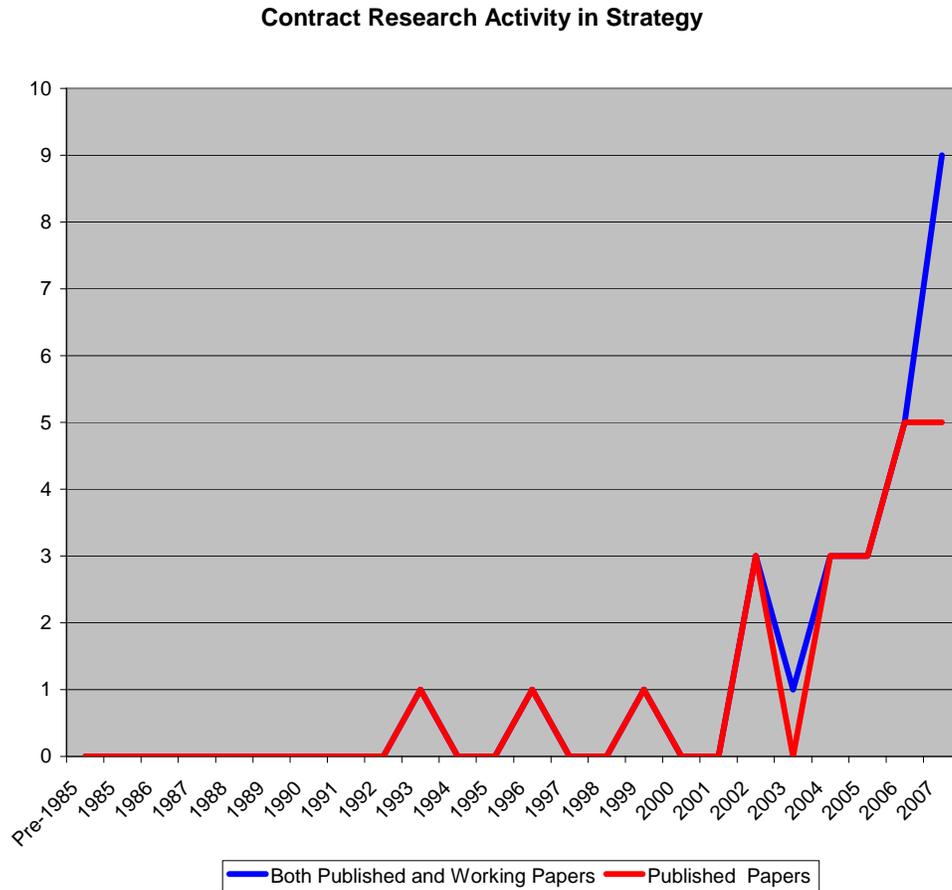
cannot afford to be complacent by continuing to conduct the same brand of contract research, as there are still too many questions that have not yet been addressed. Instead, we implore current and future strategy contract researchers to rise to the challenge of the ambitious research agenda that we have outlined. In doing so, strategy contract research will continue to differentiate itself from that in economics, and provide the field of strategy with relevant knowledge in our attempt to understand how contracts are used in firms and how they impact performance at the transaction, relationship and firm levels.

## Figures and Captions

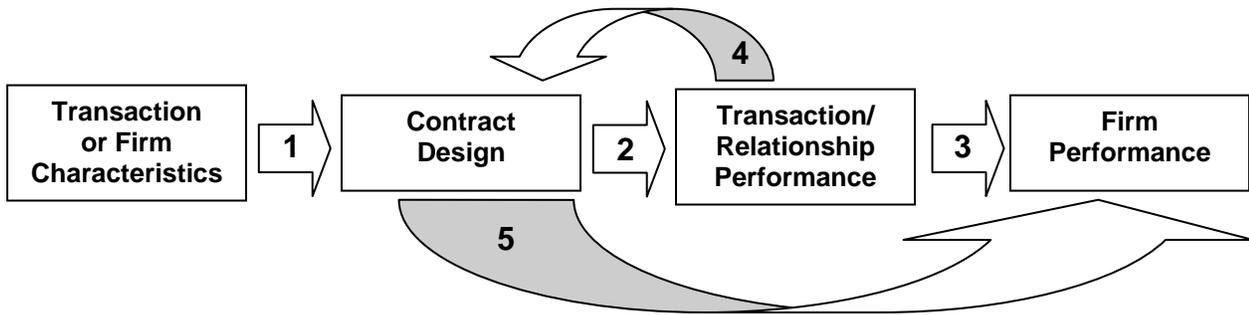
**Figure 1.** 2x2 classification matrix of non-legal contract research

		Field of Origin	
		Economics	Strategy
Type of Research	Theoretical		
	Empirical		

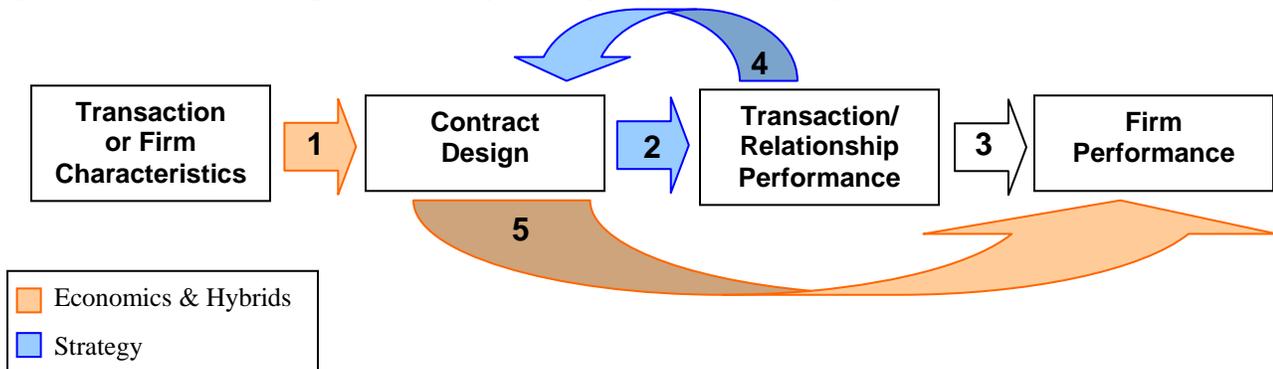
**Figure 2.** Strategy contract research activity



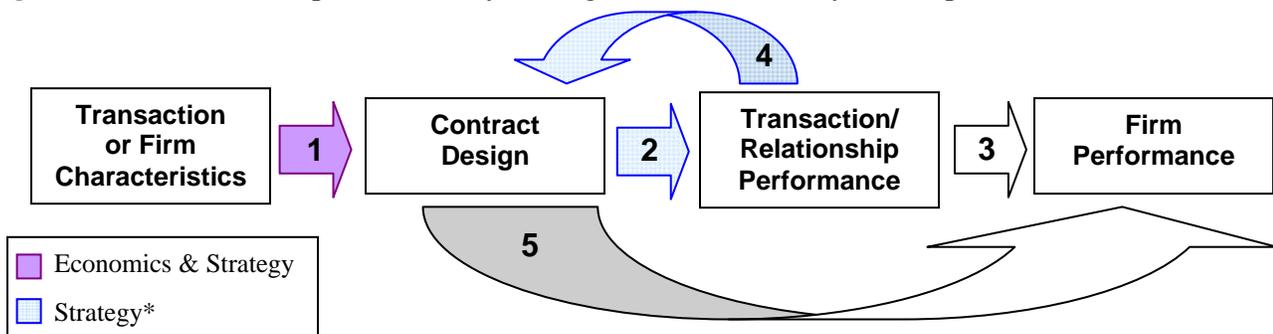
**Figure 3.** A map of the topics covered by non-legal contract research



**Figure 4.** Links in the map addressed by Strategic, Economic & Hybrid theoretical contract research.

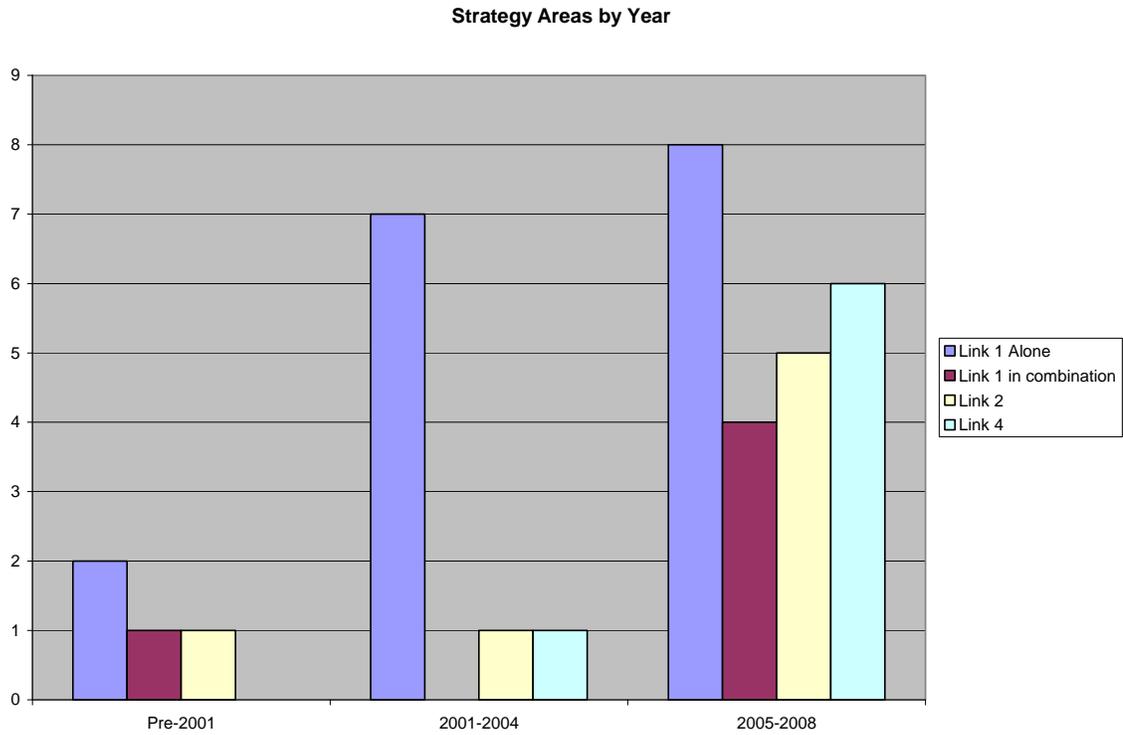


**Figure 5.** Links in the map addressed by Strategic, Economic & Hybrid empirical contract research.

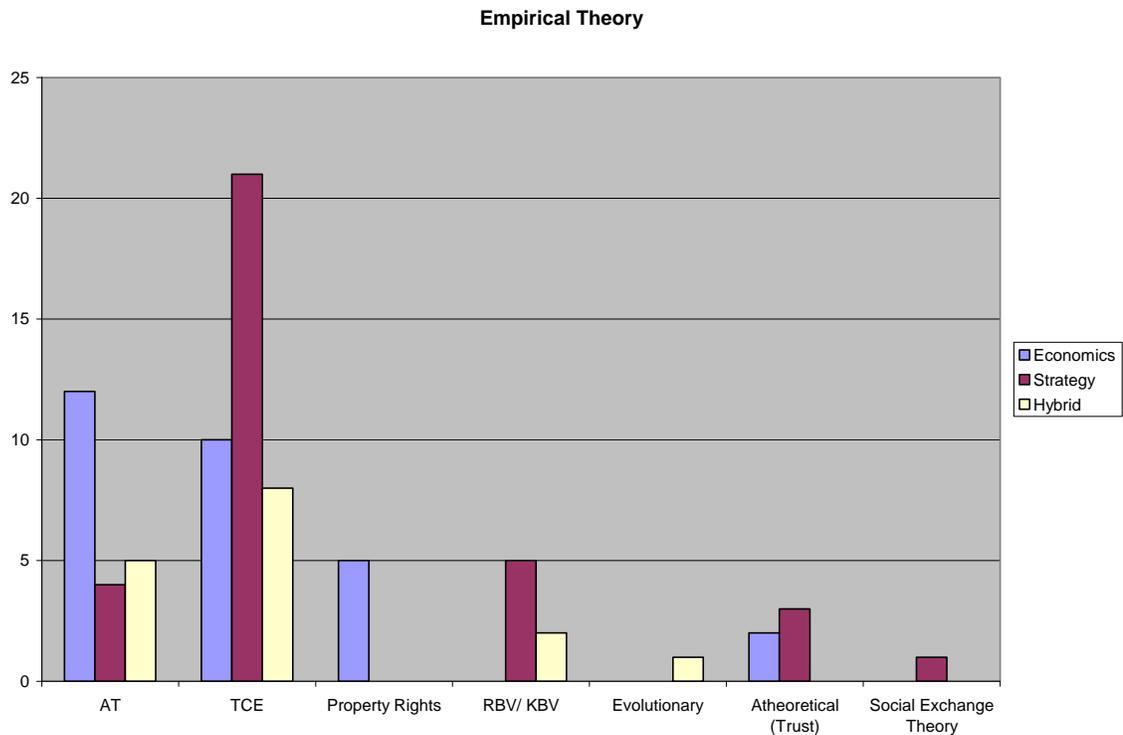


\*The greater transparency of the arrows in Links 2& 4 represent that there are 2-3 times fewer studies in these links than in Link 1.

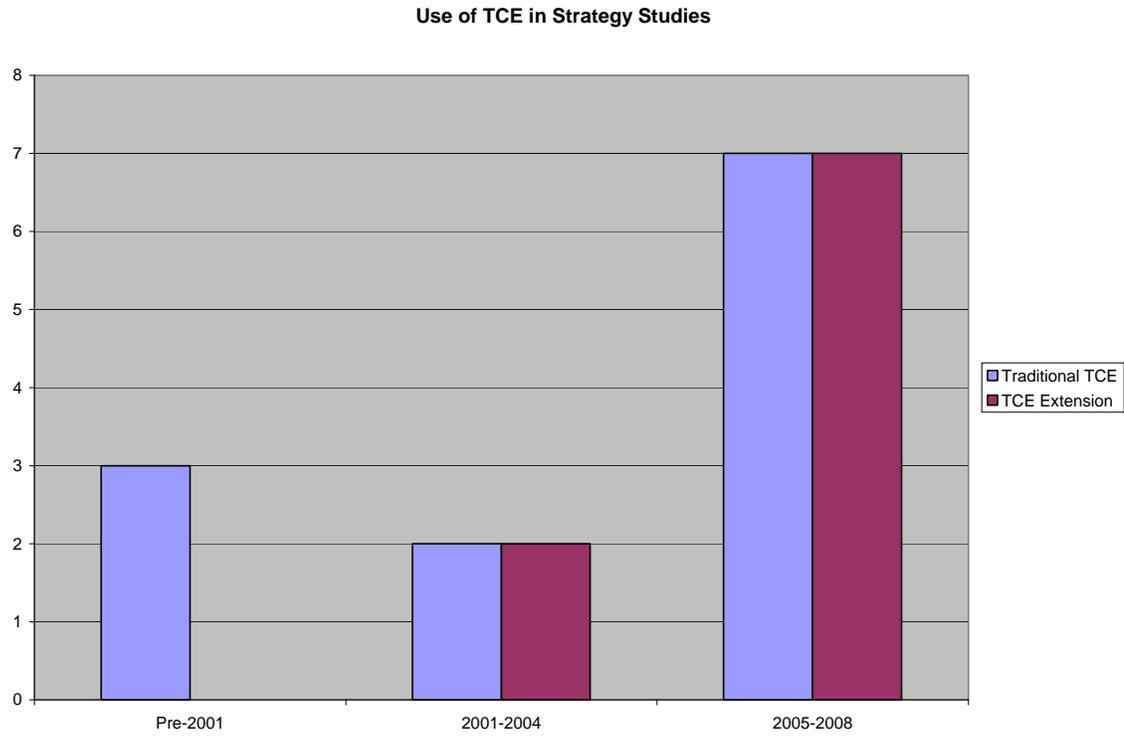
**Figure 6.** Empirical contract research in the field of strategy by period



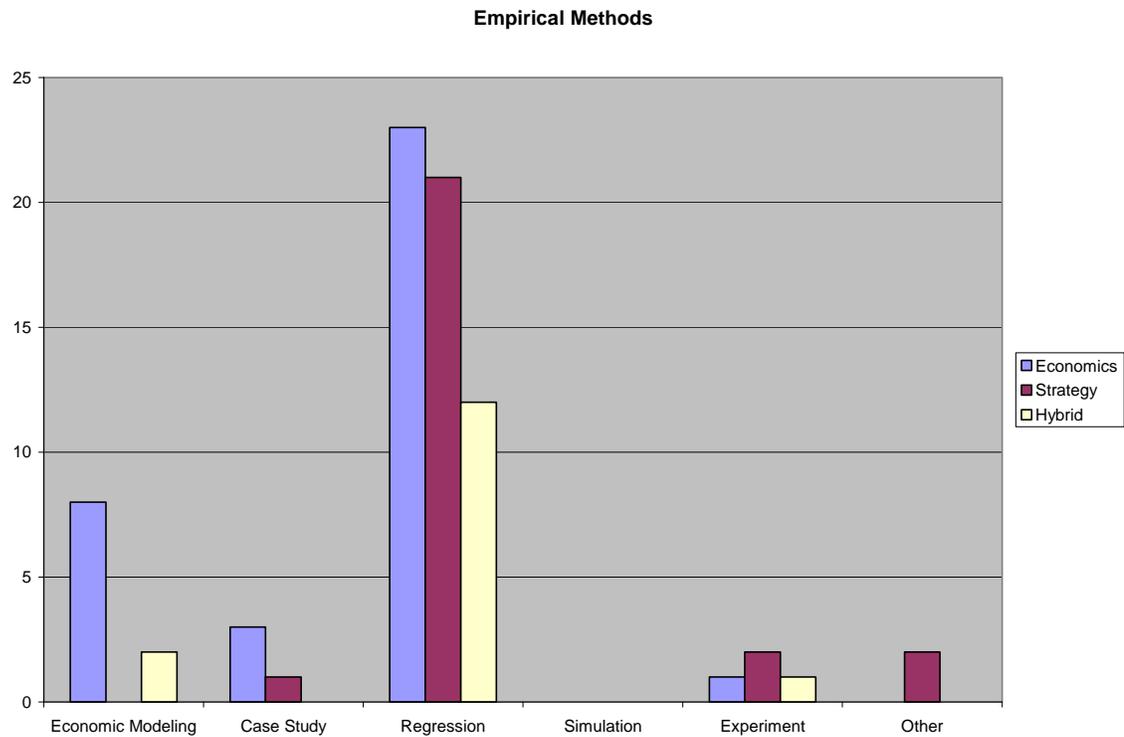
**Figure 7.** Theories used in empirical contract research in Economics and Strategy



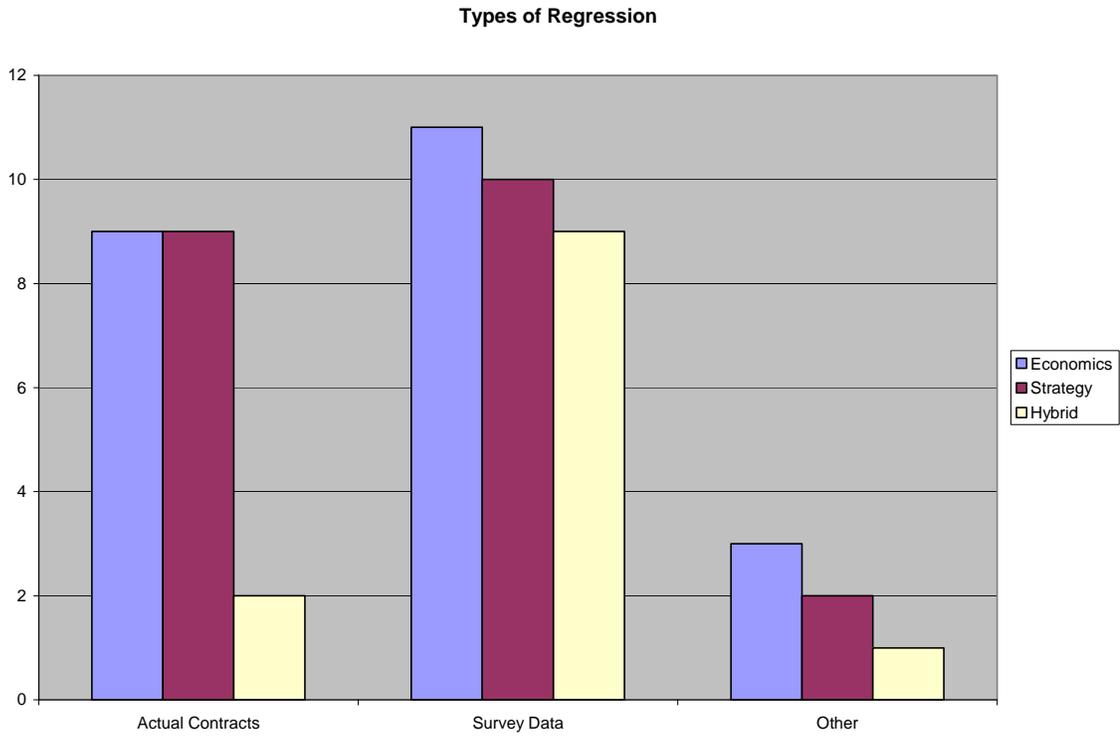
**Figure 8.** Examination of the use of TCE in empirical contract studies in Strategy by period



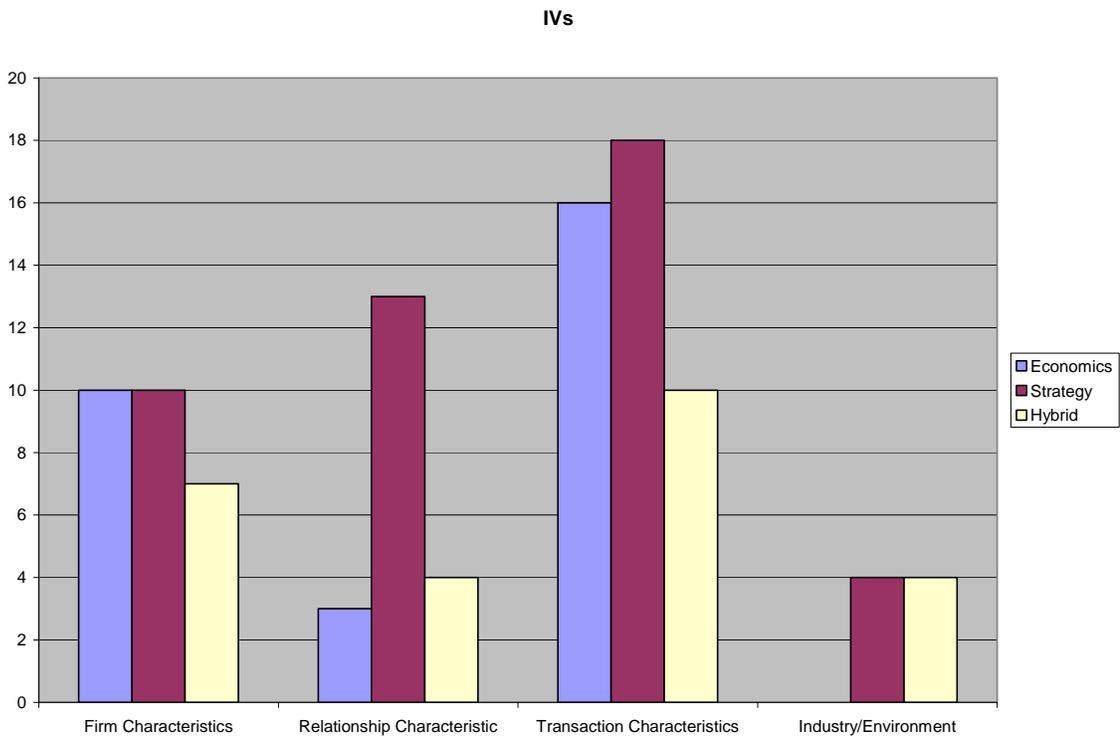
**Figure 9.** Empirical methods used in empirical contract research



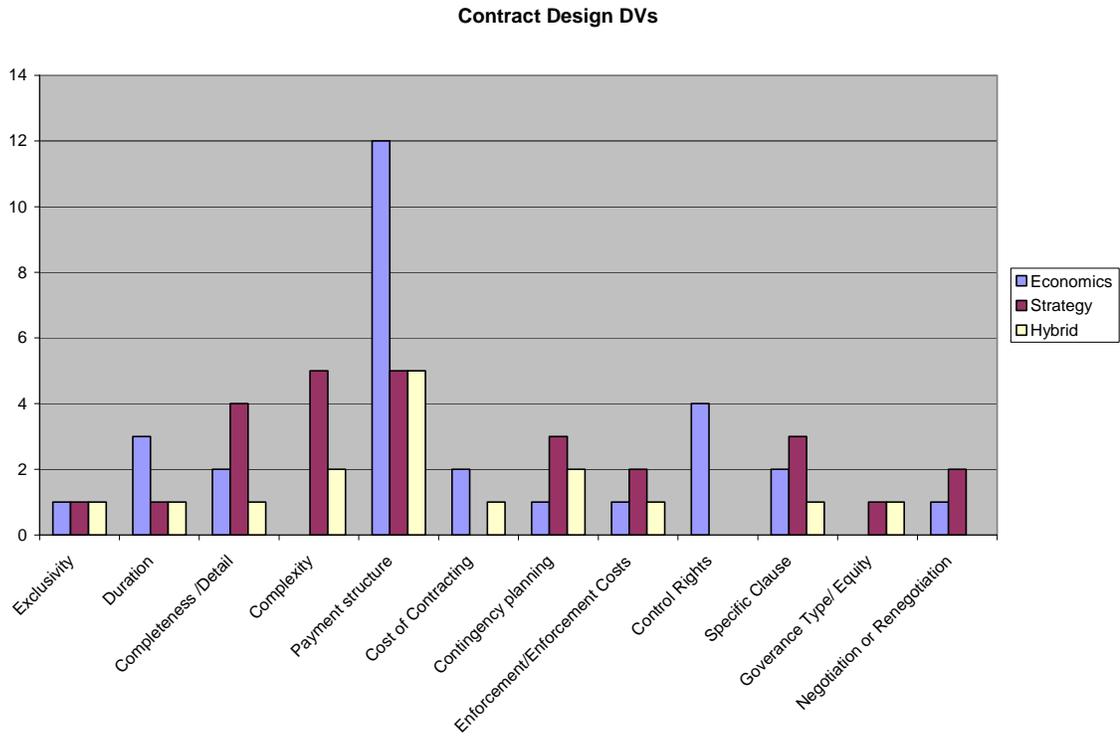
**Figure 10.** Breakdown of the types of data used in regression analysis in empirical contract research



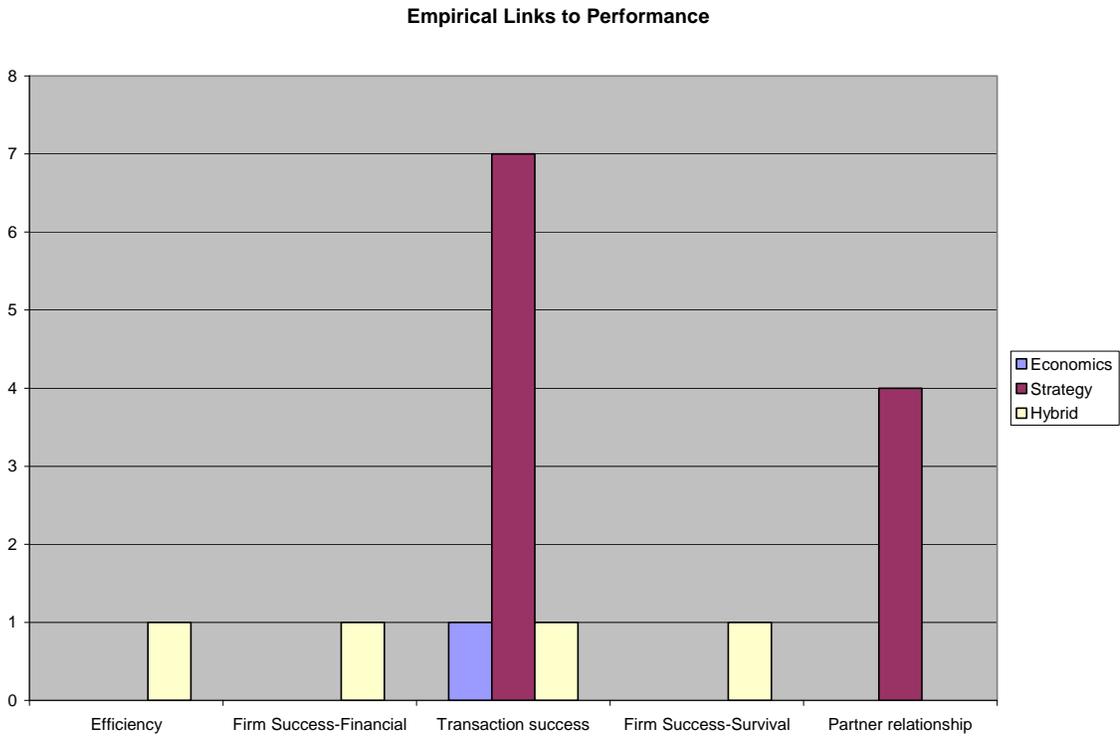
**Figure 11.** Independent variables used in empirical contract research



**Figure 12.** Contract design dependent variables used in empirical contract studies



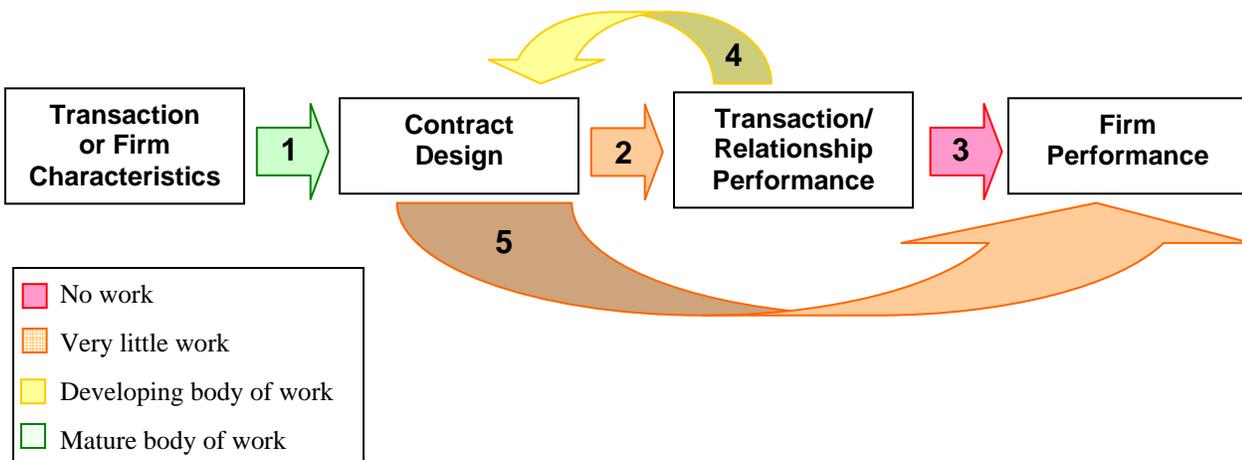
**Figure 13.** Links to performance in empirical contract research



**Figure 14.** Summary of the similarities & differences in empirical and theoretical contract research conducted by the fields of strategy and economics

		Field of Origin	
		Economics	Strategy
Type of Research	Theoretical	<b>Links:</b> 1 & 5 <b>Theory:</b> TCE, Agency & Property rights <b>Method:</b> Mathematical models <b>Main Topics:</b> Payment type & Make or buy decisions (hybrids) <b>Predictors:</b> Transaction, Firm, Relationship & Industry <b>Trust:</b> Not examined <b>Link to Performance:</b> Firm financial success	<b>Links:</b> 2 & 4 <b>Theory:</b> TCE <b>Method:</b> Case study <b>Main Topics:</b> Contractual completeness <b>Predictors:</b> Transaction, Firm & Relationship <b>Trust:</b> Very little examination <b>Link to Performance:</b> Transaction or relationship success
	Empirical	<b>Links:</b> 1 <b>Theory:</b> Agency, TCE & Property rights <b>Method:</b> Regressions using contracts & surveys (sometimes coupled with mathematical model or case study) <b>IVs:</b> Transaction & Firm characteristics <b>Contract Design DVs:</b> Payment structure & control rights <b>Trust:</b> Not examined <b>Link to Performance:</b> Very little linkage	<b>Links:</b> 1, 2 & 4 <b>Theory:</b> TCE <b>Method:</b> Regressions using contracts & surveys <b>IVs:</b> Transaction, Firm & Relationship characteristics <b>Contract Design DVs:</b> Completeness, Complexity & Payment structure <b>Trust:</b> Primarily used as a control, but very little examination overall <b>Link to Performance:</b> Transaction or relationship success

**Figure 15.** Gaps in the body of non-legal contract research



## REFERENCES