In This Issue ....

BBGR

MIDWESTERN BUSINESS AND ECONOMIC REVIEW

MIDWESTERN BUSINESS AND ECONOMIC REVIEW

Table of Contents

ABSTRACTS

REPORTING ON INTANGIBLES

This paper proposes to use a model based on Mouritsen et al. (2001) as the reporting framework for unrecognized intangibles. In this model, there are three reporting dimensions (resources, activities, and effects) and three broad categories of intangibles (human capital, organizational capital, and relational capital). Information disclosed should provide users an adequate basis to decide on their own the value of a company's intangibles and how well the management manages the company's intangibles.

COLLABORATIVE DIVORCE: AN INNOVATION FROM AN OLD SOURCE

There are many emotional, legal, financial, and communication aspects of divorce. Traditionally, an adversarial approach has been applied to divorce resolution in which opposing attorneys try to win for his client alone. Adam Smith presumably would argue that the market should be free to evolve more efficient approaches to divorce resolution. This paper briefly reviews recent alternative divorce resolution techniques. Specific attention is paid to the Collaborative Divorce model wherein a team of specialists handles the specific aspects of a divorce. Available evidence seems to suggest that this approach results in lower economic costs and leads to quicker, more satisfactory divorce resolutions than does the traditional approach. This would, therefore, seem to confirm Smith's belief in the efficiency-generating power of the specialized use of resources.

EFFECTS OF THE FEDERAL RESERVE'S FOREIGN EXCHANGE INTERVENTIONS

Since the collapse of the Bretton Woods system, major industrial countries have officially adopted the floating exchange rate system, and many of them have resorted to period interventions in the exchange market to prevent their currencies from excessive fluctuations. This paper studies the effectiveness of the governments' foreign exchange intervention policies by utilizing the intervention function analysis technique. The objective is two-fold: (1) to test the initial effect and the effect over time of the government interventions on the mean and variability of exchange rates, and (2) to test whether the post intervention time paths of the exchange rates have been the same in all episodes of intervention.

The results of the study show that interventions in exchange markets have, at best, a temporary effect on the time path of exchange rates. The effect over time generally converges to zero in three to five periods with a path that may be oscillatory or non-oscillatory. None of the interventions in the foreign exchange market by the five countries studied in this paper had a long run effect on the mean or trend of the exchange rates movements. Even prolonged interventions had no effect, or at best a temporary effect, on the foreign exchange market. With respect to the effect of interventions on the variability of the exchange rates, the results of the study are inconclusive. In four cases, intervention increased the post-intervention variability in exchange market relative to that of pre-intervention. In two cases the post-intervention variability of exchange rates was reduced, whereas in one case intervention had no statistically significant effect on exchange rate variability.

INSIDER OR OUTSIDER MANAGERIAL SUCCESSION?—AN EMPIRICAL STUDY ON CEO SUCCESSOR TYPE

This study investigates the relation between post-CEO-succession financial performance and CEO successor type. The results suggest that insider CEO successors are more favorable choices with the positive financial performance improvement in one year following CEO succession in some poorly performing firms. The results of this study, overall, support the theory that insider CEO successions are less disruptive than outsider successions.

MEDIATION: A WINDOW AND A MATRIX

Mediation increasingly is replacing litigation as a method of settling business disputes. Because the dynamics of mediation differ so much from those of litigation, misconceptions about the process can occur. This paper examines how communication theory can help in the understanding of mediation's cooperative nature, what the mediation process is about, and what its role is becoming in the business world.

OKUN'S LAW REVISITED: EVIDENCE FROM EAST ASIA

The late Arthur Okun (1962) hypothesized that when real gross national product (GNP) growth rate is in excess of three percent per annum, the unemployment rate will decrease by about one percent. More precisely, his hypothesis may be presented in the context of the following equation:

$$\text{Change in Unemployment} = -\alpha * (\text{growth} - 3\%).$$

Okun formulated his "law" on the basis of the empirical relationship he observed between real GNP growth rates and the unemployment rate for the United States in the postwar period. Depending on the country and the sample used, actual estimates of "α" reported in the literature have mostly ranged from 0.5 to 1. A recent panel test of Okun's hypothesis for ten industrial countries conducted by D. G. Freeman (2001) reports estimates for α to be in the range of 0.10 to 0.80. The major goal of this paper is to revisit Okun's hypothesis using data for 11 countries in East Asia. For the most part, our findings demonstrate that Okun's law cannot be corroborated universally.

PRICE CONTROLS AND PROFESSIONAL BASEBALL

Existing literature indicates that the issue of competitive balance is of significant interest to Major League Baseball. The argument has been made that price controls, in the form of salary caps, are necessary to ensure competitive balance. Our results show that there is a significant and direct relation between payroll and winning percentage, and between winning percentage and future cash flows. If major league baseball represents a social good, price controls to ensure competitive balance appear to be justified based on our research.

EMOTIONAL INTELLIGENCE AND DISPOSITIONAL AFFECTIVITY: AN EXPLORATORY STUDY OF THE FACTORS INFLUENCING WORKPLACE AGGRESSION

The current research was an exploratory study examining emotional intelligence and dispositional affectivity as factors influencing workplace aggression. Using a sample of 110 behavioral health workers from the Midwestern United States, regression analysis was used to assess the impact of emotional intelligence and dispositional affectivity on workplace aggression. Results indicated that, as expected, individuals with lower emotional intelligence and high negative affect were more likely to engage in aggressive behaviors at work. Theoretical and practical implications are discussed.

REPORTING ON INTANGIBLES

Wing W. Poon, Montclair State University

1. INTRODUCTION

The average market-to-book ratio of the Standard and Poor's 500 companies has been greater than three for about the last ten years. Many attribute a large portion of the difference between market and book values to unrecognized intangibles. According to the generally accepted accounting principles in the U.S., intangibles are not recognized on the balance sheet unless they are acquired, either separately or as part of a business combination. As most of the intangibles (such as brand names, business processes, secret formulas, technological know-how, etc.) are developed internally, they are not recognized on the balance sheet. Financial statement users can only guess at the value and makeup of these intangibles. It is therefore very difficult to compare the financial statements of a company that has substantial intangibles developed internally with those of another company that has purchased most of its intangibles. This can lead to the misallocation of capital. This absence of relevant information about internally developed intangibles can result in significant private and social harm as intangibles have become an increasingly important factor to business success and economic growth in our increasingly knowledge-based economy.[1] In this paper, a model based on the intellectual capital accounting system suggested in Mouritsen et al. (2001) is proposed as the framework of reporting for unrecognized intangibles. With improved information available, a more efficient capital allocation can be made by market participants.

2. RELEVANCE

Empirical studies have found consistent evidence supporting the contention that intangibles are value relevant. For example, Gu and Lev (2004) find that royalty income from patent licensing is highly relevant to stock valuation. Kallapur and Kwan (2004) find that brand assets recognized by U.K. firms are value relevant (however, their results suggest that brand asset measures might not be reliable). Barth et al. (1998) find that brand value estimates reported by Financial World (a financial magazine) are significantly positively related to stock prices and returns, incremental to other accounting numbers. Lev and Sougiannis (1996) find that earnings numbers adjusted for R&D capitalization are significantly associated with stock prices and returns.

3. VALUATION ISSUES

In terms of valuation of intangibles, different approaches have been suggested. They can generally be classified into three categories: the cost approach, the market approach, and the income approach. The cost approach is based on the concept of substitution. It concerns with the cost to obtain an asset of equal utility. Whenever necessary, adjustments are made for technological and economic changes. The market approach looks to the market to see what others in the marketplace have judged the value of the asset to be. This approach works very well when there is an active and well-established market. The income approach measures value as the present value of the net economic benefits to be received over the life of the asset. It is essential that a good projection of future economic benefits is available and that the discount rate used is calculated on a basis consistent with the projection of future benefits. Sometimes, estimates from more than one approach are synthesized to arrive at the final value estimate. However, reasonably reliable valuation of internally developed intangibles is hard to come by. First, expenditures to develop an intangible usually happen long before any end product can be demonstrated to have future benefits and there is usually little, if any, relationship between the amounts expended in the development of intangibles and their ultimate value. Therefore, the cost approach may not be appropriate. Second, many intangibles are not separate and salable and thus, the market approach is not applicable. Third, future benefits from intangibles can sometimes be highly uncertain. As a result, estimates from the income approach may not be reliable. In addition, as control is one of the essential characteristics of an asset, items such as customer satisfaction and highly trained employees can never be recognized.

4. A FRAMEWORK FOR SUPPLEMENTAL REPORTING

These valuation and control issues are indeed major obstacles to the recognition of most intangibles. However, they are not an adequate excuse for companies not to disclose relevant information about intangibles. Supplemental disclosure of information regarding unrecognized intangibles seems to offer the best solution. The focus is on the provision of information on the status of a company's unrecognized intangibles. This should make the management to be aware of and thus to manage these important value drivers more actively and to enable the public to evaluate and compare the performance of the management in this area.

A framework for supplemental reporting of unrecognized intangibles must be developed to allow companies and the public to communicate about information concerning intangibles. A well-defined reporting structure will enable users of information to understand what the information means and compare it across companies. A brief description of any term whose meaning is

not apparent should be provided. In addition, any significant underlying assumptions made in the determination of the items should also be disclosed.

A model based on the intellectual capital accounting system suggested in Mouritsen et al. (2001) is proposed as the framework of reporting for unrecognized intangibles. In this model, there are three reporting dimensions: resources, activities, and effects. Companies are to report on these three dimensions for each of the three broad categories of intangibles: human capital, organizational capital, and relational capital. Human capital is broadly related to the education, training, innovativeness, and ability of a company's employees. It cannot be owned by the company. Organizational capital refers to things belonged to a company as a whole like patents, trademarks, software systems, and business structure and procedures. Like human capital, a company cannot own its relational capital. It regards to the relationships between a company and outside parties. Items such as customer loyalty, market leadership, distribution networks, business collaborations, and licensing agreements are included in this category. Resource indicators report on the portfolio of intangible-related items such as number of employees, number of patents, and market share. Activity indicators describe activities undertaken to develop or improve the resources. They show what the company is doing, for example, to improve employee productivity, to develop new products, or to attract new customers. Many of these activity indicators are financial indicators such as employee training costs, research and development expenditures, and advertising costs. Effect indicators report on the results of activities on resources. Examples include employee retention data, number of new patents obtained, and percent of revenue from new customers. This proposed reporting model should be able to include and classify all indicators advocated in the literature. Classifying some indicators may sometimes be more difficult than others as they may belong to more than one category. However, this should not be a problem as classification of indicators is mainly for the ease of exposition. The focus is the disclosure of relevant information.

In this model, a company is able to report on what intangibles it has, what it has done to develop and improve these intangibles and the effectiveness of its efforts. This model provides a coherent and well-defined structure on which information about intangibles can be presented. Yet, it is flexible enough to allow individual companies to report on what they consider to be their companies' important value drivers. This latter point is crucial because strategies and value creation processes are likely to differ among companies. In order for the information disclosed to be useful, management must explain why the information disclosed is relevant for understanding the company's strategy and value creation process. In fact, what disclosed should be the information that will play an integral part in the discussion and explanation of the company's strategy and valuation creation process. In that way, the information disclosed will provide users an adequate basis to decide on their own the value of a company's intangibles and how well the management manages the company's intangibles.

When a coherent, well-defined disclosure structure is endorsed by the major accounting policy-making institutions, companies with good news would voluntarily disclose the information. As laggards would feel the pressure from analysts and investors, more companies would start to disclose. With improved information available, a more efficient capital allocation can be made by market participants.

5. SUMMARY

In our current knowledge-based economy, intangibles have become an increasingly important factor to business success and economic growth. However, as most of the intangibles are developed internally, they are not recognized on the balance sheet. This absence of relevant information can result in significant private and social harm. Because of valuation and control issues, supplemental disclosure of information regarding unrecognized intangibles seems to offer the best solution. A model based on the intellectual capital accounting system suggested in Mouritsen et al. (2001) is proposed as the framework of reporting for unrecognized intangibles. In this model, there are three reporting dimensions: resources, activities, and effects. Companies are to report on these three dimensions for each of the three broad categories of intangibles: human capital, organizational capital, and relational capital. Information disclosed should provide users an adequate basis to decide on their own the value of a company's intangibles and how well the management manages the company's intangibles. As a result, a more efficient capital allocation will be made.

Table 1 Reporting Model for Intangibles

	Resources	Activities	Effects
Human Capital	number of employees	training	employee retention data
Organizational Capital	number of patents	research and development	number of new patents obtained
Relational Capital	market share	customer acquisition	percent of revenues from new customers

FOOTNOTES

[1] Research reported in Lev (2002) indicated that the corporate investment in intangibles in the late 1990s was about $1 trillion, which almost matches the corporate investment in property, plant and equipment.

REFERENCES

Barth, M., M. Clement, G. Foster, and R. Kasznik. 1998. Brand Values and Capital Market Valuation. *Review of Accounting Studies* pp. 41-68.

Gu, F. and B. Lev. 2004. The Information Content of Royalty Income. *Accounting Horizons* pp. 1-12.

Kallapur, S. and S. Kwan. 2004. The Value Relevance and Reliability of Brand Assets Recognized by U.K. Firms. *Accounting Review* pp. 151-172.

Lev, B. 2001. *Intangibles: Management, Measurement and Reporting*. Washington, D.C.: Brooking Institution Press.

Lev, B. 2002. Intangibles at a Crossroads: What's Next? *Financial Executive* (March/April) pp. 35-39.

Lev, B., and T. Sougiannis. 1996. The Capitalization, Amortization, and Value Relevance of R&D. *Journal of Accounting and Economics* pp. 107-138.

Mouritsen, J., H. Larsen, P. Bukh, and M. Johansen. 2001. Reading an Intellectual Capital Statement: Describing and Prescribing Knowledge Management Strategies. *Journal of Intellectual Capital* pp. 359-383.

COLLABORATIVE DIVORCE: AN INNOVATION FROM AN OLD SOURCE

Anthony J. Greco, Ph.D., University of Louisiana at Lafayette

Divorce rates across the various states have been relatively high for some time. In fact, twenty-five of forty-nine reporting entities experienced divorces as a percentage of marriages of fifty percent or more in 1990. By 2003, the most recent year of available data, twenty-four of forty-six reporting entities had rates exceeding fifty percent. Over the entire 1990-2003 period, the divorces-as-a-percentage-of-marriages rate rose in twenty-three states, fell in twenty states, and remained the same in three states. Data were unavailable for the five remaining states. For the latest year of data (2003) where the rate for twenty-four of forty-six entities for which data were available exceeded fifty percent, forty-two of these forty-six entities (91.3 percent) had rates of at least forty percent with a range of forty-one percent to eighty-seven percent. For the U. S. as a whole, this divorce-as-a-percentage of marriages rate reached fifty percent in 1995.[1]

As a philosopher, Adam Smith would probably be quite distressed with the high rates of divorce characteristic of modern societies. He would, as most, lament the upheaval caused by the various emotional, legal, financial, and communication aspects of divorce, especially in cases involving children. However, as an economist, he would be additionally distressed with the adversarial approach that has been traditionally applied to divorce resolution. This approach pits the attorneys of the opposing parties to a divorce against one another in a long, often bitter, and emotionally and financially draining process. The attorneys' objective in this process is to "win" for his client and his client alone. That is, the attorney seeks to redistribute income and wealth to his client from the opposing party to a divorce in a zero-sum game. That is, one side gains at the expense of the other.

Smith would recognize that, under this adversarial approach to divorce resolution, resources are being allocated in an inefficient manner. That is, rarely does one find an attorney who has the training and the expertise to recognize and properly address all of the emotional, legal, financial, and communication aspects of a divorce that affect his/her client. Consequently, much time and effort are wasted by divorce attorneys in their myopic attempts to win the legal confrontation with their opposing attorney(s). Smith would argue that, though unfortunate, there is a market for divorce resolution, with the divorcing parties on the demand side of the market and the divorce facilitators (to this point traditionally divorce attorneys) on the supply side. Since this market exists and is unfortunately growing larger, resources need to be more efficiently allocated in serving this market. That is, some thing(s) can be done on the supply side of this market to improve the market's outcome, i. e. to improve the efficiency of the divorce resolution process. Being the staunch laissez faire advocate that he was, Smith would probably suggest that the government should diminish its intervention in the divorce process, that is, that less emphasis be placed on a trials and court-ordered resolutions, resolutions that typically absorb a great degree of time and money and take matters out of the hands of the parties to the divorce.

While it is true that the ultimate objective of the divorce process is to arrive at a judicial (legal) recognition of the dissolution of the marriage, the traditional adversarial approach ultimately relies on a judge to affect such a resolution after hearing the arguments proffered by the attorneys of the opposing parties. Again, why would one expect that all judges (or any, for that matter) are sufficiently trained to fully perceive and understand all of the legal, emotional, financial, and communication aspects involved in various divorces in the first place and to know exactly what steps to take in order to protect the interest of the opposing parties, (especially when children) are involved. Once again, this points out the need to improve conditions on the supply side of the divorce resolution market.

Adam Smith would argue that the market should be free to evolve new, more efficient divorce resolution approaches, i. e. to innovate. Indeed, over the years, various alternative dispute resolution paradigms have been proposed for divorce, as well as for other legal disputes. Numbered among these ADR paradigms are: (1) mediation, where a third neutral party tries to bring the disputing parties to a mutually agreeable solution, and (2) arbitration, where a third neutral party hears both sides to a dispute and makes a ruling which is binding on both parties. In federal district courts, for example, ADR began in the 1970s, witnessed some innovations in the 1980s, and experienced additional expansion in 1988 when Congress authorized ten federal district courts to implement mandatory arbitration programs and another ten to set up voluntary programs. Further, the Civil Justice Reform Act of 1990 (CJRA) required all district courts, as aided by various community constituencies, to develop a district-specific method of lowering cost and delay in civil litigation. ADR was among the options recommended by the statute. (Plapinger and Stienstra, ADR and Settlement…, 1996).

By 1996, mediation had become the primary ADR process employed by the federal district courts. In a roughly five-year period, fifty-one of the ninety-four federal district courts (54.3 percent) had established mediation programs. Arbitration had evolved as that the second most frequently used ADR program over this same period. In fact, twenty-two of the ninety-four federal district courts (23.4 percent) had adopted some form of arbitration (Plapinger and Stienstra, ADR and Settlement…, 1996).

At the same time, mediation was also outgaining arbitration in state courts. While forty-four states had mediation programs in one or more of their state courts, only twenty-four states had court arbitration programs. Divorce mediation has an even longer history than mediation for commercial cases. Data showing the rise of mediation as opposed to other ADR forms have not always been available although there have been reports showing an increase in the use of mediation. The increasing popularity of mediation has been attributed to overcrowded courts and the rising costs of litigation, as well as to dissatisfaction with arbitration which was once the dominant form of ADR. Partly this dissatisfaction is due to the feeling that arbitration has tended to become increasingly like litigation over time in such things as depositions and creating records, etc. Then, too, because of its voluntary nature, mediation is generally more popular than arbitration. This popularity difference was illustrated in a poll conducted by ABA in the late 90s. Therein, it was found that fifty-one percent of lawyers involved in ADR hearings for the five previous years favored the use of mediation while thirty-one percent preferred litigation. However, when focusing on the choice between litigation and arbitration, only thirty-one percent of the lawyers preferred arbitration while forty-three percent preferred litigation (Holden, Chicago Lawyer, 1997).

Signifying lawyers' recognition of mediation as a valuable tool to use in family dispute resolution, the ABA's House of Delegates adopted new model standards for family and divorce mediation in early 2001. These Model Standards cover thirteen general principles, as well as, detailed practical consideration involved in implementing these principles. The standards were devised to guide family and divorce mediators and to train additional mediators. In addition to their "internally oriented" goals, the standards were also established to educate the public relative to mediation. Despite their endorsement of mediation as a valuable ADR tool, the Model Standards recognize that this tool is not necessarily appropriate for use in the resolution of all family disputes. That is to say, the standards recognize that use of mediation must be approached with great caution in "high conflict" divorce situations. (Shepard, New York Law Journal, 2001). Generally, normal or low conflict divorce cases in which mediation can be seriously considered are present when the following conditions apply: (1) the decision to divorce is mutually shared by the divorcing parties, (2) the parties have no desire to reconcile, (3) the parties want to remain on good terms with one another, (4) the parties do not hold each other solely responsible for the separation, (5) both parties understand the financial situation, (6) the parties have not lied to each other about any important matters, (7) the parties are capable of disagreeing without doing or saying things that they may regret later, (8) neither party is easily intimidated by the other, (9) physical violence is not an issue, (10) alcohol or drug abuse is not an issue, and (11) each spouse believes that the other spouse is a good parent. ("Will Divorce Mediation Work For You," Nolo, 2005.

As an example, divorce mediation has recently made significant strides in New Jersey. Slightly over a decade ago, it was used much less than the traditional adversarial approach. As the number of divorces increased and the time it took to process these through the judicial system lingered on, divorce mediation grew in popularity. By early 2003, its use was described as accelerating in the state. Attorneys began to replace their litigation practice with mediation. Although the growth of divorce mediation in the state has been impressive, it still accounts for a small fraction of the approximality 30,000 divorce cases filed annually in New Jersey. This observation led a past chairman of the New Jersey State Bar Association's Family Law Section to describe divorce mediation as "just a tool." While acknowledging that mediation's role in divorce has been growing, he does not view it as a serious threat to the revenue of matrimonial lawyers. (Ainsworth, New Jersey Lawyer, 2003).

Hence, mediation has been applied more often to divorce resolution than arbitration. The mediation process, by its nature, gives the opposing parties much more control in the divorce-resolution process. The mediator does not order a resolution. Rather, he/she merely tries to assist the opposing parties to forge their own agreement. Even though the mediation process generally produces better results than the rendering of court decisions via the traditional adversarial approach, it has been generally applied to cases involving child custody and visitation matters and is often ordered by the courts. Its general use in divorce resolution seems to vary quite a bit in different localities. Perhaps this reflects the overall highly emotional nature of child custody issues, resulting in their separate treatment from the property settlement issues of divorce in most states. It seems from the above that mediation and other alternative dispute resolution techniques have not seemed to fulfill their promise in the area of divorce resolution.

However, a new divorce resolution paradigm has evolved or, more properly, is evolving, an approach sure to have won Adam Smith's approval. This is the collaborative approach of which there are two variations: (1) the Collaborative Law Model and (2) the Collaborative Divorce Model. Both of these models represent a movement to something that was strongly advocated by Adam Smith, i. e. the specialized use of resources. In his famous pin factory example in the Wealth of Nations, Smith illustrated how pin production was made more and more efficient by increased specialization of resources. (Smith, Wealth of Nations) The two aforementioned collaborative models recognize, to some extent, that the divorce process does, indeed, involve the legal, emotional, financial, and communication aspects alluded to previously. Further, they both attempt, to varying degrees, to address these various aspects of divorce through the use of specialized resources.

The Collaborative Law Model, however, employs the specialized resources to a lesser degree than the Collaborative Divorce Model. Under the Collaborative Law Model, which began about 1990, attorneys representing the two parties to the divorce process work cooperatively. They both agree at the outset not to take the case to court and sign a stipulation to withdraw from the case if the process ceases to be collaborative, e. g., if either party files court motions or if violence erupts between the opposing parties. In this model, the attorneys often use the old referral approach, i. e. they refer the parties to the divorce to other professionals, as they deem appropriate. These other professionals would include mental health specialists,

child specialists, and/or financial specialists. Although one can see that a variety of professionals is employed to address the varied aspects of divorce, the attorneys remain in control of the process. They are not necessarily compelled to bring in any other specialists.

This Collaborative Law Model was begun literally out of desperation by an attorney in Minneapolis in the late 1980s. This attorney had practiced family law for nearly twenty years and felt that there had to be a better way to resolve divorces. He began working with other attorneys in a collaborative fashion to settle divorces, initially only requiring a collaborative commitment on a case-by-case basis. He formed a collaborative institute with three other attorneys. Soon the number of attorneys grew and now their Collaborative Law Institute numbers roughly fifty members. (Webb, 2000).

By contrast, the Collaborative Divorce Model (though nearly identical in name) represents a refinement or extension of the Collaborative Law Model. It necessarily mandates and employs an interdisciplinary team approach from the outset of the divorce resolution process. This interdisciplinary team consists of: (1) two Collaborative Law attorneys; (2) two gender-balanced Mental Health Specialists who act as "coaches" to the respective parties; (3) a Child Specialist to serve as an advocate for any children involved; and (4) a neutral Financial Specialist.

This movement was started in the early 1990s by a small group of professionals in the San Francisco/Bay Area. As in the case of the development of the Collaborative Law Model, these professionals in the San Francisco area had been working for many years in the traditionally adversarial divorce system and had grown discouraged with the pain and injury inflicted by such a system on members of divorcing families, especially on the children of these families. They sought to devise and install a better system to alleviate these problems. They found that their opinion and resolve were shared and clearly enunciated by other professionals (Nurse and Thompson, 2005). The Collaborative Divorce approach that evolved clearly recognizes that no individual professional is equipped to handle all of the varied aspects of divorce in a manner that will be in the best interests of all parties to a divorce. It takes specialization to its fullest extent and, hence, would have been applauded by Adam Smith.

All of the professionals involved in the Collaborative Divorce Model must attend a team-training session. They are all encouraged to undergo mediation training prior to their team-training session. In addition, each classification of specialized professional must meet specific requirements established by their specific disciplines and by their local Collaborative Divorce group. The obvious paradigm shift of the Collaborative Divorce Model is away from an individual orientation and toward a team orientation. It emphasizes sharing control rather than maintaining control. As a result, it tends to alleviate, if not eliminate, the adversarial nature of traditional divorces. Although, it does employ more professionals than the typical traditional divorce, it tends to result in quicker and more lasting resolutions to divorces, saving the parties much time and money. It strives in each case, to reach a resolution that is most beneficial (or at least onerous) to all parties to the divorce. Hence, in some sense, all parties benefit and the process is not a zero-sum game.

Recognizing that economic efficiency entails the achievement of both full employment of resources, as well as full production, and that, the specialization of resources, as advocated by Adam Smith, promotes both full employment and full production, one must conclude that the Collaborative Divorce Model and the Collaborative Law Model to a somewhat lesser degree for divorce resolutions would have been fully endorsed by Smith. He would have applauded these models' strict emphasis on specialized use of resources as promotive of efficiency, and he would have heralded the emergence of these models as illustrations of the market system's tendency to generate innovative responses to the needs of the market place.

Therefore, whether the Collaborative Law Model or the Collaborative Divorce Model is employed to resolve a divorce, the emphasis is on the increased use of specialized professional (labor) resources for the purpose of achieving a quicker and less painful resolution for all parties affected by the divorce.

Because of the relatively short-lived existence of collaborative divorce cases of both varieties, data relative to their performance are rather limited. However, the available data suggest that such collaborative methods have performed very well. The most comprehensive compilation of data to date consists of 160 nationwide divorce cases involving some form of collaborative resolution process over an approximate six-month period in 2004.[2] Of these 160 cases, 127 (79.4 percent) reached agreement. Only eighteen of the 160 cases (11.25 percent) were not resolved through collaboration and went to litigation. In eight of the 160 cases (five percent), the couples reconciled and, hence, dropped divorce proceedings. Due to complicating circumstances, four of the 160 cases (2.5 percent) continued to evade resolution. Further, two of the 160 cases (1.25 percent) were ongoing without the original attorneys. There was no clear indication of the presence of children in only twenty of the 160 cases (12.5 percent). This high percentage of cases involving children may signal a growing recognition of the multi-faceted aspects of divorce noted previously. (Greco, 2006)

Of the 155 attorneys reporting on this set of collaborative cases, 70.9 percent indicated that their fees were $10,000 or less. Individual attorneys for each client involved in these collaborative cases were asked to estimate what their range of fees would have been for conventional adversarial divorce cases having similar issues and complexities. Over 80 percent of participating attorneys responded to this query. Nearly twenty-one percent of the respondents estimated fees of $10,000 or less. This contrasts noticeably with the nearly 71 percent who had reported their fees at $10,000 or less for the actual collaborative cases covered by this survey. Therefore, nearly 80 percent of the responding attorneys estimating the fee ranges for similar contested-divorce cases felt that these fees would be in excess of $10,000. Further, nearly half of the responding attorneys (49.5 percent) estimated that the fees for similar contested cases would exceed $25,000, with an additional 11.4 percent putting such fees as high as $25,000. These fee estimates

were, of course, for attorneys only. The lower average attorney fees reported by respondents for the actual collaborative cases exclude the fees of the other professionals involved. (i. e. fees for the mental health specialists, child specialists, and financial specialists). Such specialists would not, of course, be typically used in the contested divorce cases. However, the attorney fees estimated by responding attorneys in conventional divorce cases do not include the court costs usually involved in such cases, as well as the emotional stress involved in protracted and contentious court filings and proceedings. Further, remember that in the traditional, contested divorce which winds its way through the judicial process, the court decides the outcome, not the individuals involved in the divorce. The chances of a mutually satisfactory (or at least minimally onerous solution) are, therefore, rather small. (Greco, 2006)

Further, recall that under twenty-one percent of responding attorneys estimated that fees for similar contested divorce cases would be $10,000 or less. However, 51.5 percent of respondents estimated that total fees for both clients covering all professionals in the collaborative cases would be $10,000 or less. Only 15.8 percent of respondents estimated that the total professional bill would exceed $25,000 with only another 5.1 percent estimating fees as high as $25,000. Contrast these figures with the 49.5 percent and 11.4 percent figures estimated, respectively, by attorneys for conventional contested divorces. Further the lower estimated fees for combined professional services apply to the total combined cost of both parties in the collaborative cases, whereas the estimated fees for attorneys in similar contested cases apply to just one client or side of the divorce battle (Greco, 2006).

In addition, a 2004 survey of members of the Texas Collaborative Law Institute netted responses from 114 members.[3] Of these, over 90 percent (103 respondents) had worked on at least one collaborative case. In fact, these respondents had worked on 483 cases over time. Virtually all of these cases (99 percent) involved property issues and 90 percent involved children's issues. As suggested above, the preponderance of cases involving children's issues may indicate a growing reliance on the collaborative approach to deal with the multi-faceted nature of divorces. Interestingly, one side's typical fees exceeded $15,000 in only sixteen percent of the 483 cases (i. e. in 77 cases). Therefore, typical fees for one side were less than $15,000 in 84 percent of the cases (i. e. in the remaining 408 cases). Further, typical fees for one side fell within the $1,000-$5,000 range in twenty-seven percent of the 483 cases (i. e. in 130 cases). Recall that for the aforementioned 2004 survey of 160 nationwide collaborative cases, individual attorneys reported fees of $10,000 or less in approximately seventy-one (71) percent of these cases. Fees of up to $15,000 were reported for 84.4 percent of these 160 cases, strikingly similar to the 84 percent reported for the 483 cases in the CLI of Texas survey. (Greco, 2006)

As more time elapses, there will, of course, be more evidence relative to the economic cost of collaboratively-settled divorces. This will allow more extensive comparisons between the relative costs of collaborative and adversarilly-contested divorces. The data to date do seem to suggest that such costs are lower for the collaboratively-resolved divorces.

NOTES

1. The statistics relative to divorce discussed in this section were derived from the U. S. Government website: www.census.gov.

2. The discussion and data contained in this section were prepared by the author from the 2004 survey taken by Carl Michael Rossi.

3. The discussion and data contained in this section were prepared by the author from the 2004 Survey of CLI of Texas members.

REFERENCES

Ainsworth, Earl, "It's Make-or-Break Time for Mediation," New Jersey Lawyer, Vol. 12, No. 2, 2003.

Greco, Anthony J., "Professional Fees Associated With Collaborative Divorce Resolution: The Evidence to Date," Journal of Legal Economics, Vol. 13, No. 3, 2006.

Holden, Mary W., "As Courts Overflow, Mediation Flourishes," Chicago Lawyer, March 1997.

Nolo, "Will Divorce Mediation Work for You?" www.nolo.com, 2005.

Nurse, A. Rodney and Thompson, Peggy, "Using Research to Improve Collaborative Practice," Keynote Address, International Academy of Practice - Skills Institute, Dallas, Texas, June 2005.

Plapinger, Elizabeth and Stienstra, D., "ADR and Settlement in Federal District Courts: A Sourcebook for Judges and Lawyers," Federal Judicial Center, 1996.

Shepard, "The Model Standards of Practice for Family," New York Law Journal, 2001.

Smith, Adam, An Inquiry into the Nature and Causes of the Wealth of Nations, Edwin Cannan (ed.), Lindon: Modern Library, 1905.

Webb, Stuart, "History and Development of Collaborative Practice," unpublished work, 2000.

EFFECTS OF THE FEDERAL RESERVE'S FOREIGN EXCHANGE INTERVENTIONS

Paul Sarmas, California State Polytechnic University - Pamona

I. INTRODUCTION

The cessation of the Bretton Woods system was evident as more developed countries switched to a floating exchange rate regime. Since then, a large body of economic literature has been published on the topic of exchange rate behaviors. Even though major industrial countries abandoned the system of pegged exchange rates in favor of floating exchange rates in the post-Bretton Woods period, many nevertheless, continued periodic interventions in the exchange market in order to prevent excessive currency fluctuations.

Current economic studies of exchange rate models provide empirical results that are more supportive of the flexible-price theory than of the fixed-price and portfolio-balance theories. However, the overall results point to a poor explanatory power of the variables and instability of the estimated coefficients in terms of signs and statistical significance. At best the results on the extent to which changes in fundamental economic variables affect the changes in exchange rates are inconclusive.[1] As well, most of these studies either ignore the interventions or deal with them by including dummy variables in their regression models.

This study investigates the initial effect and effect over time of government intervention on exchange rate by using the intervention-function-time series approach. This technique is used to compare the post intervention means and variability of exchange rates with those of pre-intervention. The results also include a comparison of the effectiveness of one-time intervention with that of a prolonged intervention. Finally, the time path and the dynamic response of exchange rates to different episodes of intervention have been studied using impulse response functions.

II. REVIEW OF THE RELEVANT LITERATURE

Exchange rate models are generally based on the theoretical assumptions of efficient foreign exchange markets and perfect capital mobility. The cornerstone of these models is the relationship between the monetary policy and its determinant with the exchange rates. The literature seems to be divided into two classifications. One view focuses on the relationship between the monetary policy, formulated by its determinants, and exchange rates.[2] The other view concentrates on the relationship between monetary policy, formulated by foreign exchange intervention, and exchange rates.[3] The latter point of view provides the framework for the study presented in this paper.

The effectiveness of foreign exchange market intervention has been suspect in recent years when central banks refused to intervene in circumstances that, in earlier times, they would have. Schwartz (2000) concluded that the results of empirical research of effectiveness of foreign exchange market intervention were inconclusive, and pointed out implementation problems that were often ignored by intervention advocates. In another study, Sarno and Taylor (2001) show that official intervention affects exchange rates, whether through the portfolio balance channel or the signaling channel. Their empirical results are mixed on balance: the studies of the 1990s support the effectiveness of intervention, whereas the studies of the 1980s largely reject the effectiveness of intervention.

Prompted by evidence of increased exchange rate volatility and frequent central bank intervention in foreign exchange markets, Ramchander and Sant (2002) conducted an empirical investigation of the relationship between central bank intervention actions and currency volatility. The results of their study indicated no relationship between the Federal Reserve's foreign exchange market intervention activity and the U.S. dollar-Deutsche mark volatility during the 1985-1993 period. However, using the non-parametric sign test and matched sample test, Fatum and Hutchison (2003) found strong evidence that sterilized intervention by the Bundesbank and U.S. officials systematically affected the Dollar-Deutsche Mark exchange in the short run.

This study uses the intervention-function and impulse-response function techniques to investigate the effectiveness of foreign exchange market intervention on foreign exchange rates. It differs from earlier studies by focusing on a number of issues, such as: (1) testing both the initial effect and effect over time of intervention on the mean and variability of exchange rates, (2) testing the differences or similarities of the pre- and post-intervention time paths of the exchange rates, and (3) comparing the effectiveness of a one-time intervention with that of a prolonged intervention.

III. METHODOLOGY AND THE MODELS

The conventional method of analyzing the effect of a shock to a variable is to compare the mean and the variance of the variable before and after the shock and then test for the statistical significance of the change. Such tests can be criticized on the grounds that successive values of a time series may be correlated, and that some of the effects of one period may "carry over" to the next period.[4] In order to avoid such "carry over" effects, the

mean values of two different periods can be compared using the Intervention Analysis Technique.

Intervention analysis allows for a formal test of a change in the mean of a time series. It requires running the best fitting Autoregressive Integrated Moving Average (ARIMA) on the variable in question for the longest span of data before or after intervention, to find the order of ARIMA. The next step entails running the same ARIMA for the entire range of data by including the intervention variable, and testing for the significance of the coefficient of the intervention variable.

The model to be tested in this study is:

$$S_t = a_o + A(L)S_{t-1} + c_oZ_t + B(L)e_t \quad (1)$$

where S_t is the exchange rate, Z_t is the intervention variable, and $A(L)$ and $B(L)$ are polynomials in lag operator L. There are several methods of modeling intervention function analysis. They include impulse function, pure jump, gradually changing function, and prolonged impulse. This study uses two of the models: "impulse function" and "prolonged impulse function". Impulse function assumes intervention to be purely a temporary one. Prolonged impulse function assumes intervention has been in effect for one or more periods, with a certain growth or decay pattern to be estimated from the intervention data.

Of particular interest are the sign and significance of the response of exchange rates to the intervention variable, Z. Once the coefficient of the intervention variable is estimated, the dynamic response of the exchange rates to interventions is calculated. The final step in the process is to estimate the post intervention adjustments path of the exchange rate to the new equilibrium levels using impulse response functions.

The intervention-function analysis confirms or rejects a change in mean and variance of the exchange rate changes, before and after intervention, but it does not attribute the change to any specific variable. The intervention-function model can be generalized by including and testing for the significance of the variables that are assumed to have caused the change in the exchange rate or have resulted in government intervention. Therefore, the model can be reformatted as following:

$$S_t = a_o + A(L)S_{t-1} + B(L)Z_t + C(L)\varepsilon_t \quad (2)$$

where S_t is the exchange rate; Z_t is the variable that is assumed to be the main cause of intervention; and $A(L)$, $B(L)$, and $C(L)$ are polynomial lag operators in L.

IV. SOURCES OF DATA

The exchange rate data are collected on a monthly basis over the post Bretton Woods era, for the period of 1973:03-1998:12, from the International Financial Statistics database. Data on interventions are collected from the Treasury and the *Federal Reserve Bank of New York, Quarterly Review,* 1973-1998. The focus on this paper is on the non-sterilized intervention episodes, in order, to examine both the initial impact as well as

the pro-longed effect of intervention on the selected exchange rates. Because the demise of the Bretton Woods' fixed exchange rate system may have set deterministic initial conditions on the exchange rate series, the regressions were estimated for the 1974:01-1998:12 interval. The exclusion of 1973 from the sample period was a deliberate move to avoid non-stationarity caused by the "new" data generating process. Also, to avoid serial correlation resulting from temporal aggregation, this study uses the end of the month spot dollar price of foreign currencies. In addition, 1998 was selected as the end of sample range because most major European currencies were replaced with the Euro, and lack of sufficient data prevented the inclusion of the Euro in this study.

All the exchange rate data were tested for the presence of a unit root in the individual series. Because literature on the subject of unit roots is far from resolved, it helps to apply a variety of tests.[5] In this study, we have tested series using the Augmented Dickey Fuller (ADF) test (1979), and the Phillps-Perron (1988) test of the existence of a unit root in the time series.[6] If a unit root was found to be present, the appropriate degree of integration was applied before running the ARMA models. The model selection was based on the Schwartz Bayesian Criterion (SBC) and the Akaike Information Criterion (AIC). Also, for each of the ARIMA model residuals the Ljung-Box "Q" statistics were estimated to test the hypothesis that all the autocorrelations of the residuals are zero.

V. EMPIRICAL RESULTS

Table 1 contains the results of the intervention models. Table 2 contains the estimated initial and the long-run effects of intervention for each exchange rate. Table 3 contains the pre-intervention and the post-intervention means and variances of exchange rates for countries and time periods for which interventions had a statistically significant effect on mean or variability of exchange rates. The results of the intervention function analysis and impulse response study are summarized in the following sections.

(A) French franc:
Since early 1979, the dollar value of the French franc experienced a steady decline (Figure 1a). As shown in table 1, with regard to the June 1980 intervention episode, the initial impact of the intervention was statistically different from zero at the 1% level of significance. The statistically significant coefficient of the initial impact is 0.0082 and the corresponding pro-longed effect is 0.015 (Table 2). The auto-regression coefficients imply a non-oscillatory convergence, with the long-run effect of intervention converging to zero in less than four periods (Figure 1b). The effect of the intervention on the variability of the exchange rate, at 1% level, showed a statistically significant increase in variability (Table 3).

(B) Swiss franc:
The Swiss Franc showed steady appreciation against the dollar during the 1974-1978 period (Figure 2a). In December 1978, the Fed intervened in the foreign exchange market against the Swiss franc. The initial effect of this intervention was -0.2600,

10

Table 1

Best Fitting ARIMA and Intervention Models

Exchange Rate	Study Period	Best Model	SBC	AIC	R^2	Intervention Coef. (C_o)
$/French franc	1974:01-1998:12	ARIMA((1,3),1,0)	-10.77	-10.83	.13	0.0082**
$/Swiss franc	!974:01-1998:12	ARIMA(0,1,1)	-8.06	-8.10	.14	-0.2600*
$/British pound	1974:01-1998:12	ARIMA(2,1,0)	-6.19	-6.25	.17	-0.0109
$/ Deutsche mark	1974:01-1980:10	AR(1, 1, 0)	-9.06	-9.15	.08	-0.0056
$/Deutsche mark	1980:11-1987:03	ARIMA(1,1,0)	-8.70	-8.79	.18	0.0275**
$/Deutsche mark	1990:01-1998:12	ARIMA(1,1,0)	-8.10	-8.24	.31	0.0389**
$/Japanese yen	1974:01-1980:02	ARIMA(1,1,0)	-18.49	-18.59	.29	-0.0002**
$/Japanese yen	1980:06-1987:02	ARIMA(1,1,0)	-17.76	-17.85	.18	0.0004**
$/Japanese yen	1990:06-1998:12	ARIMA((1,7),1,0)	-16.93	-17.09	.18	0.0001

*Statistically significantly different from zero at the 5% level.
**Statistically significantly different from zero at the 1% level.

which was statistically significant at the 1% level (Table 1). The estimated coefficients, shown in Table 2, indicated a decreasing trend during the initial impact of intervention (-0.2600) and its long-run effect (-0.0339). The long-run effect converged to zero in less than six periods, with a non-oscillatory path (Figure 2b). The effect of intervention on the variability of the exchange rate showed a statistically significant decrease in variability at the 1% level (Table 3).

(C) British pound:
The dollar value of the pound declined steadily since early 1980 (Figure 3). The Fed intervened in the foreign exchange market against the pound in February 1985. The effect of the intervention was not statistically significantly different from zero, as shown in Tables 1 and 2.

(D) Deutsche mark:
The Fed has intervened on several occasions in this market. During the 1974-1980 period, the dollar value of the Deutsche mark showed a steady increase (Figure 4a). The Fed had a prolonged episode of intervention over the August 1978-July 1980 period. The effect of this intervention was not statistically significant (Tables 1 and 2).

From 1981 to 1986, the Deutsche mark experienced a sharp decline against the dollar (Figure 4a). The Fed intervened in the foreign exchange market against the Deutsche mark in October 1985. The initial effect of the intervention was statistically significantly different from zero at the 1% level (Table 1). The intervention coefficient of the long-run effect is 0.0419 following the initial impact coefficient of 0.0275 (Table 2).

Table 2

Impact Effect and Long-Run Effect of Intervention

Exchange Rate	Period of Study	Intervention Date	Initial Impact	Long-Run Effect
$/French franc	1974:01-1998:12	1980:06	0.0082**	0.0150**
$/Swiss franc	!974:01-1998:12	1978.12	-0.0260*	-0.0339*
$/British pound	1974:01-1985:12	1985:02	Nil	Nil
$/Deutsche mark	1974:01-1980:10	78:11-80:07&79:06-80-07	Nil	Nil
$/Deutsche mark	1980:11-1987:03	1985:10	0.0275**	0.0419**
$/Deutsche mark	1990:01-1998:12	1991:02	0.0389**	0.0918**
$/Japanese yen	1974:01-1980:02	1979:01	-0.0002**	-0.0003**
$/Japanese yen	1980:06-1987:02	1985:10	0.0004**	0.0005**
$/Japanese yen	1990:06-1998:12	1993:05&1994:11	Nil	Nil

*Statistically significantly different from zero at the 5% level.
**Statistically significantly different from zero at the 1% level.

The long-run effect was an oscillatory convergence to zero in less than five periods (Figure 4b). The effect of the intervention on the variability of the exchange rate, as shown in Table 3, indicated a statistically significant increase in variability at the 5% level.

During the 1990-1992 period, the dollar value of the mark rose sharply (Figure 4a). The Fed intervened in the foreign exchange market against the Deutsche mark in February 1991. The initial impact of that intervention, shown in Table 1, was statistically significant at the 1% level. The rising trend from the initial to the long-run impact of the intervention is evident by the coefficients reported in Table 2. The long run effect converged to zero in less than five periods with a non-oscillatory path (Figure 4c). The effect of the intervention on the variability of the exchange rate (as reported in Table 3) denoted a statistically significant increase in variability at the 1% level.

(E) Japanese yen:
During the 1974-1980 period, the yen experienced a steady appreciation against the dollar (Figure 5a). The Fed intervened in the foreign exchange market against the yen in January 1979. The impact of intervention was statistically significant at the 1% level (Table 1). The coefficients of the initial and pro-longed impact of the intervention (Table 2) show a negative trend. The long-run effect was an oscillatory convergence to zero in less than five periods (Figure 5b). The effect of the intervention on the variability of the exchange rate showed a statistically significant decrease in variability at the 1% level (Table 3).

Table 3

Pre-Intervention and Post-Intervention Mean and Variance

Exchange Rate	Period of Study	Pre-Int. Mean	Post-Int. Mean	Pre-Int Var.	Post-Int Var
$/French franc	1974:01-1998:12	.2400	.2100	.00004	.00060
$/Swiss franc	1974:01-1998:12	.5400	.6100	.00360	.00040
$/Deutsche mark	1980:11-1987:03	.3300	.4500	.00005	.00130
$/Deutsche mark	1990:01-1998:12	.6300	.5900	.00100	.07840
$/Japanese yen	1974:01-1980:02	.0047	.0044	.0000003	.00000004
$/Japanese yen	1980:06-1987:02	.0044	.0045	.00000005	.00000007

The dollar value of the yen experienced a period of stability during the 1980-1985 period. However, at the end of this period the exchange value of the yen increased sharply (Figure 5a). In October 1985, the Fed intervened in the foreign exchange market against the yen. As shown in Table 1, the initial effect of this intervention was statistically significant at the 1% level. The long-run effect (Table 2) converged zero in less than five periods, with an oscillatory path (Figure 5c). However, as shown in Table 3, the effect of the intervention on the variability of the exchange rate was not statistically significant.

During the 1990-1994 period, the yen experienced a sharp increase against the dollar (Figure 5a). The Federal Reserve intervention in the foreign exchange market against the yen took place in May 1993 and January 1994. The initial impact of intervention was not statistically significantly different from zero (Table 1).

V. Summary and Conclusion

Since the break down of the Bretton Woods system and conversion to a floating exchange rate system, many industrialized countries have resorted to periodic interventions in the foreign exchange markets to prevent wild fluctuations in their currencies. Earlier studies analyzing the exchange rate behavior have either ignored the interventions or have dealt with them through inclusion of dummy variables in regression models.

In this study, the newly developed techniques of intervention function analysis are applied to exchange rates between the U.S. dollar and the currencies of five countries in order to study the initial effect and the effect over time of government interventions in the foreign exchange markets.

The results of this study show that interventions in the foreign exchange markets have, at best, a temporary effect on the time path of exchange rate adjustment. The effect over time generally converges to zero in three to five periods with a path that may be oscillatory or non-oscillatory. No interventions in the foreign exchange markets of the five countries had a long-term effect on means or trends. Prolonged interventions in the exchange market were even less effective than a one-time intervention. With respect to the effect of interventions on the variability of exchange rates, the results of this study were inconclusive. In four cases, interventions increased the post-intervention variability in the exchange market relative to pre-intervention. In two cases, interventions reduced the post-intervention variability. In one case, intervention had no statistically significant effect on variability.

In general, the empirical results suggest that the Federal Reserve's intervention activities affected target exchange rates temporarily for a three-to-five month period, and that the effect on post-intervention volatility is inconclusive.

Figure 1a
Dollar:French Franc Exchange Rate Movement

Figure 1b
Time Path of Intervention Effect on French Franc
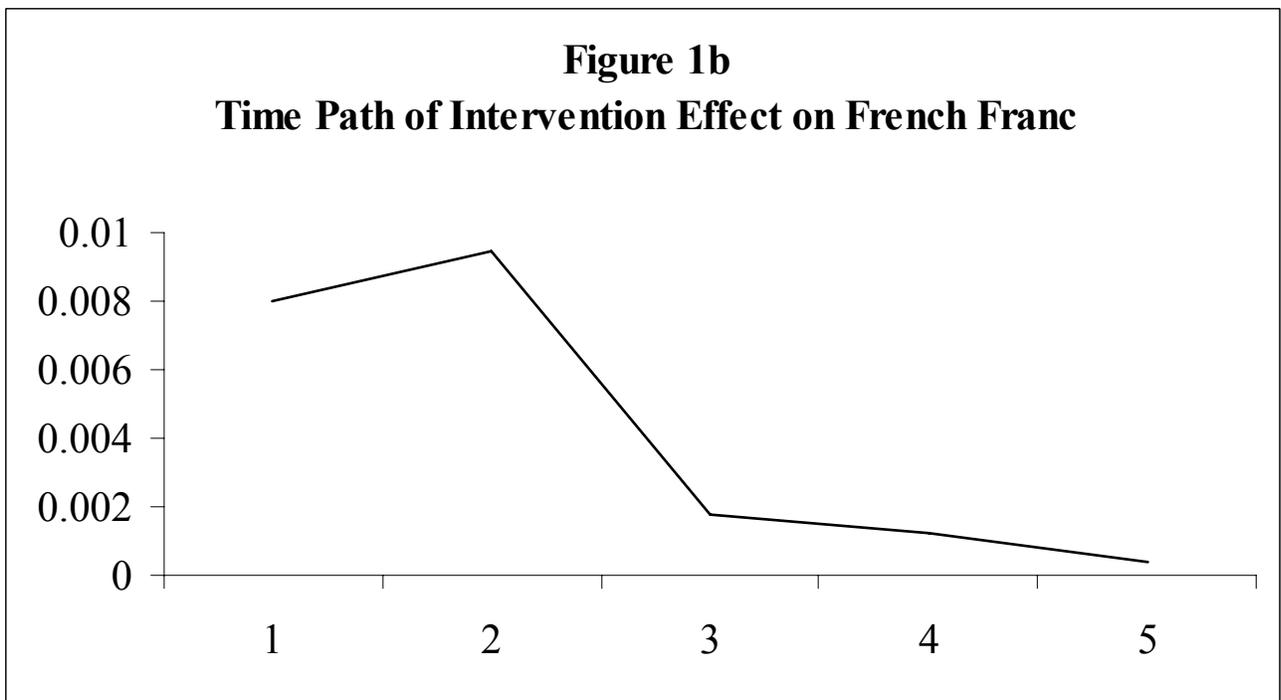
Figure 2a
Time Path of Intervention Effect on Swiss Franc

Figure 2b
Dollar:Swiss Franc Exchange Rate Movements
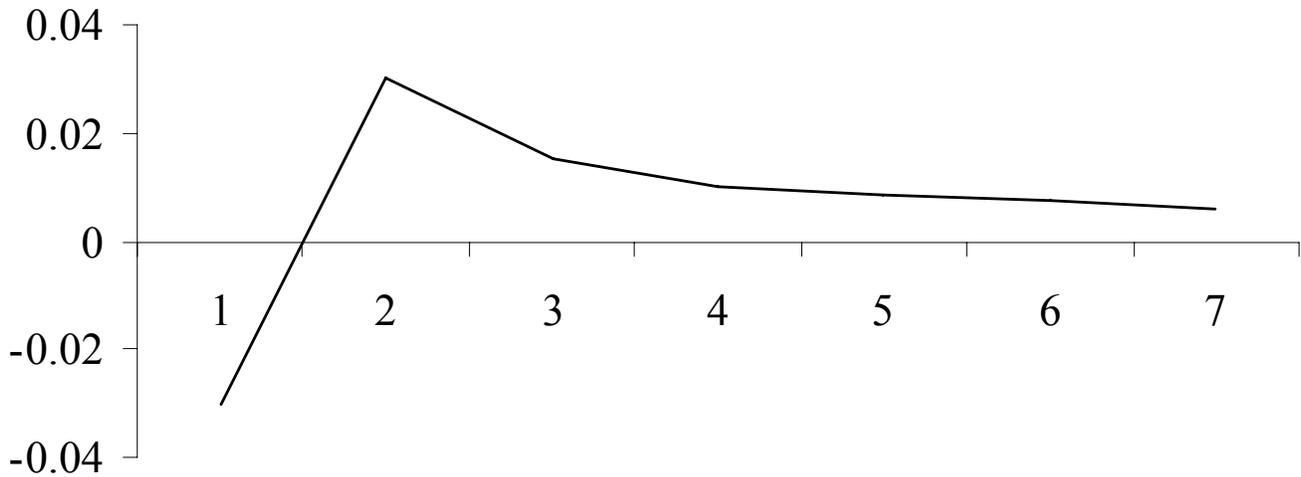
Figure 3
Dollar: Pound Exchange Rate Movements

Figure 4a
Dollar:Deutsche Mark Exchange Rate Movements

Figure 4b
Time Path of Intervention Effect on Deutsch Mark
(1980-1987)

Fire 4c
Time Path of Intervention Effect on Deutch Mark
(1990-1993)

Figure 5a
Dollar: Yen Exchange Rate Movements

17
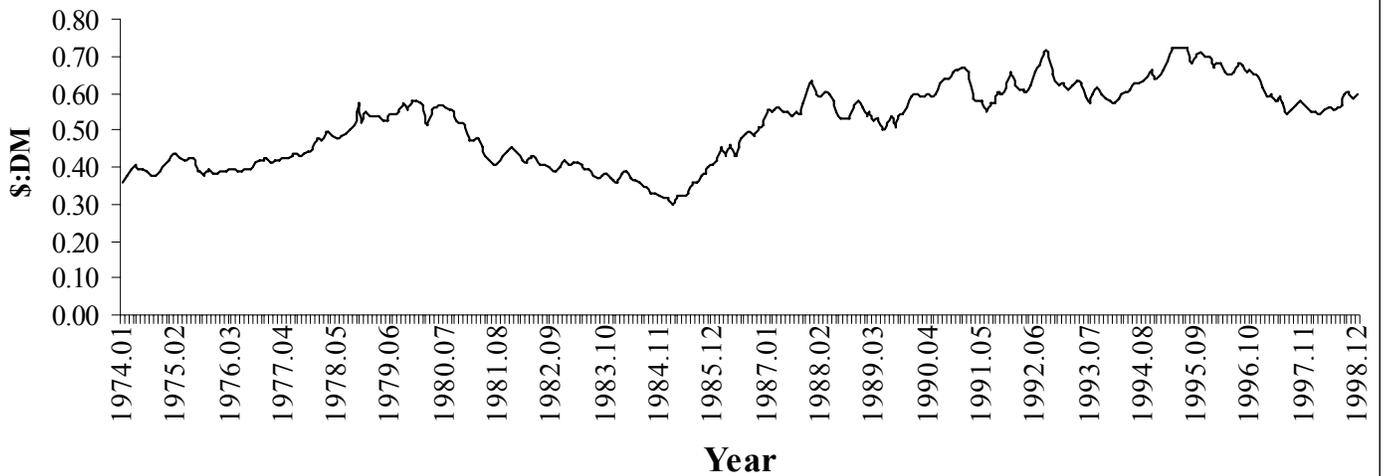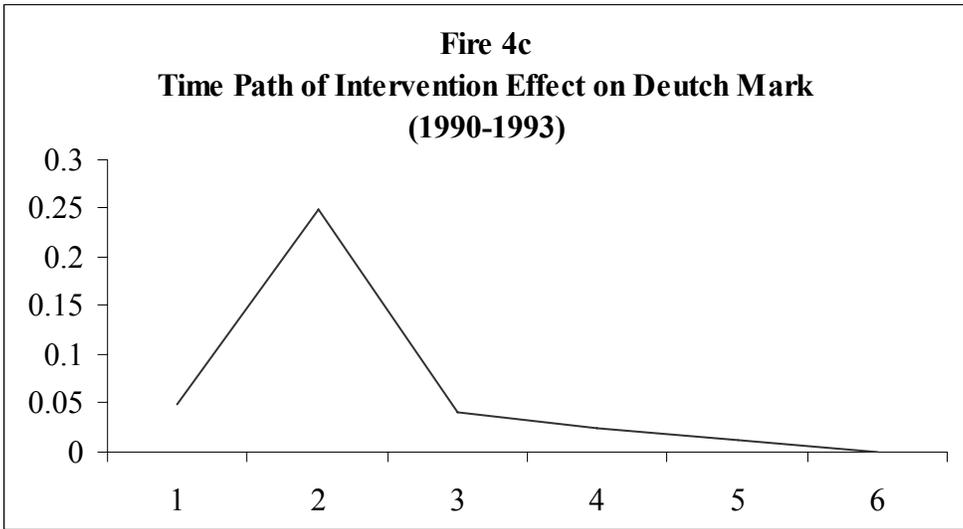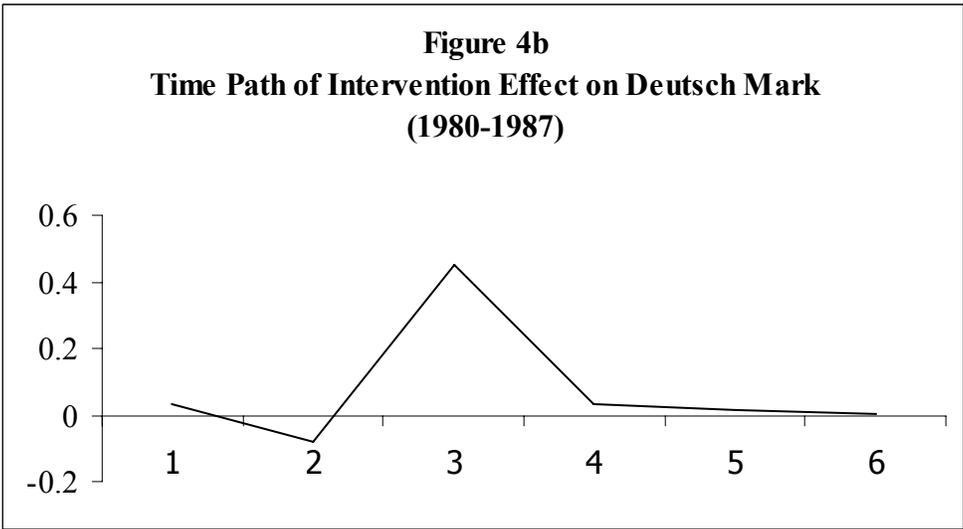
Figure 5b
Time Path of Intervention Effect on Yen
(1974-1980)
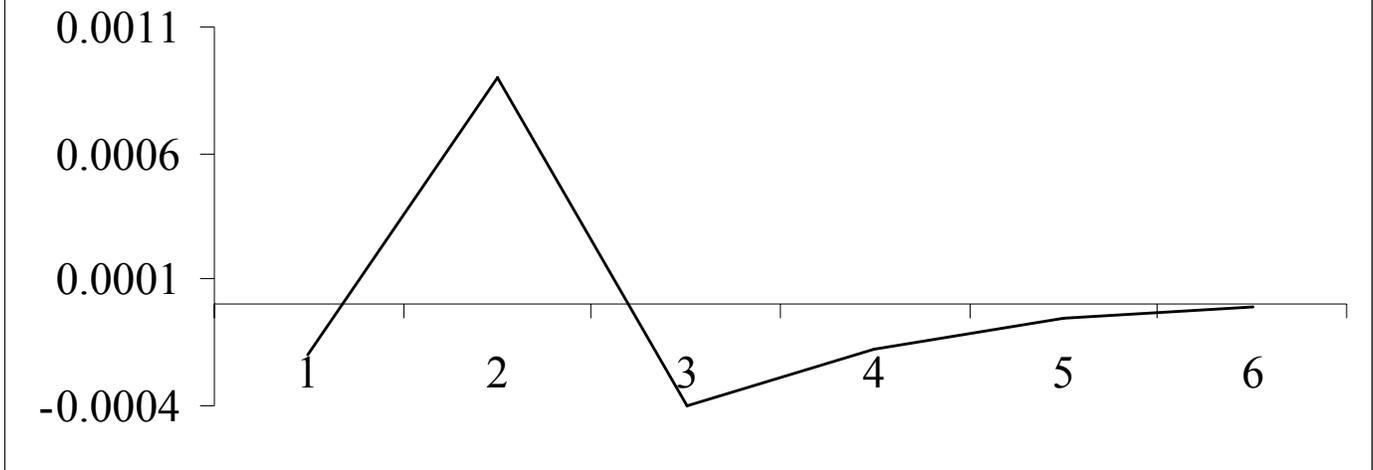
Figure 5c
Time Path of Intervention Effect on Yen
(1980-1987)
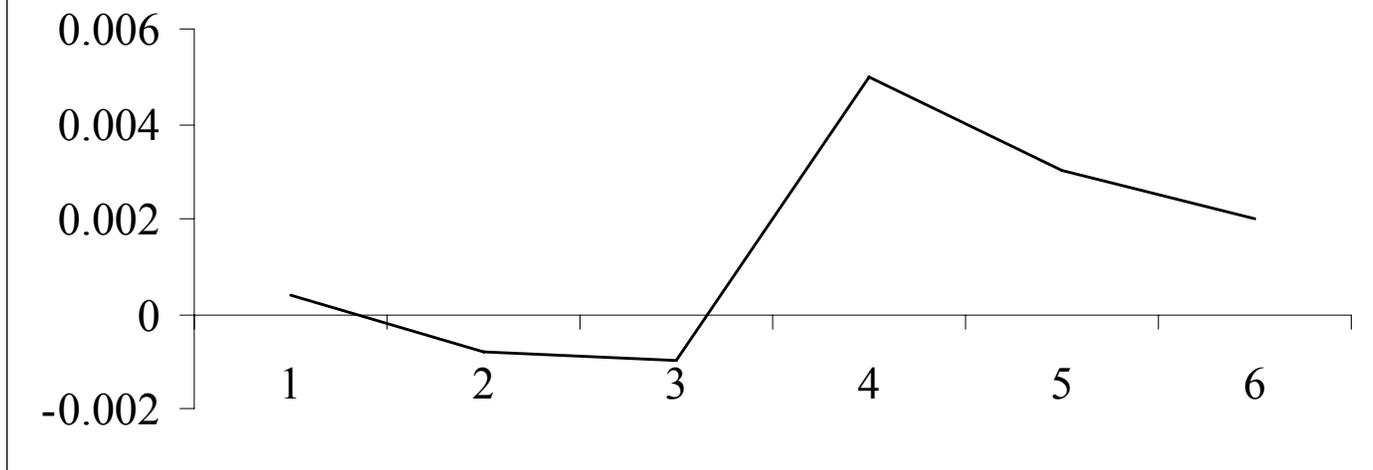
END NOTES

[1] For further studies refer to Dornbusch (1983), Ahkings (1989), Marrinan (1989), Whitt (1990), McDonald and Taylor (1992), Diamandis, Georgoutses, and Kouretas (1998) and Karfakis (2003).

[2] For further discussion of the related topics, refer to Clarida and Gail (1994), Eichenbaum and Evans (1995), and Kim and Roubini (2000).

[3] Further discussion of the related issues are addressed in articles by Beine, Benassy-Quere, and Lecourt (2002), Saacke (2002), Dominguez (2003) and Kim (2003).

[4] Since the study of Working (1960), it has been known that temporal aggregation will cause serial correlation to appear even in data from an efficient market.

[5] For a critical review, see Christiano and Eichenbaum (1990).

[6] The Dickey-Fuller test assumes that errors are statistically independent and have a constant variance. The Phillips-Perron test is a generalization of the Dickey-Fuller procedure that allows for fairly less restrictive assumptions concerning the distribution of errors.

REFERENCES

Ahkings, F. W., 1989. The dollar/pound exchange rate in 1920s: An empirical investigation. Southern Economic Journal 55, 924--934.

Beine, M., Benassy-Quere, A., Lecourt, C., 2002. Central bank intervention and foreign exchange rates: New evidence from FIGARCH estimation. Journal of International Money and Finance 21, 115--144.

Christiano, L., Eichenbaum, M., 1990. Unit roots in real GNP: Do we know and do we care? Carnegie-Rochester Conference Series on Public Policy 32, 7--62.

Clarida, R. H., Gail, J., 1994. Sources of real exchange rate fluctuations: How important are nominal shocks. Canegie-Rochester Conference Series on Public Policy 41, 1--56.

Diamandis, P. F., Georgoutsos, D. A., and Kouretas, G. P., (1998). The Monetary Approach to the Exchange Rate: Long-Run Relationships, Identification and Temporal Stability. Journal of Macroeconomics. 20 (4), 741--767.

Dickey, D., Fuller, W. A., 1979. A theory of the estimators for time series regression with a unit root. Journal of the American Statistical Association, 427--431.

Domiguez, K. M. E., 2003. The market microstructure of central bank intervention. Journal of International Economics 59, 25--45.

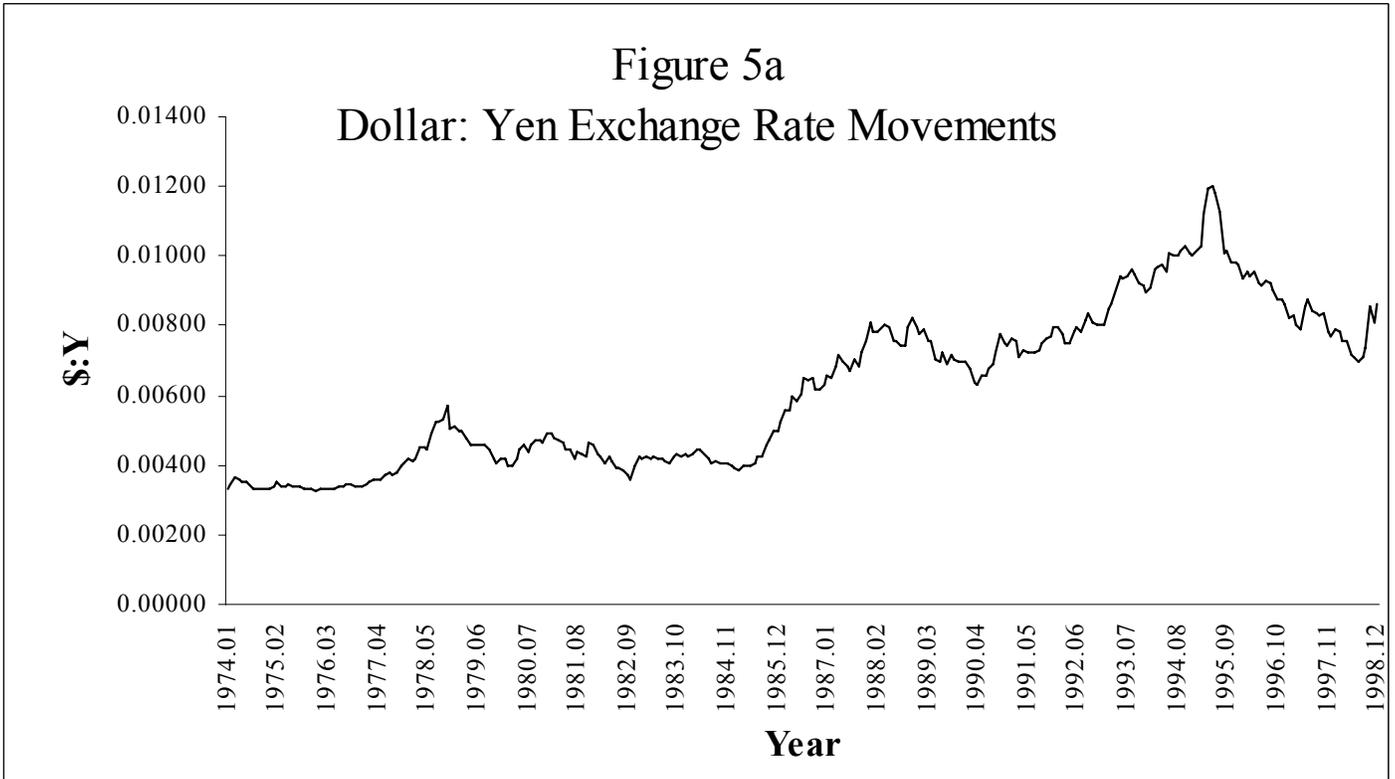Dornbusch, R., 1983. Exchange rate economics: Where do we stand? In Jagdeep S.Bhandari and Bluford H. Putnam, eds., Economic Interdependence and Flexible Exchange Rates. Cambridge, Massachusetts: The MIT Press, 45--81.

Eichenbaum, M., Evans, C., 1995. Some empirical evidence on the effects of monetary policy shocks on exchange rates. Quarterly Journal of Economics 110, 975--1010.

Fatum, R., Hutchison, M. M. , 2003. Is sterilized foreign exchange intervention effective after all? An event study approach. The Economic Journal 113, 390--412.

Karfakis, C., (2003). Exchange Rate Determination during Hyperinflation: The Case of the Romanian Lei. Applied Financial Economics. 13 (6), 473--495.

Kim, S., 2003. Monetary policy, foreign exchange intervention, and the exchange rate in a unifying framework. Journal of International Economics 60, 355--386.

Kim, S., Roubini, N., 2000. Exchange rate anomalies in the industrial countries: A solution with a structural VAR approach. Journal Monetary Economics 45, 561--586.

MacDonald, R., Taylor, M. P., 1992. Exchange rate economics: A survey. International Monetary Fund *Staff Paper*, 1--57.

Marrinan, J., 1989. Exchange rate determination: sorting out theory and evidence. Federal Reserve Bank of Boston, *New England Economic Review*, 39--51.

Phillips, P. C. B., Perron, P., 1988. Testing for unit root in time series. Biometrica 75, 335--346.

Ramchander, S., Sant, R. R., 2002. The impact of Federal Reserve intervention on exchange rate volatility: Evidence from the future market. Applied Financial Economics 12, 231--252.

Saacke, P., 2002. Technical analysis and the effectiveness of central bank intervention. Journal of Money and Finance 21, 459--479.

Safarzadeh, M., Farsio, F., 1995. International evidence on the relationship between exchange rate variability and stock prices: A cointegration and VAR approach. Journal of Business and Economics Perspective 20, 25--37.

Sarno, L., Taylor, M. P., 2001. Official intervention in the foreign exchange market: Is it effective and, if so, how does it work? 39, 839--869.

Schwartz, A. J., 2000. The rise and fall of foreign exchange market intervention as a policy tool. Journal of Financial Research 18, 319--382.

Whitt, J. A., 1990. Flexible exchange rates: An idea whose time has passed? Federal Reserve Bank of Atlanta *Economic Review* 75, 2--15.

Working, H., 1960. A note on the correlation of first differences of averages in random chain. Econometrica, 28 916--918.

INSIDER OR OUTSIDER MANAGERIAL SUCCESSION?—AN EMPIRICAL STUDY ON CEO SUCCESSOR TYPE

Lei Wen, Buena Vista University
Wallace N. Davidson III, Southern Illinois University

1. INTRODUCTION

As the shareholders and boards of directors increase the expectations of CEO performance standards, the incidence of CEO succession is accelerating in the U.S. and globally. Shareholder activism and changes in corporate governance have transformed the CEO's world (Lucier, Spiegel and Schuyt, 2002). The rise and the fall of these powerful CEOs are "the new normal phenomena," according to a 2002 survey on 2500 largest publicly traded corporations conducted by Booz Allen Hamilton, a well-known consulting firm. The report demonstrates that the succession rate of CEOs at major corporations increased by 53% between 1995 and 2001.

Although a substantial body of work has been done on CEO succession, only a very few papers pay special attention to poorly performing firms (e.g., Hotchkiss, 1995). This study investigates whether financially distressed firms benefit from the different types of CEO successors. Furthermore, it evaluates the interaction between CEO successor type and post-CEO-succession financial performance. The results of this paper, overall, support the theory that "insider CEO successions are less disruptive than outsider successions" (Reinganum, 1985).

The remainder of the article is organized as follows. The next section reviews the development of literature associated with CEO succession and proposes hypothesis. Section III describes the methodology, data collection procedures and the formation of final sample. Section IV discusses the empirical results. Section V presents the summary and conclusions focusing on the implications and ideas for further research.

2. LITERATURE REVIEW AND HYPOTHESIS DEVELOPMENT

CEO succession research often concentrates on two factors: whether CEO succession is forced or natural, and whether an internal or external candidate is selected as the outgoing CEO successor. In the CEO succession literature, the successor CEO is being designated as either an insider or outsider CEO to his/her firm. The insider/outsider succession studies highlight the importance of the potential closeness between CEO successors and firms (Fondas and Wiersema, 1997).

CEO succession involves the continuity of company's culture, mission, and long-term strategy. Bringing in a new CEO may break the existing framework and trigger the power struggles. So Grusky (1963) proposes a "vicious circle" argument that key executive succession can be disruptive and reduce firm performance. The "vicious circle" argument is indirectly supported by some recent papers (e.g., Cannella and Lubatkin, 1993; Shen and Cannella, 2002; Wiersema, 2002). Shen and Cannella (2002) suggest that outsider successors will be negatively associated with post-CEO-succession operating performance. Similarly, Cannella and Lubatkin (1993) report the evidence of a negative relation between accounting returns and the likelihood of outside CEO succession. Wiersema (2002) analyzes company performance two years before and two years after CEO succession and finds that companies with CEO successions experienced no significant improvement in their operating earnings or their stock performance.

There are two views about the relation between successor type and post-succession financial performance. One theory is that outsider CEO successors have a positive impact on post-succession financial performance (Borokhovich, Parrino, and Trapani, 1996; Furtado and Karan, 1994; Huson, Malatesta, and Parrino, 2004). The stock market reacts more positively to outsider succession announcements and is apparently more optimistic about post-succession financial performance after outsider CEO succession (e.g., Borokhovich, Parrino and Trapani, 1996; Furtado and Karan, 1994; Davidson, Nemec, Worrell, and Lin, 2002). There is some empirical evidence supporting this "outsider better" theory. For example, Huson, Malatesta, and Parrino (2004) document an increase in accounting performance subsequent to CEO succession, especially for outsider successions. They show that outside CEO successors positively affect post-succession operational performance changes. Borokhovich, Parrino, and Trapani (1996) show that the evidence from stock returns around succession announcements indicates that, on average, shareholders benefit from outside appointments, but are harmed when an insider replaces a fired CEO. Furtado and Karan (1994) argue that the cross-sectional differences in the excess stock returns around the announcement date support the value to the firm of outside appointments following poor stock performance. The experience and background of outsider may also be important. For example, Davidson, Nemec, Worrell, and Lin (2002) define outsider CEO successors into industry-related and industry-unrelated and find that the stock market reaction is more positive for outsider CEO succession announcements when the CEO comes from an industry-related firm.

Another theory is that hiring an insider CEO successor is better, which means that insider succession is less disruptive and less likely to reduce firm financial performance than outsider succession (Davidson, Worrell, and Cheng, 1990; Grusky, 1963). First, when a firm is really in bad shape, a fast turnaround may be expected. An insider may have a shorter learning curve because the insider may not need as much time to study how the company operates. This learning process may have already taken place before any restructuring or strategic change occurs. An insider CEO successor is more familiar with the firm's specific situations and target markets. Second, hiring an insider allows the board to obtain more information concerning the executive's suitability for the position before making a final decision. According to the agency theory, the problem of information asymmetry is less severe between insider executives and board of directors (Guasch and Weiss, 1981; Zajac, 1990). Finally, the insider's experience provides the candidate with an opportunity to obtain additional specific human capital. An insider CEO successor may know how to promote and who has specialized knowledge about the firm and its markets. This inside CEO successor may have a close working relationship with the firm's suppliers and personal friendships with other senior executives, which will greatly facilitate the process of taking charge (Gabarro, 1987). In summary, an insider CEO successor could bring more necessary skills and expertise after succession to a troubled firm in a short time period, thereby increasing operational performance immediately.

This "insider better" theory is supported by previous studies (Kesner and Sebora, 1994). Davidson, Worrell, and Cheng (1990) find that insider succession is associated with increased firm performance. Furtado and Rozeff (1987) and Worrell and Davidson (1987) show that insider succession increases stock prices following the death of the predecessor. Business practitioners believe that companies are better off hiring insider CEOs than outsider CEOs for long-term business success (47 percent versus 33 percent, 20 percent are unsure or don't know), according to 2004 research by Burson-Marsteller, a consulting firm. The study was conducted among business practitioners - CEOs, senior executives, financial analysts/institutional investors, business media, board members and government officials.

Although previous empirical results examining successor type and financial performance have been mixed, this study considers that insider CEO successors have more advantages than outsider CEO successors. The above arguments lead to hypothesis:

Hypothesis: Insider successors in troubled firms will be positively associated with post-CEO-succession operational performance.

3. DATA AND METHODOLOGY

3.1 Sample and Data Collection

The sample includes poorly performing U.S. corporations that experienced CEO successions from 1984 to 1999. A primary data source for CEO succession and senior executive succession was the senior executive list provided in the Forbes annual survey of compensation from 1983 to 2002. In addition, Lexis/Nexis, Proxy Statements, the Wall Street Journal Index, and New York Times Index are used as a second source to identify that these CEO successions are not directly related to a takeover, spin-off or divesture. After this fist step, 1053 CEO successions are obtained between January 1, 1984 and December 31, 1999.

In the second step, the Standard and Poor's COMPUSTAT database was used to find out whether these 1053 observations have low Z-scores (< 1.81) before CEO successions. Z score is the "output from a credit-strength test that gauges the likelihood of bankruptcy" (Harvey, 2006). The Z score is a blend of traditional financial ratios based on a statistical method known as multiple discriminate analysis (MDA). Z score is known to be about "90 % accurate in forecasting business failure one year into the future" (Siegel, Shim, and Hartman, 1992). An interesting feature of the Z-score model is its ability to withstand certain types of accounting irregularities and earning management. If the CEO succession announces event taken place before July 1, the previous year's Z-score of troubled firm is used considering that the departing CEO should be blamed for poor financial performance. If CEO succession is announced in the second half of the fiscal year, the current fiscal year's Z-score of troubled firm is used because it is the same year in which the CEO succession event takes place. Finally, a total 101 CEO successions at 93 sample firms meet the low Z score requirements before CEO succession in 1053 CEO observations between 1984 and 1999.

TABLE 1

INDUSTRY DISTRIBUTION AND FIRM CHARACTERISTICS OF SAMPLE FIRMS

Panel A of Table 1 reports the industry distribution and firm characteristics of sample firms, which consists of 101 observations of 93 sample firms that had CEO successions between January 1, 1984 and December 31, 1999. The distribution of the sample is reported in Panel A by two-digit Standard Industrial Classification (SIC) code. CEO successions in poorly performing firms are heavily concentrated in regulated industries, such as electric and gas Services. Transport, computer hardware and software have higher percentage of CEO successions in poorly performing firms in this study.

Panel B of Table 1 contains summary statistics for all 101 observations of 93 sample firms. Panel B of Table 1 also shows that the sample firms are typically very large publicly traded firms. The distribution of the sample is reported in Panel A by two-digit Standard Industrial Classification (SIC) code. Panel B presents the summary statistics of total assets (in million dollars), employee numbers (in thousand) and sales assets (in million dollars) from year –1 to year +2. The year of CEO succession refers to year 0. The previous year of CEO succession year is year –1. All accounting and financial data are from Compustat.

Panel A: SIC Distribution					
Industry	Two-digit SIC Codes	Sample	%	Cum. Freq.	%
Oil and Gas	13	6	5.9%	6	5.9%
Chemical Products	28	2	2.0%	8	7.9%
Computer Hardware & Software	35, 73	7	6.9%	15	14.9%
Transportation	37, 40, 45	8	7.9%	23	22.8%
Scientific Instruments	38	2	2.0%	25	24.8%
Communication	48	6	5.9%	31	30.7%
Electric and Gas Services	49	57	56.4%	88	87.1%
Entertainment Services	70, 78, 79	4	4.0%	92	91.1%
Health	80	1	1.0%	93	92.1%
All others	10,20,21,25,33,36,58,72	8	7.9%	101	100.0%
Total		101			

Panel A of Table 1 reports the sample characteristics of original sample, which consists of 101 observations of 93 sample firms that had CEO successions between January 1, 1984 and December 31, 1999. The distribution of the sample is reported in Panel A by two-digit Standard Industrial Classification (SIC) code. CEO successions in poorly performing firms are heavily concentrated in regulated industries, such as electric and gas Services. Transport, computer hardware and software have higher percentage of CEO successions in poorly performing firms in this study.

Panel B of Table 1 contains summary statistics for all 101 observations of 93 sample firms that had CEO successions between January 1, 1984 and December 31, 1999. Panel B of Table 1 also shows that the sample firms are typically very large publicly traded firms which average $ 4.186 billion in annual sales, 21,930 employees, and $ 8.948 billion in total assets at one year before CEO successions.

3.2 METHODOLOGY

In the CEO succession literature, return on assets (ROA) is often selected as the financial measurement because it is a well-understood and widely used accounting measure of operating performance (Zajac, 1990). To identify the sources of any changes in the operating performance after CEO succession, operating income return on assets (OROA) is used as the primary financial performance measurement in this study. The CEO succession year is defined as Year 0 in this study. The sample time period is from one year before CEO succession until 2 years after CEO succession (Year –1 to Year +2).

Panel B: Sample Firm Characteristics				
Year	-1	0	1	2
Total Assets (in million dollars)				
Median	4977.00	5226.10	5281.00	6323.48
Mean	8948.22	9196.19	9387.81	9905.51
Standard Deviation	11789.10	11589.59	11557.64	11897.12
Minimum	1.63	8.66	5.08	8.51
Maximum	86705.00	81113.00	81091.00	80292.00
Employees (in thousand)				
Median	7.49	7.78	7.82	8.10
Mean	21.93	20.70	20.10	20.49
Standard Deviation	40.52	35.52	33.27	32.71
Minimum	0.03	0.06	0.06	0.07
Maximum	301.54	256.21	219.84	225.35
Sales (in million dollars)				
Median	2129.40	1902.13	2036.16	2260.36
Mean	4186.26	4310.60	4302.75	4548.80
Standard Deviation	7364.58	7335.32	7268.03	7941.14
Minimum	0.78	6.62	11.62	5.65
Maximum	64523.00	62716.00	64052.00	71940.00

To help ensure that improvements in performance are not industry-driven, the financial ratios are adjusted by using the performance-based control group matching method described in Barber and Lyon (1996). The final remaining data set is composed of 83 sample firms from 1984 to 1999.

The ordinary least squares (OLS) regression models are used in this study. The dependent variables in these regression models are changes in the primary financial performance measurements--OROA. In model 1, model 2 and model 3, the dependent variables are changes in financial performance measurement (unadjusted OROA). The dependent variables in model 4, model 5 and model 6 are changes in OROA adjusted by subtracting median OROA for an industry comparison group matched by four-digit or two-digit SIC code and by previous OROA (industry comparison group-adjusted). Model 1 and model 4 measure OROA changes around CEO succession from Year –1 to Year 0. Model 2 and model 5 measure OROA changes around CEO succession from Year 0 to Year +1. Model 3 and model 6 measure OROA changes around CEO succession from Year +1 to Year +2. All accounting and financial data are from COMPUSTAT Database. CEO information, board size, composition data and characteristics are from proxy statements. Four variable groups are classified in these ordinary least squares (OLS) regression models: firm characteristics, CEO characteristics, board characteristics, and strategic changes.

Change in OROA = f (Size, Pre-CEO-Succession Financial Performance, Regulated Industry Dummy, Outgoing CEO Tenure, CEO Successor Type, CEO Duality Dummy, CEO Age, Join Firm, Directorship, Change in Board Size Dummy, Change in Board Composition Dummy, ΔASSET, ΔEMPLOY)

4. EMPIRICAL RESULTS

4.1 Firm, Board and CEO Characteristics Results

In Table 2, the descriptive statistics for the sample of outgoing and incoming CEO successors between 1984 and 1999 are reported. The table includes information on age, CEO duality, board characteristics, and firm characteristics. Sample firms have a large difference between outgoing CEO age and incoming CEO age. The mean (median) age of outgoing CEOs is 60.58 (62) years. As for the CEO successors, the mean (median) age of incoming CEOs is 52.36 (52) years. This indicates that the age difference is one of main considerations of board to choose a CEO successor. As shown in Table 2, the incoming CEO successors have been in the sample firms for 8.6 years on average before they become CEOs.

Table 2

Summary Statistics for CEO Characteristics

Summary Statistics are given below to describe the outgoing and successor CEO characteristics between 1984 and 1999. The year of CEO succession refers to year 0. Outsider CEOs are the CEOs who just join the firm at the time of appointment. CEO information, board size, composition data and characteristics are from proxy statements of all 83 sample firms.

Insider directors are directors who are the current employees of the firm. Grey board directors are not the current employee directors who are either related to an executive officer of the firm, former executives of the firm, or consultants, attorneys, investment bankers, etc. at other companies that have or may have substantial business relationships with the firms. All other directors are classified as outsider or independent directors.

Directorship measure how many years the successor CEO has been in the firm at the time of appointment. CEO duality equals one where successor CEO has occupied the CEO and Chair of board of directors at the same time in the firm at the time of appointment.

	Median	Mean	Standard Deviation	Minimum	Maximum
Outgoing CEO:					
Age (years)	62	60.58	6.77	38	92
CEO Tenure	7	8.56	6.09	0.5	33
Successor CEO:					
Age (years)	52	52.36	5.34	39	72
CEO Duality	52 (63%)		Insider CEO	61 (73.5%)	
CEO Trainee	12 (14.5%)		Outsider CEO	10 (12%)	
Prior years with firm	6	8.60	9.29	0	37
Directorship	3	4.42	4.86	0	23
Firm:					
Sales ($ millions)	2491.34	4788.58	7900.03	105.42	64523
Assets ($ millions)	6472.44	10366.87	12084.48	42.93	81113
Employees (in thousand)	9.27	25.16	43.59	0.28	301.54
Board Size	11	11.59	3.01	6	19
Outsider directors	66.7%	63.3%	19.1%	0	92.3%

Table 3

Regression Analysis of Changes in Operating Return on Assets (OROA) around CEO Succession from Year -1 to Year +2

This table reports the results of regressions of changes in operating return on assets (OROA) around CEO succession in 83 sample firms from Year –1 to Year +2 between 1984 and 1999. The year of CEO succession refers to year 0. The previous year of CEO succession year is year –1. To control for the industry effects, the financial ratios are adjusted by using the performance-based control group matching method. First, a matched industry comparison group is constructed for each sample firm on the basis of four-digit or two-digit Standard Industrial Classification (SIC) code. Second, 90% to 110% filter of pre-CEO-succession Z score at Year –1 is employed to identify the portfolio firms in industry comparison group. The final remaining sample is composed of the set of 83 sample firms from 1984 to 1999. The dependent variable in Model 1-3 is the change in operating return on sales (unadjusted OROA). The dependent variable in Model 4-6 is the change in OROA adjusted by subtracting median OROS for a industry comparison group matched by four-digit or two-digit SIC code and by previous financial performance (industry comparison group-adjusted OROA). Model 1 and 4 measure the changes around CEO succession from Year –1 to Year 0. Model 2 and 5 measure the changes around CEO succession from Year 0 to Year +1. Model 3 and 6 measure the changes around CEO succession from Year +1 to Year +2. Four variable groups are classified in this table: firm characteristics, CEO characteristics, board of director, and strategic changes. Firm characteristics variables include lagged firm size (SIZE, log of firm's sales), pre-CEO-succession OROA (PRE-OROA), and regulated industry [REG, dummy variable equals to 1 if a firm is in a regulated industry and 0 otherwise, regulated firms are defined as those whose primary business is on the communications (SIC code 48), gas and electric (SIC code 49), or financial (SIC code 60-69) industries]. CEO characteristics group includes outgoing CEO tenure (TENURE), CEO successor type (CEOTYPE, CEO successors are divided into 3 groups. Outsider CEOs are the CEOs who just join the firm at the time of appointment. CEO trainees are the CEOs who work at the firm in less than 2 years at the time of appointment. Insider CEOs are the CEOs who work at the firm in longer than 2 years at the time of appointment), CEO duality (DUALITY, CEO duality dummy equals one where successor CEO has occupied the CEO and Chair of board of directors at the same time in the firm at the time of appointment and 0 otherwise), CEO successor age at the time of appointment (AGE), years when CEO successor has been in the firm (JOIN), years when CEO successor has been the director of board in the firm at the time of appointment (DIRECTOR). Board of director groups includes the changes in board size (ΔBSIZE, the change in board size dummy equals one where there is a number difference between the directors in current time period and the previous year and 0 otherwise) and change in the board composition (ΔBCOMP, the change in board composition dummy equals one where there is a percentage difference between the outsider directors over all directors in current time period and the previous year and 0 otherwise). Insider directors are directors who are the current employees of the firm. Grey board directors are not the current employee directors who are either related to an executive officer of the firm, former executives of the firm, or consultants, attorneys, investment bankers, etc. All other directors are classified as outsider or independent directors. The changes in assets (ΔASSET) and employees (ΔEMPLOY) are used as 2 proxies to show the strategic changes in sample firms. All accounting and financial data are from Compustat database. CEO information, board size, board composition data and characteristics are from proxy statements of all sample firms. Values are unstandardized regressions coefficient and t-test results. The values of t-tests are given in parentheses.

	Const-ant	Firm Characteristics			CEO Characteristics						Board of Director		Strategic Change		Adj. R^2
		SIZE	PRE-OROS	REG	Tenure	CEO Type	Duality	Age	Join	Director	ΔBSIZE	ΔBCOMP	ΔAsset	ΔEmploy	
Model 1	0.018	-0.0168	-0.22	0.05	0.0014	0.0014	-0.004	0.0009	0.0012	-0.002	-0.03	0.04	0.000008	0.00015	0.287
	(0.27)	(-1.45)	(-3.8)***	(3.9)***	(1.52)	(0.134)	(-0.33)	(0.807)	(1.75)*	(-1.946)*	(-2.2)**	(2.15)**	(0.158)	(0.156)	
Model 2	0.14	-0.0233	0.044	-0.038	-0.002	-0.0055	-0.0004	-0.0003	0.0004	0.0022	0.0163	-0.01	0.000005	-0.002	-0.002
	(1.4)	(-1.53)	(0.518)	(-1.97)*	(-1.69)*	(-0.38)	(-0.024)	(-0.2)	(0.446)	(1.275)	(0.729)	(-0.42)	(0.648)	(-1.66)	
Model 3	-0.24	0.019	-0.079	0.033	0.003	0.0043	-0.015	0.0027	-0.0001	-0.0004	-0.02	0.0028	0.000003	0.0006	-0.076
	(-1.85)	(0.94)	(-0.665)	(1.28)	(1.623)	(0.22)	(-0.63)	(1.257)	(-0.08)	(-0.163)	(-0.614)	(0.09)	(-0.088)	(0.146)	
Model 4	-0.065	0.0005	-0.203	0.0008	0.007	-0.005	-0.03	0.0009	-0.0002	-0.0009	-0.0029	-0.005	0.00002	-0.01	0.319
	(-0.42)	(0.018)	(-2.31)**	(0.024)	(3.1)***	(-0.21)	(-1.038)	(0.353)	(-0.15)	(-0.3)	(-0.09)	(-0.11)	(1.66)	(-4.7)***	
Model 5	0.15	-0.013	0.326	0.0063	0.0039	0.038	-0.013	-0.005	-0.001	0.004	-0.0085	0.024	-0.00001	0.0059	0.059
	(0.62)	(-0.32)	(2.19)**	(0.127)	(1.05)	(1.052)	(-0.279)	(-1.18)	(-0.42)	(0.854)	(-0.135)	(0.38)	(-0.5)	(1.831)*	
Model 6	-0.056	-0.003	-0.158	0.034	0.0012	-0.027	0.0169	0.002	-0.0006	-0.002	-0.002	0.029	-0.00003	0.008	-0.074
	(-0.3)	(-0.09)	(-1.44)	(0.879)	(0.403)	(-0.95)	(0.46)	(0.628)	(-0.03)	(-0.579)	(-0.04)	(0.625)	(-0.471)	(1.398)	

*** Indicates statistical significance at the 0.01 level.
** Indicates statistical significance at the 0.05 level.
* Indicates statistical significance at the 0.10 level.

There are 2 measures associated with the working relationship between CEO successor and board in Table 2. The directorship is used as the first one to measure how many years a CEO successor has been as a director of board in the firm at the time of CEO appointment. The mean (median) directorship of incoming CEOs is 4.42 (3.0) years. The second measure is CEO duality, which means that CEO successors have occupied the CEO and Chair of board of directors at the same time in the firm at the time of appointment. Table 2 shows that 63% CEO successors in the sample firms have CEO duality following CEO successions, which implies potential more support from boards. As shown in Table 2, 61 out of 83 sample firms have insider CEO successors. Only 12 out of 83 sample firms have CEO trainees as CEO successors. 10 out of 83 sample firms choose outsider to be CEOs. The data in this table demonstrate the importance of the age difference between departing and incoming CEOs. These results strongly points to the interpretation that boards are likely to appoint CEOs at relatively younger ages to turn around poorly performing firms.

4.2 Regression Results

Table 3 presents regression coefficient estimates for models in which the dependent variables are the changes in unadjusted and industry-adjusted OROA on a yearly basis. The dependent variable in model 1 of Table 3 represents the differences between unadjusted OROA in Year 0 and unadjusted OROA in Year -1. The regression coefficient for pre-CEO-succession financial performance (PREOROA) is negative and significant at 1 percent level (t-statistic = -5.99). Relatively financially distressed firms appear to be somewhat more likely to turn around in Year 0.

The dependent variable in model 2 of Table 3 represents the differences between unadjusted OROA in Year +1 and unadjusted OROA in Year 0. The regression coefficient for pre-CEO-succession financial performance (PREOROA) is negative and significant at 1 percent level (t-statistic = -3.33). Relatively financially distressed firms appear to be somewhat more likely to turn around in Year +1. The second significant variable is the tenure of the outgoing CEOs (TENURE). The regression coefficient for tenure of the outgoing CEOs (TENURE) is negative and significant at 5 percent level (t-statistic = -2.6). Thus, "the exit of long-tenured CEO is likely to have a negative impact on post-succession operational performance" (Shen and Cannella, 2002).

The dependent variable in model 3 of Table 3 represents the differences between unadjusted OROA in Year +2 and unadjusted OROA in Year +1. The regression coefficient for the change in assets (ΔASSET)) is negative and marginally significant at 10 percent level (t-statistic = -1.89). Change in assets appears to have somewhat negative impact on post-succession operational performance in Year +2.

The dependent variable in model 4 of Table 3 represents the differences between industry-adjusted OROA in Year 0 and industry-adjusted OROA in Year -1. As shown in model 4 of Table 3, the regression coefficient for the change in employees (ΔEMPLOY), one of proxies of strategic changes, is negative

and significant at 1 percent level (t-statistic = -4.9). The result indicates that there is a negative relation between the change in employees and post-CEO-succession industry-adjusted OROA in troubled firms in Year 0. In other words, the layoffs of employees have a positive impact on the bottom line in Year 0.

The dependent variable in model 5 of Table 3 represents the differences between industry-adjusted OROA in Year +1 and industry-adjusted OROA in Year 0. The first significant variable is CEO successor type (CEOTYPE). This study codes this variable a 3 if a CEO successor is an insider, 2 if a CEO successor is a CEO trainee, 1 if a CEO successor is an outsider. Model 5 of Table 3 shows that the regression coefficient for CEO successor type (CEOTYPE) is positive and significant at 5 percent level (t-statistic = 2.21). The result indicates that in Year +1, insider CEO successors may improve OROA because of firm-specific knowledge, cooperation from the board of directors, and the support from other senior executives. This provides some evidence to show that in Year +1, insider CEO successors can do a better job than outsider CEO successors after CEO succession. As mentioned above, Hypothesis anticipates that there is a positive relation between insider CEO successors and post-CEO-succession operational performance in troubled firms. Thus, Hypothesis receives some support.

Overall, a positive relation between insider CEO successors and post-succession industry-adjusted OROA is identified in one year following CEO succession. Thus, the results of this study provide some evidence to the Hypothesis which predicted that there is a positive relation between insider CEO successors and post-CEO-succession operational performance in troubled firms.

5. CONCLUSION

This study focuses on the relation between post-CEO-succession financial performance and successor type in poorly performing firms. The results suggest that insider CEO successors are associated with relatively positive financial performance improvement in poorly performing firms. These results, overall, support the theory that "insider CEO successions are less disruptive than outsider successions" (Reinganum, 1985). As mentioned earlier, insider CEO successors may make more strategic changes immediately following CEO successions based on firm-specific knowledge, better understanding of industry and business environment, support from the board and other senior executives, (Gabarro, 1987; Kotter, 1982; Kesner and Sebora, 1994; Zajac, 1990). Thus, insider CEO successors have a better chance to improve financial performance in poorly performing firms in one year following CEO succession, compared with outsider CEO successors. In summary, an insider CEO successor could bring more necessary management skills and expertise to a troubled firm in a short time period following succession, thereby increasing operational performance immediately(e.g., Kesner and Sebora, 1994; Davidson, Worrell and Cheng, 1990).

REFERENCES

Barber, Brad M. and John D. Lyon, 1996, Detecting abnormal operating performance: The empirical power and specification of test statistics, Journal of Financial Economics 41, 359- 399.

Borokhovich, K., Parrino, R., and Trapani, T., 1996. Outside Directors and CEO Selection. Journal of Financial and Quantitative Analysis 31, 337-355.

Cannella, A. A., Jr., & Lubatkin, M. 1993. Succession as a sociopolitical process. Academy of Management Journal, 36: 763-793.

Davidson III, Wallace N., Carol Nemec, Dan L. Worrell and Jun Lin, 2002. Industrial Origin of CEOs in Outside Succession: Board Preference and Stockholder Reaction. Journal of Management and Governance 6: 295–321.

Davidson III, Wallace N.; Worrell, Dan L.; Cheng, Louis, 1990. Key Executive Succession and Stockholder Wealth: The Influence of Successor's Origin, Position, and Age. Journal of Management 16, 647-665.

Fondas, N., Wiersema, M., 1997. Changing of the guard: The influence of CEO socialization on strategic change. Journal of Management Studies 34, 561-585.

Furtado, Eugene P.H. and Karan, Vijay, 1994. Internal/External Top Management Succession and Firm Performance. Journal of Financial and Strategic Decisions 7, 1-14.

Furtado, Eugene P.H. and Rozeff, M. S., 1987. The wealth effects of company initiated management changes. Journal of Financial Economics 18, 147-160.

Gabarro, J. J. 1987. The dynamics of taking charge. Boston: Harvard Business School Press.

Grusky, O., 1963. Managerial succession and organizational effectiveness, American Journal of Sociology 69, 21-31.

Guasch, J. L., & Weiss, A., 1981. Self-selection in the labor market. American Economic Review 71, 275-284.

Harvey, C., 2006. Campbell R. Harvey's Hypertextual Finance Glossary. http://www.duke.edu/~charvey/Classes/wpg/bfglosz.htm

Hotchkiss, Edith Shwalb, 1995. Postbankruptcy performance and management turnover, Journal of Finance 50, 3-21.

Huson, M., and Malatesta P. and Parrino, R., 2004. Managerial Succession and Firm Performance. Forthcoming, Journal of Financial Economics.

Kesner, I. F., and Sebora, T. C. 1994. Executive succession: Past, present & future. Journal of Management, 20: 327-372.

Kotter, J. P. 1982. The general managers. New York: Free Press.

Lucier, Chuck, Eric Spiegel, and Rob Schuyt, 2002. Why CEOs Fall: The Causes and Consequences of Turnover at the Top. Strategy+business. http://www.strategy-business.com

Reinganum, M. R., 1985. The effect of executive succession on stockholder wealth, Administrative Science Quarterly, 30, 46-60.

Shen, Wei; Cannella Jr., Albert A. 2002. Revisiting the performance consequences of CEO succession: The impacts of successor type, post-succession senior executive turnover, and departing CEO turnover. Academy of Management Journal 45, 717-733.

Siegel, J., Shim, J., and Hartman, S., 1992. The McGraw-Hill Pocket Guide to Business Finance. 1992. McGraw-Hill, Inc.

Wiersema, M. F., 2002. Holes at the Top: Why CEO Firings Backfire. Harvard Business Review 80, 70-78.

Worrell, Dan L.; Davidson III, Wallace N., 1987. The Effect of CEO Succession on Stockholder Wealth in Large Firms Following the Death of the Predecessor. Journal of Management 13, 509-516.

Zajac, E. J., 1990. CEO selection, succession, compensation and firm performance: A theoretical integration and empirical analysis. Strategic Management Journal 11, 217-230.

MEDIATION: A WINDOW AND A MATRIX

Charles Ramser, Midwestern State University
Kristopher Tilker, Midwestern State University

I. INTRODUCTION

The adversarial system, long considered by many to be the Academy Award winner of the world's legal systems, is here to stay, but it is losing some of its starring role to mediation. This new upstart system is taking center stage more often in the business world, and as the scope of its role is being developed, so are the tools with which to explain the entire mediation process. The dynamics of mediation differ from those of litigation, and often there is a misunderstanding about how this newer process works. Much can be clarified by knowing about the conceptual aspects of mediation. Those who choose mediation need to understand its cooperative nature as compared to litigation's adversarial one. In this paper we will examine how using communication theory is one way this can be done. We also will look at the dynamics of the mediation process and touch on its role in the business world.

II. MEDIATION'S ASCENDENCY

Mediation as a conflict resolution technique is making inroads into the traditional American jurisprudence system. One reason is that increasing federal debt and difficulties with state financing have left few dollars available for judiciary expansion, so mediation has room to edge in. Also, mediation is economically efficient from the consumer's perspective. The exorbitant expenses associated with pretrial, trial, and post-trial procedures force many citizens to seek out more cost-efficient methods of resolving conflict. A study completed in 1996 by Northwestern University indicated mediation's median cost was $2,750.[1]

Another main reason mediation is grabbing some of the spotlight from the adversarial system is the record number of successes posted by those who have engaged in the process. The same study by Northwestern University indicated an overall settlement rate of 78% in mediation.[2] More recent figures found in the annual reports of the Supreme Court of Oklahoma show that of the 2,000-plus cases received in that state for mediation in 2002[3] and 2003,[4] 64% were settled. Increased demand for mediation can be seen in the annual reports of the Texas Judicial System. With twelve of fourteen centers submitting data in 2002, the total number of cases received for mediation in the state was 14,215.[5] By the end of the reporting period the following year, with eleven of fourteen centers reporting, the total number was 20,356, a 43% increase.[6] Mediation truly is being forced into a starring role by both economics and success.

III. OPENING THE WINDOW

How can parties to a mediation best use the process of negotiation through a disinterested third party to continue to fuel this rising star? To answer that, individuals involved in mediation must understand one fundamental dynamic of the process: that mediation works because it builds, and is built upon, trust. Mediation's effectiveness depends in large measure on the mediator's impartiality and capacity to win the trust of both parties involved. Mediation is collaborative communication that both cultivates and then depends upon a high degree of mutual trust among participants. That is, participants must come to believe that each has integrity, character, and capability. Without that, the option of persuasion upon which mediation is founded cannot operate. However, trust is fragile. As Sonnenberg has noted, "It takes a long time to build, can be easily destroyed, and is hard to regain."[7]

IV. MEDIATION DYNAMICS

In mediation dynamics, perceptions are as important as reality. If people perceive a situation as being closed, then that becomes their "truth," and the motivation to communicate with the opposing party will not exist. One of the common complaints of clients entering mediation is that they cannot communicate, which indicates that they perceive a closed situation. Frustration then builds from feelings of being misunderstood.[8] The ultimate result is a barrier to any communicative activity and even a loss of desire to communicate with others who share a common stake in a resolution.

V. SURMOUNTING THE BLOCK

How, then, to prevent or open this blockage? In this paper, two approaches that have been known to the business world for many years -- the Johari Window and the Communication Intimacy Matrix -- are revisited and combined in a fresh way to be used as an effective tool to open communication in the mediation process.

VI. THE JOHARI WINDOW

In 1955, Joseph Luft and Harry Ingham proposed the Johari Window as a graphic model of interpersonal awareness.[9] Since then, scholars, executives, and consultants have used the model as a tool for developing high levels of trust and openness in different situations. Basically the model describes mechanisms for developing effective working relationships through self-disclosure and feedback. The model is depicted as a window

with four panes that represent four areas of effectiveness in the relationship between two people or entities. That relationship can be looked at as two-dimensional: information known and unknown to one person, and information known and unknown to the other person. What each person knows about the other is "open," and what is not known is "hidden." Industries, universities, and counselors have shown that communications are richer, more authentic, and fuller when the open, or **public**, arena ("the window of exchange") is larger. In this public arena are mutual understanding and knowledge of information relevant to those sharing it? This shared knowledge can reduce the potential for conflict. The Johari Window can be represented graphically this way:

These two processes should be in balance. If they are all disclosure and little feedback, the process is one-way, involving conceited domination. This person can be termed Blabbermouth because he talks a lot but does not listen well. In mediation settings, people tend to get annoyed with such a person and will eventually either actively or passively learn to shut him up.[14] If the balance is too far in the opposite direction (all feedback and no disclosure), there is an exploitive mode of communication, with a large facade. This person can be termed the Pumper because he keeps large amounts of information inside. In mediation, this person will make parties tend to feel defensive and resentful.[15] Finally, when there is little disclosure and also little feedback sought, a large unknown area exists. A person in

	Party A	
	Known	Unknown
Party B Known	**PUBLIC** (Arena)	**BLIND** (Blindspot)
Unknown	**PRIVATE** (Façade)	**UNKNOWN**
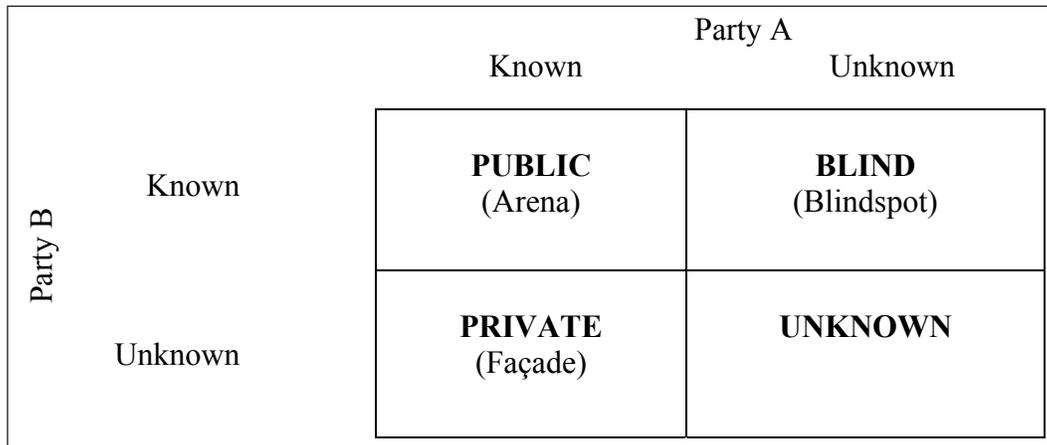
The area known as the public arena is made up of perceptions understood by the mediation parties. It is a small pane when communications are closed, blocked, or not forthcoming. This is the window that needs to be open for effective mediation. The area known as the **blindspot**, or hidden arena, is comprised of attitudes and behavior not known to Party A but known to Party B. To illustrate, Party B may perceive Party A as arrogant, and Party A may not seek feedback about B's perceptions. The **private** arena, or façade, is the attitude and behavior that is known to Party A but not to Party B. Party A may really feel he has a false premise underlying part of his position. He may not disclose this, and B may not pick it up from verbal/nonverbal messages of A.[10] These blockages directly hamper open communication in mediation.

Unfortunately, the **unknown** arena would also be large in early stages of mediation. There would be many possible observations, reflections, and concepts never arrived at because of lack of the will to communicate.[11]

The two processes shaping the configuration of the four arenas are *feedback* and *disclosure*. Feedback is the extent to which people are willing to share with others how they are perceived. It is the willingness to be open with an adversary and is also one's ability to understand verbal and nonverbal communication from others. Feedback should be sought.[12] Disclosure is the extent to which people are willing to share with others appropriate information about themselves.[13] In mediation, it is important for people to disclose their feelings and perceptions.

this mode is labeled the Hermit. This person is difficult to read because he is unpredictable. In mediation, this would mean the parties tend to feel insecure and confused about expectations.[16] Without effective communication, the process can break down, leaving the parties feeling offended, disliked, and distrustful of each other. Smoothing out the interpersonal communication would smooth the mediation process itself and make it more effective for all.

VII. THE SYNTHESIS

What is proposed in this paper to keep communication at an optimum level is an ideal state in which a large public arena exists (plenty of feedback and disclosure, or an open window). This is the place for the Open-Receptive Person, a place in which agreement occurs.[17] Generally the blindspot, private, and unknown arenas would be smaller. It would not be appropriate or possible for blindspot and private arenas to be non-existent. In mediation, people almost never would share everything with the adversary, and because all parties are by nature limited in their knowledge, the unknown arena would always exist.

To attain such a balanced arena requires a mechanism for obtaining feedback and a model for offering disclosure that would operate simultaneously. This paper submits that this process can be facilitated by study of the Johari Window linked with thorough understanding of Whetten and Cameron's Intimacy Matrix.

VIII. THE INTIMACY MATRIX

Interpersonal, informal communication between superiors and subordinates or small groups of subordinates can be built around the Whetten and Cameron (1987) model, as depicted by this matrix:

TYPE	FOCUS			
		EXTERNAL	INTERNAL	PERSONAL	RELATIONSHIP
	CLICHES	*CLOSED*			
	FACTS				
	OPINIONS				
	FEELINGS				*OPEN*

One dimension refers to communication focus (subject). It can include external issues, internal or common group experiences, personal disclosure, and even the specific relationship between the two or more mediation parties themselves. The other dimension of the matrix is the type of communication. It ranges from clichés, which require little communication investment, to facts, which require more investment, to an even larger investment of self, one's opinion. It culminates finally, in feelings, which are the strongest involvement of self because they are emotional and require trust.[18]

This matrix works with the Johari Window model to facilitate a balanced public arena in that rather than just calling for simultaneous disclosure and feedback -- a big jump for those who have not been communicating effectively -- it suggests a more incremental, gradual process of moving from external to group to personal to relationship focuses in mediation communication. At the same time, it involves branching from clichés to facts to opinions to feelings as intimacy is increased. The lower right portion of the matrix is the territory for mediation success. The upper left portion is unlikely territory for success. Progression toward the lower right may be gained by parties before the actual mediation session commences or during mediation as issues are tackled.

IX. MEDIATION AND BUSINESS

Mediation is one of several tools known collectively as alternative dispute resolution (ADR) methods. The question of fairness in dealing with employees and their rights in an increasing litigious society is looming large. Mediation is being incorporated routinely into entire industries. The construction industry, for example, has been a leader in utilizing mediation to resolve disputes between contractors and subcontractors.[19] The securities industry employs mediation to resolve employee-customer controversies.[20] While E-commerce uses mediation to settle software licensing disagreements,[21] insurance companies employ ADR, often mediation, to resolve reinsurance conflicts among carriers.[22] Cost control is also a major issue. ADR methods such as mediation have the potential to increase fairness in dismissals, promotions, and other management actions, while also reducing cost.[23] It is also noted that while many employees feel their rights are not protected, many employers resent the cost of litigation and regulation and what they perceive as the combative and anti-employer stance of the Equal Employment Opportunity Commission (EEOC).[24] Mediation serves as an alternative in these situations. When employees bring charges before the EEOC, they find themselves behind almost 100,000 others who have already filed; sometimes their wait can be eighteen months long.[25] Further, mediation is developing into a key method in the formation and maintenance of strategic alliances.[26] While mediation has become a dominant force in settling rear-end suburban utility vehicle collision claims in the United States, globally it has become key in settling international business disputes involving product licensing and cultural variations in executive pay.[27] The business world seems to be dictating the likes of mediation, and mediation can be enhanced by the tools discussed herein.

X. SUMMARY

In summary, opening the Intimacy Matrix is suggested as a tool for enlarging the public pane of the Johari Window and for understanding successful mediation. A key advantage is that the Intimacy Matrix suggests a technique for enabling balanced, comfortable, incremental growth of the public pane of the Johari Window during stages of mediation, hence enabling its success.

These communication tools are presented as theoretical prescriptions to open up communications in the mediation process. The Johari Window metaphor is limited. In fact, Shapiro, Heil, and Hager report that while the Johari Window test instrument does not actually measure personal change,[28] through the model, we can see movement from one pane to another as trust ebbs and flows and as parties interact. With the help of the Intimacy Matrix, we can see how the open pane can grow.

Mediation is a more dynamic process than can be wholly reflected through two-dimensional grids such as the Johari Window and the Intimacy Matrix. However, the window and the matrix can help mediation participants understand the process of building trust and openness between parties to help facilitate the process. Mediation is a collaborative tool for resolving conflicts in the business world. The use of tools such as the window and the matrix will help parties who are considering mediation instead of litigation understand the difference and play a role in making mediation an stronger understudy of the adversarial system.

FOOTNOTES

1 Jeanne M. Brett et al., *The Effectiveness of Mediation: An Independent Analysis of Cases Handled by Four Major Service Providers*, NEGOTIATIONS J., July 1996, at 259, 263.

2 *Id*. at 261.

3 Sue D. Tate, Sup. Ct. Of Okla., Alternative Dispute Resolution System 2002 Annual Report 5 (2003).

4 Sue D. Tate, Sup. Ct. Of Okla., Alternative Dispute Resolution System 2003 Annual Report 5 (2004).

5 Office of Court Administration, *Texas Judicial System Annual Report 2002*, (Dec. 2002), http://www.courts.state.tx.us/oca/PublicInfo/annual_reports.asp (last visited 20 March 2005).

6 Office of Court Administration, *Texas Judicial System Annual Report 2003*, (Dec. 2003), http://www.courts.state.tx.us/oca/PublicInfo/annual_reports.asp (last visited 20 March 2005).

7 F. K. Sonnenberg, *Trust Me …Trust Me Not*, Industry Wk., Aug. 16, 1993, At 22, 28.

8 N. J. Foster, *Barriers to Everyday Communications*, (Aug. 2000), http://mediate.com/articles/foster.cfm (last visited 20 March 2005). Author retains copies.

9 Paul Hersey & Kenneth Blanchard, Management Of Organizational Behavior 236 (3rd Ed. 1977).

10 *Id*. at 237

11 *Id*.

12 *Id*. at 238.

13 *Id*. at 239

14 University of San Francisco Faculty, *Johari Window*, (2005) http://www.cps.usfca.edu/324sh/johari.htm (last visited 18 March 2005). Author retains copies.

15 *Id*.

16 *Id*.

17 *Id*.

18 D. A. Whetton & K. S. Cameron, The Performance Management Sourcebook 109 (Craig Schneir, Et Al. Eds., 1987).

19 Steven L. Schwartz, *Mediation: A Magnet for Positive Change*, 58 DISP. RESOL. J. 49, 51 (2003).

20 *Id*.

21 *Id*.

22 *Id*.

23 David L. Levine, *Just Cause Employment Policies in the Presence of Worker Adverse Selections*, 9 J. LABOR ECON. 294, 299-301 (1991).

24 Edward E. Potter & Judith A. Youngman, Keeping America Competitive: Employment Policy For The Twenty-first Century 141 (1995).

25 Shannon P. Duffy, *Casellas: Eeoc Suffering Backlash*, The Legal Intelligencer, June 20, 1995, At 1.

26 Schwartz, *supra* note 19.

27 Daniel Q. Posin, *Mediating International Business Disputes*, 9 Fordham J. Of Corp. And Fin. L. 449, 449 (2004).

28 David Shapiro Et Al., *Validation Of The Johari Window Test As A Measure Of Self-disclosure*, 120 The J. Of Soc. Psychol. 289, 290 (1983).

OKUN'S LAW REVISITED: EVIDENCE FROM EAST ASIA

Nozar Hashemzadeh and Loretta S. Wilson, Radford University

INTRODUCTION

Since the Great Depression, primary objectives in industrialized nations have included promotion of high growth in real output, low unemployment and price stability. However, attainment of these objectives has proven to be problematic. For example, the United States struggled with double-digit inflation and high unemployment rates in the late 1970s and through most of the 1980s. This episode was widely blamed on the prolonged war in Vietnam, the oil shock of 1973 and a failure of the Federal Reserve to assume a more aggressive posture in combating inflation.

The Japanese economy has been in a recessionary phase since 1991. Among the many reasons cited for slow growth in Japan are an aging labor force, natural disasters, bankruptcies of major financial institutions, falling land prices and misalignment of fiscal and monetary policies. The economic outlook has not been much brighter in Western Europe. Like Japan, Europe has had to contend with slow growth rates and an aging population. Moreover, European Union (EU) member countries have been unable to agree on a cohesive strategy to develop a comprehensive and workable action plan that would spur economic growth and lower unemployment in the region. Since the mid 1990s, real GDP growth rate for the EU has been anemic and unemployment has been relatively high.   When compared to the United States, the EU region has experienced both lower GDP growth rates and higher unemployment rates during recent decades. Although the unemployment rate in the EU as a whole has not fallen below 8% since 1990, some recent data suggests a narrowing gap in jobless rates between the EU and the United States.[i]

UNDERLYING ASSUMPTIONS OF OKUN'S LAW

An hypothesis devised to encapsulate the relationship between employment and output in an advanced industrial economy such as the United States was formulated by the late Arthur Okun (1962). Okun's law, as his hypothesis came to be known over time, was widely integrated into much of macroeconomic theory. Nobel Laureate James Tobin (1988) and a colleague of Okun at Yale described Okun's law as "one of the most reliable empirical regularities of macroeconomics."

From a theoretical standpoint, Okun's law is based on the notion that there is a robust correlation between changes in real gross national product (GNP) and the unemployment rate. Subsequent studies of Okun's original work have focused mainly on providing empirical corroboration of a stable relationship between the steady state unemployment rate and deviations from long run GNP growth rates (e.g., Hall and Taylor 1988; Clark 1983; Gordon 1984; Prachowny 1993; Adams and Coe 1989; Blinder 1997; Moosa 1997; D.G. Freeman 2000). Some authors, including M. J. Silvapulle (2004), have argued that the output-unemployment relationship as represented in Okun's model is asymmetric. Using data from the United States for the post-war period, Silvapulle's results show that the short-run effects of positive cyclical output on cyclical unemployment are quantitatively different from those of negative ones, and the data are consistent with the proposition that cyclical unemployment is more sensitive to negative than to positive cyclical output.

The present study participates in this literature by empirically testing Okun's law using data on unemployment rates and real output growth for selected countries in the region of East Asia.

DATA SAMPLES

The data used in the analysis is extracted from the International Financial Statistics database published by the International Monetary Fund (IMF). The countries selected for investigation include the Philippines, Malaysia, Japan, China, Singapore, India, Pakistan, Thailand, Indonesia and Hong Kong. The sample extends from 1985 through 2003.

Figures 1 and 2 below illustrate observed relationships between the unemployment rate (vertical axis) and the real GDP growth rate (horizontal axis) for a sub-group of the selected countries. Note that with a few exceptions (Malaysia, Japan, and to some degree, Hong Kong), the raw date does not support Okun's law. For instance, in Thailand, both GDP growth and the unemployment rate seem to be moving together for most of the period. These aberrations suggest that the relationship between

real GDP growth and the unemployment rate should not be treated as universal and steady over time. As Altig, Fitzgerald and Rupert (1997, p. 4) have correctly pointed out, "GDP growth depends in a fundamental way on the level and rate of change of labor resource utilization. This is the case in both the short and the long run, and such changes are only imperfectly captured by changes in the unemployment rate."
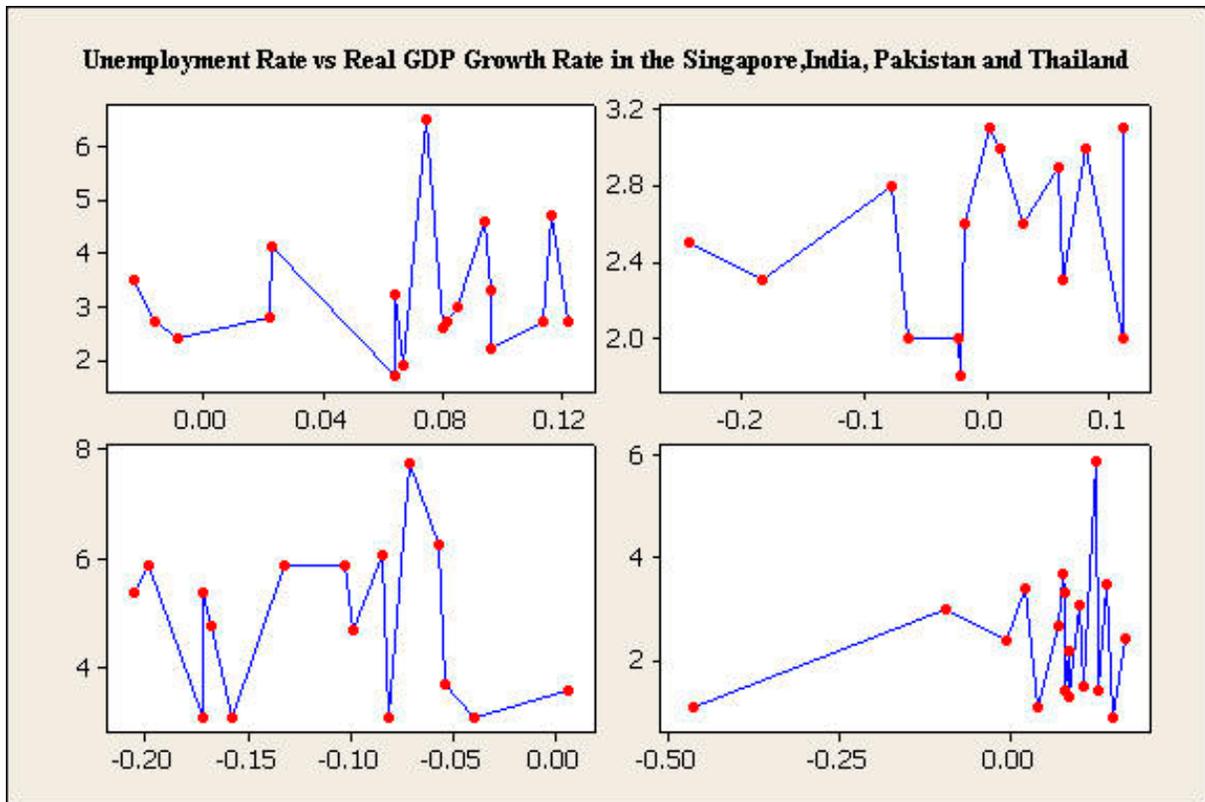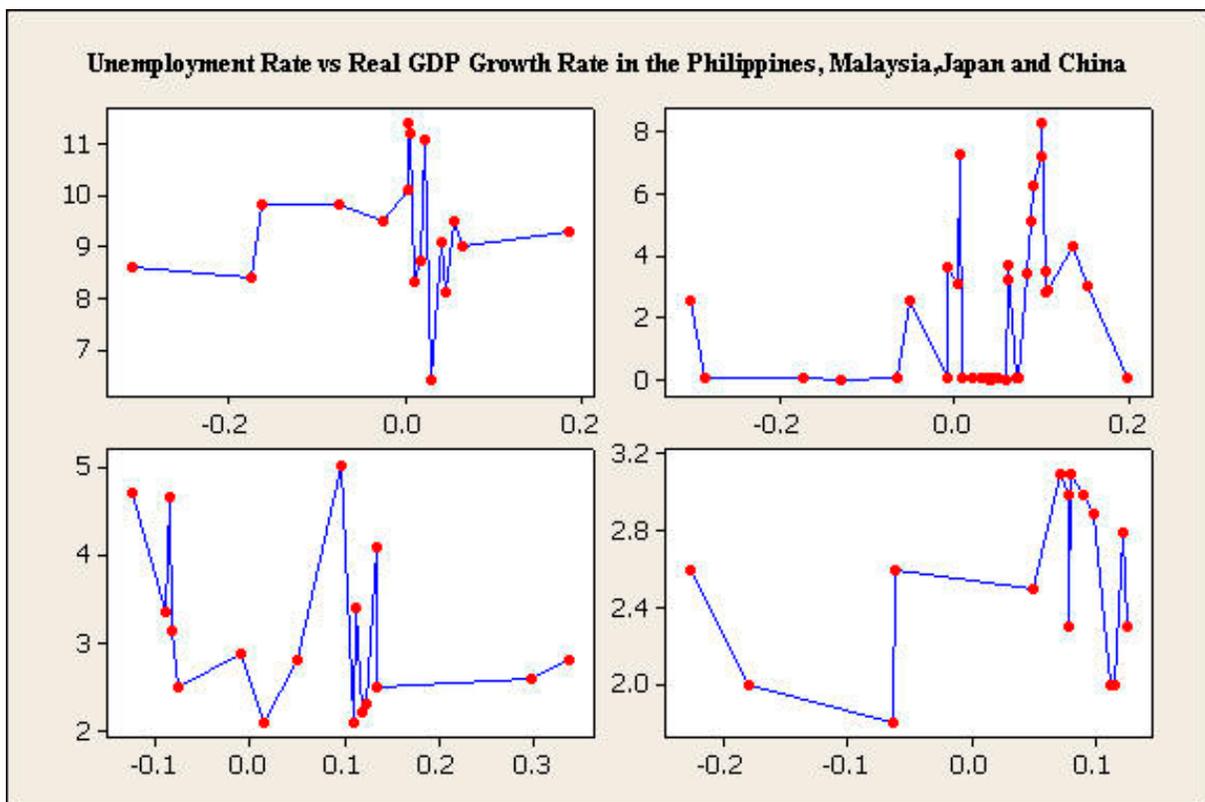
Figure 1

Unemployment Rate vs Real GDP Growth Rate in the Singapore, India, Pakistan and Thailand

Figure 2

Unemployment Rate vs Real GDP Growth Rate in the Philippines, Malaysia, Japan and China

METHODOLOGY

To avoid the problem of estimating a "spurious" correlation between real GDP growth rate and the unemployment rate, the trend component from the data must be removed. This is an important first step because most economic time series are non-stationary and will exhibit a "causal link" when none may exist. [ii]

There are several methods for removing the trend for real GDP and unemployment series. A simple procedure would be to regress the level or the logarithm of these variables on time and use the residuals from the regression for further analysis.. If the regressions are run in log forms, then the estimated slope indicates the trend growth rate of the dependent variable. Another method for detrending the data is to compute the residual from the linear regression of the dependent variable on time and add the estimated equilibrium value such as the mean of the series, as in the following equation.

$$X'(t) = X(t) - (a + b*t) + \overline{X} \quad (1)$$

Where X'(t) is the detrended data point at time t, X (t) is the original data point, $\overline{X}$ is the mean of the series (or another value supplied by the user), "a" is the regression intercept,

Table 1
Descriptive Statistics for Real GDP Growth and Unemployment Rates
for Selected Countries in East Asia

Country	Variable	Mean	Std. Deviation	Coefficient of Variation	Median
China	Real GDP Growth	0.0328	0.1122	342.3700	0.0788
	Unemployment Rate	2.5330	0.4470	17.6300	2.6000
Hong-Kong	Real GDP Growth	0.04643	0.03958	85.25	0.04177
	Unemployment Rate	3.0880	1.8770	60.7600	2.2000
India	Real GDP Growth	-0.0111	0.1012	-909.5400	0.0028
	Unemployment Rate	2.5330	0.4470	17.6300	2.6000
Indonesia	Real GDP Growth	-0.0776	0.2486	-320.38	0.0279
	Unemployment Rate	4.112	1.898	46.17	2.8
Japan	Real GDP Growth	0.0617	0.1327	215.2700	0.0957
	Unemployment Rate	3.1310	0.9570	30.5600	2.8000
Malaysia	Real GDP Growth	0.0492	0.1053	214.2400	0.0874
	Unemployment Rate	4.2750	1.8610	43.5200	3.4800
Pakistan	Real GDP Growth	-0.1118	0.0626	-55.9900	-0.1000
	Unemployment Rate	4.8690	1.4480	29.7300	5.1000
Singapore	Real GDP Growth	0.0641	0.0458	71.420	0.0774
	Unemployment Rate	3.1830	1.1670	36.650	2.7500
Sri Lanka	Real GDP Growth	-0.0196	0.0460	-234.550	-0.0157
	Unemployment Rate	11.4320	2.8300	24.750	11.3000
Thailand	Real GDP Growth	0.0507	0.1429	281.70	0.0839
	Unemployment Rate	2.4640	1.2730	51.6600	2.4200
The Philippines	Real GDP Growth	-0.156	0.1119	-719.28	0.0099
	Unemployment Rate	9.312	1.253	13.46	9.300

and "b" is the regression slope. The next step is to estimate the correlation of the residuals obtained from the above regressions and determine statistical significance.

Table 1 provides an overview of the macroeconomic experience of sample countries in recent years. It should be noted that the averages presented in Table I and Figures 3 and 4 are most likely plagued by error due to non-standardized collection methods and reporting lags. Nevertheless, the summary data provides an overall perspective on the magnitude of economic growth and the unemployment rate in each of the countries.

The averages shown in Table 1 and Figures 3 and 4, indicate that Sri Lanka had the highest average unemployment rate while Thailand reported the lowest for the period under review. In terms of real GDP growth, most countries in the sample had meager growth with Indonesia and the Philippines showing a negative average growth rate.

The correlations contained in Table 2 provide evidence strongly suggesting that Okun's law is not empirically validated on a broad scale (and therefore, perhaps, it ought not to be classified as a general economic law). We note that our findings may be, in part, be a consequence of the fact that the vast majority of countries in the world cannot and do not have the necessary tools and knowledge to implement appropriate economic policies to ensure high GDP growth with low unemployment. Moreover, the pace of economic development for most of the economies in the sample has been uneven and insufficient to enhance significant employment opportunities in the affected labor force.
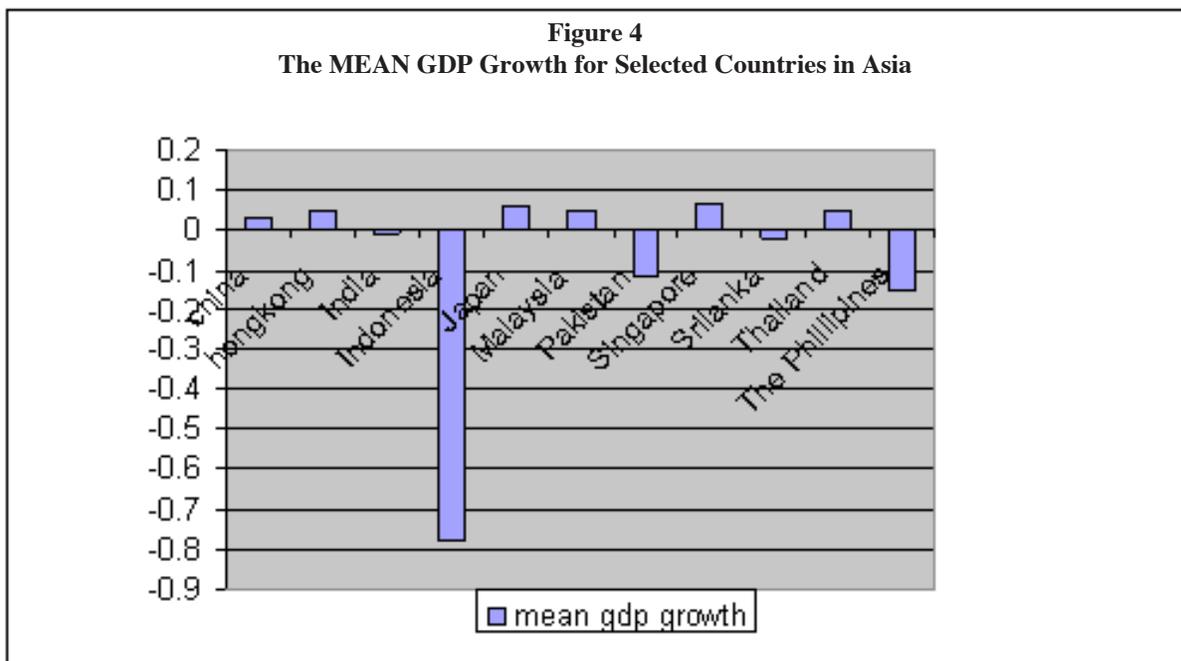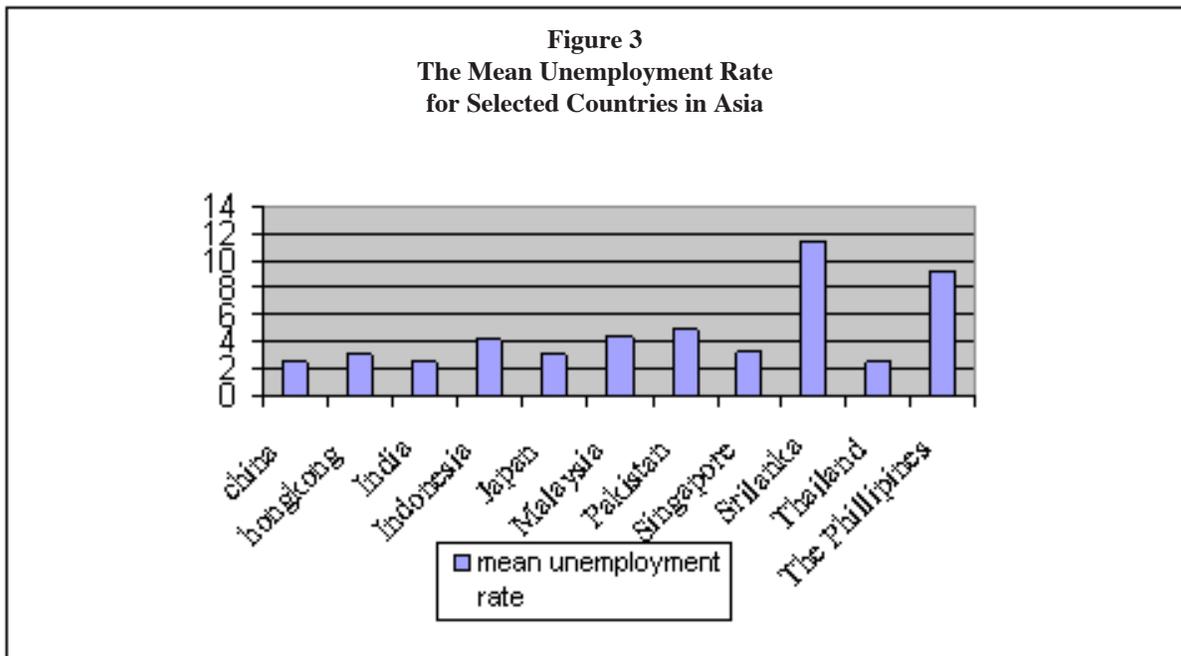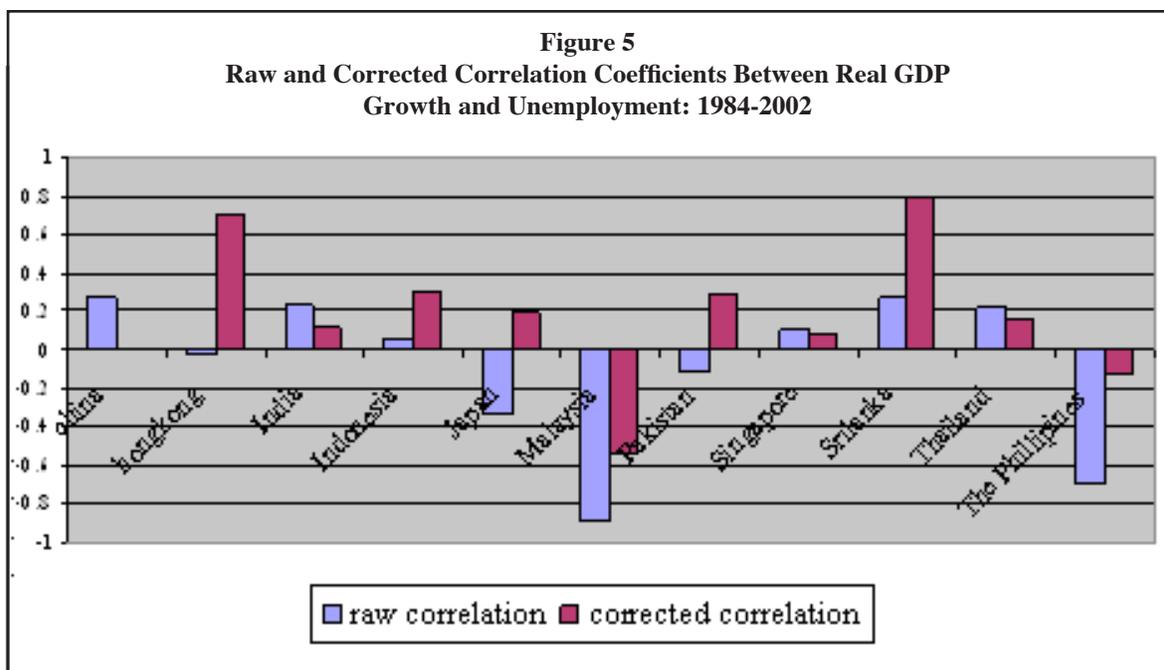

Figure 3
The Mean Unemployment Rate
for Selected Countries in Asia

Figure 4
The MEAN GDP Growth for Selected Countries in Asia

Table 2
Correlation Between Real GDP Growth and Unemployment Rates
for Selected Countries in East Asia

Country	Raw Correlation	P-Value	Corrected Correlation	P-Value
China	0.264	0.341	-0.002	-0.993
Hong-Kong	-0.026	0.922	0.711	0.001
India	0.235	0.399	0.115	0.684
Indonesia	0.052	0.843	0.302	0.239
Japan	-0.329	0.197	0.195	0.454
Malaysia	-0.881	0.000	-0.533	0.027
Pakistan	-0.120	0.658	0.297	0.264
Singapore	0.105	0.678	0.076	0.764
Sri Lanka	0.273	0.367	0.794	0.001
Thailand	0.218	0.385	0.153	0.545
The Philippines	-0.698	0.001	-0.129	0.610

Figure 5
Raw and Corrected Correlation Coefficients Between Real GDP
Growth and Unemployment: 1984-2002

DISCUSSION

Theoretical and substantive issues, including problems in collecting and reporting data, limit the extent to which we can draw broad generalizations from the results reported in Tables 1 and 2. For instance, the countries in our sample do not follow identical standards for data collection, adjustment and coding. As a result, it is not possible to ensure cross-time reliability and consistency across countries. The International Financial Statistics published by the IMF are collected from a variety of sources, including self reported data on GDP, price index and employment statistics. Moreover, the database constructed by the IMF is primarily intended for cross-country comparisons and may not, in all cases, be suitable for individual country analysis. The summaries and findings reported in Tables 1 and 2 above should be interpreted with these constraining factors in mind. Furthermore, if the relationship between the unemployment rate and real GDP growth is dynamically unstable, the reported values of the correlation coefficients could change both in sign and magnitude depending on the time period used. Due to data limitations, we did not break the samples into sub-samples to further examine the association between these variables over shorter time intervals.

As previously mentioned, to circumvent the problem of spurious correlation, we detrended the data using the construct outlined in equation one. Next, we computed the correlation coefficients between these variables for both the raw and the filtered data. The results reported in Table 2 suggest that, for the most part, the observed coefficients are inconsequential showing no linear relationship between unemployment and real GDP growth rates. With these results, it would be quite pointless to estimate a meaningful regression relationship similar to Okun's using the raw or the filtered data. Based on Table 2 results and the accompanying histogram (Figure 5), Okun's law seems to be validated only in a single case (Malaysia) and conflicted in the remaining ten. In Japan, for instance, Okun's law would appear valid if we rely on unfiltered data, but not so for detrended data.

In sum, we have not been able to establish any significant and contemporaneous association between changes in the unemployment rate and changes in real output on a broad scale. More importantly, our results indicate that changes in the unemployment rate and real GDP should not be examined in isolation from other factors. A complete analysis of the relationship between growth in real output and employment requires explicit inclusion of other variables such as productivity, capital utilization, work hours, and resource endowments that influence the aggregate production function.

CONCLUSION

This paper examines the relationship between the unemployment rate and real output growth for an under-researched region of Asia. Although in some advanced economies, low unemployment has been generally associated with high growth in real output, there are many other factors that affect the labor and output relationship in the aggregate production function. In our sample, with one exception, we do not discover substantive evidence to support the proposition that a 1-percentage-point decline in the unemployment rate is, on average, associated with additional output growth of about 3 percentage points.

SELECTED REFERENCES

Adams, C. and D. T. Coe (1989), "A system approach to estimating the natural rate of unemployment and potential output for the United States," *IMF Working Paper* (October).

Almaghrbi, Yaser and Forrokh Nourzad (1995). "Okun's law and the fulfillment of wage and price expectations," *Journal of Post Keynesian Economics*, Winter, v18 n2 p293(16).

Altig, David, Terry Fitzgerald and Peter Rupert (1997). "Okun's Law revisited: should we worry about low unemployment?" *Economic Commentary* (Cleveland), p1(4).

Aoki, Masanao and Riccardo Fiorito (1993). "Analysis of US real GNP and unemployment interactions: state space," *Journal of Economic Dynamics & Control*, May, v17 n3 p385(15).

Apergis, Nicolas and Anthony Rezitis (2003). "An examination of Okun's law: evidence from regional areas in Greece," *Applied Economics*, July 10, v35 i10 p114(5).

Attfield, Clifford L.F, and Brian Silverstone (1998). "Okun's law, cointegration and gap variables," *Journal of Macroeconomics*, Summer, v20 n3 p625(13).

Blinder, Alan S. (1997). "A core of macroeconomic beliefs?" *Challenge*, July-August, v40 n4 p36(9).

Clark, Peter K. (1984). "Unemployment and Potential Output in the 1980s," *Brookings Papers on Economic Activity* No. 2, pp. 565-567.

Cuaresma, Jesus and Crespo (2003). "Okun's law revisited," *Oxford Bulletin of Economics & Statistics*, Sept, v65 i4 p439(13).

Freeman, Donald G.(2001). "Panal tests of Okun's law for ten industrial countries," *Economic Inquiry*, Oct, v39 i4 p511(13).

_____ (2000). "Regional Tests of Okun's Law," *International Advances in Economic Research*, August v6 i3 p557.

Gordon, Robert J. (1984). "Unemployment and Potential Output in the 1980s," *Brookings Papers on Economic Activity*, No. 2, pp.537-567.

Grant, Alan P.(2002). "Time-varying estimates of the natural rate of unemployment: a revisitation of Okun's Law," *Quarterly Review of Economics and Finance*, Spring, v42 i1 p95-113.

Hall, Robert E., and John B. Taylor (1988). <u>Macroeconomics</u>, 2nd ed., New York: Norton & Co.

Hatanaka, Michio (1966). <u>Time Series Based Econometrics: Unit Roots and Cointegration</u>. Oxford University Press.

Kahn, George A. (1996). "New estimates of the U.S. economy's potential growth rate," *Contemporary Economic Policy*, Oct, v14 n4 pl(14).

Moosa, Imad A. (1997). "A cross-country comparison of Okun's coefficient," *Journal of Comparative Economics*, June, v24 n3 p335(22).

Okun, Arthur (1962). "Potential GNP: Its Measurement and Significance," *American Statistical Association, Proceedings of the Business and Economics Section*, pp. 98–103.

Prachowny, Martin F.J. (1993). "Okun's Law: theoretical foundations and revised estimates. (Arthur Okun)," *Review of Economics and Statistics*, May, v75 n2 p331(6).

Silvapulle, Paramsothy, Imad A. Moosa and Mervyn J. Silvapulle (2004). "Asymmetry in Okun's law", *Canadian Journal of Economics*, May, v37 i2 p353 (22).

Strand, Jon (1992), "Business cycles with worker moral hazard," *European Economic Review*, August, v36 n6 p1291(13).

Sogner, Leopold and Alfred Stiassny (2002). "An analysis on the structural stability of Okun's law—a cross-country study," *Applied Economics*, Sept, v34 i14 p1775(13).

Thomas, R. L., (1997). <u>Modern Econometrics: An Introduction</u>. Addison Wesley. Also available at http://www.clev.frb.org/research/com97//.

Tobin, James, and Murray Weidenbaum, eds. (1988). <u>Two Revolutions in Economic Policy: The First Economic Reports of President Kennedy and Reagan</u>. Cambridge, MA: MIT Press.

ENDNOTES

[i] As of December 2003, the EU member countries consisted of Austria, Belgium, Denmark, Finland, France, Germany, Greece, Ireland, Italy, Luxembourg, The Netherlands, Portugal, Spain, Sweden, and the United Kingdom.

[ii] Stationarity refers to the idea that a time series should be stable over time – returns to an equilibrium level. Stationarity is an important concept for forecasting because only stationary time series are predictable. A stationary time series has a mean, variance and autocovariances that do not change over time. Many economic time series are not stationary. For a good discussion of the problems involved with non-stationary data, see R. L. Thomas (1997) and M. Hatanaka (2003).

PRICE CONTROLS AND PROFESSIONAL BASEBALL

Dipak Ghosh*, Emporia State University
Glenn Pettengill, Grand Valley State University

I. INTRODUCTION:

A long-standing and continuing stream within the sport literature contends that competitive balance is necessary for long-term success of professional sports. Rottenberg (1956) states "that a more or less equal distribution of talent is necessary if there is to be uncertainty of outcome; and that uncertainty of outcome is necessary if the consumer is to be willing to pay admission to the game." Horowitz (1997) states that "….as a general principle *all* sports leagues, whether professional or amateur, profess a desire to "maintain competitive balance"." According to Schmidt and Berri (2002) "…..the elimination of competition in professional sports effectively eliminates the industry. Consequently, professional sports leagues strive to enact institutions to promote competitive balance or, at the very least, the illusion of competitive balance." Humphreys (2002) makes the point that "greater competitive balance should lead to greater demand, other things held equal."

There is particular concern that competitive balance does not exist in major league baseball (MLB). This concern centers on the disparity between the success of big-market and small-market franchises. According to Burger and Walters (2003) "Among sports fans and journalists, there is a consensus that big market teams are able and willing to spend more lavishly than small market teams in acquiring playing talent." This "consensus" echoes the Commissioner's Blue Ribbon Panel (BRP July 2000) report which states that "large and growing revenue disparities exist and are causing problems of chronic competitive imbalance." The success of teams in markets like New York and Atlanta, and the poor results (and low payroll) of teams in markets like Kansas City (the team with the worst record in baseball in 2005) and Tampa Bay (another division "cellar dweller" in 2005), provides casual empirical support for the link between market size and competitive imbalance. Those who accept this link as factual argue for "leveling the playing field" through price control measures such as revenue sharing and/or a salary cap. Those arguing for such measures make comparisons to the National Football League (NFL) where both measures have been in place for a number of years, and where successful small market franchises like the Green Bay Packers and the Tampa Bay Buccaneers (as opposed to the Tampa Bay MLB team) thrive. This paper examines whether this casual empirical evidence is supported by more exacting empirical analysis. Further, we examine the theoretical argument for applying price controls to this situation.

The rest of the paper is organized as follows: Section II contains a discussion of the arguments for price controls in baseball. Section III contains a description of our data set. Section IV has a description of the theoretical model and the statistical methodology that we use. Section V has a description and discussion of our results divided into two steps. First, we explore the relationship between salaries paid and winning records. Second, we explore the impact of winning records on future cash flows. Section VI contains some concluding remarks.

II. THE ECONOMIC RATIONALE

Price controls have been imposed in various markets to protect consumers in cases of market failures. For example in the case of rent control and in the case of utility price regulation, price ceilings have been imposed on commodities that are viewed as necessities and where consumers may be at a bargaining disadvantage. Likewise, price supports have been imposed on inputs prices in cases when the suppliers of these inputs are viewed to be at a competitive disadvantage and the price of the input has important implications for income distribution, for example in the case of minimum wage regulation and in the case of agricultural subsidies. These precedents for price controls seem at variance with the pivotal role that price control issues have played in negotiations between the professional baseball owners' association and baseball players' association.

In the instance of baseball labor negotiations, price controls involve price ceilings that would limit total payments made by any one consumer of professional baseball talent. The welfare implications from this issue do not seem consistent with the application of price ceilings elsewhere. Management's case for price ceilings does not, on face, seem to have economic merit. Certainly, as a whole, the purchasers of this commodity would not appear to be at a competitive disadvantage relative to the supplier of the commodity. Furthermore, the item in question would not appear to be in the category of a basic necessity. Also, although labor opposed the details of the application of these price controls, the players' association did not oppose the potential limitation of its members' income on the basis of principle. What, then, are the principles that are used to justify this particular application?

Although multi-millionaire owners raise the issues of economic poverty, the argument for price controls seems to rest on the proposition that major league baseball franchises represent social goods.[1] This argument assumes that the existence of a major league franchise provides social benefits in excess to those derived by the fans that attend the games or otherwise pay for the entertainment value of the teams' performances. For

instance, fans attending the games will provide economic value to a number of service providers not directly linked to the game. A much more nebulous social benefit derives from a general community well-being that results from having a professional baseball team, especially a winning baseball team, which creates social unity within the members of the community.

The provision of this social good, management argues, requires the implementation of price controls on players' salaries. The argument assumes that without some limitation on salaries, bidding wars would result in a pooling of baseball talent in those franchises that have the largest economic clout. These franchises would tend to be large market franchise, as exemplified by the New York Yankees. The bidding wars, according to the argument, would result in a predatory behavior parallel to cases where multi-market firms use predatory pricing to lower prices in a particular market and drive local firms from the market. In this case the predatory behavior involves foreclosure of a raw material, star baseball talent, which will supposedly force some competitors out of the market. The small franchises, unable to successfully bid for top talent, will experience poor performance. This poor performance will acerbate the cash flow problem that small franchise firms already experience due to their limited market. In addition to the argument that major league baseball represents a social good, the case for price controls also requires an exacting statistical linkage between market size and performance. We turn our attention to this linkage in the following sections.

III. DATA

The data for this study has been obtained from the website of Baseballstats.net (http://www16.brinkster.com/bbstats/). This website collects data from various sources, including major league baseball. From this source we collect data on win-loss records, team payroll, and attendance for each major league team for the period 1986-1999.

IV. METHODOLOGY

The case for competitive imbalance argues for a correlation between ability to generate cash flows and performance. In order to study this linkage we investigate the impact of payroll on winning percentage by estimating regression (1):

$$(1)\ W_t = a + bp_t + \varepsilon_t$$

where W = winning percentage (percentage of total games won), p = team payroll as a percentage of total MLB payroll multiplied by the total number of teams in major league baseball in any year. The value of p = 1 when a team's payroll is equal to the average payroll for the league.[2] Our hypothesis is that an increase in a team's payroll as a percentage of total MLB payroll will result in a higher winning percentage. Teams outbidding other teams for the best available talent should be able to win more games than their competitors. The coefficient on "p" should be positive and significant.

A positive link between payroll and winning percentage should also imply that a high payroll team will continue to be successful in the future. Our hypothesis is that a winning record in any

year and/or high attendance in a year will allow management to spend more on players' salaries next year, maintaining the winning record. If large market franchises allow higher initial payrolls, their payrolls should continue to increase in size, putting small market franchises with fewer resources at an increasing disadvantage. Thus, we estimate equation 2:

$$(2)\ \Delta P_t = c + dW_{t-1} + eA_{t-1}$$

where W = winning percentage, P = team payroll as a percentage of total MLB payroll in a year multiplied by the total number of teams, A = total attendance for a team in a year as a percentage of total attendance for MLB in that year multiplied by the number of teams. Since changes in payroll should be greater the more games the team wins in the previous year, and the greater is the attendance in the previous year, coefficient on the lagged value of winning percentage and on lagged attendance should be positive and significant.

Since we are using panel data (a combination of cross section (different teams) and time series (14 years), we may have a misspecification problem, since variables such as superior management, front office personnel, etc. may also affect the team's winning percentage. In equation (1) we estimated the relationship between payroll and winning percentage without considering these factors. The omission of these variables may cause us to mis-specify the relationship between payroll and winning percentage. In order to check for this potential error we use panel data techniques (as described in Greene, 1993 chapter 16), estimating different regression parameters (different slopes and/or intercept terms) for different teams (cross sections).

There are two types of panel data techniques that could be used. One is the random effects model, which treats the difference between the different cross sections (teams) as a random variable. It is appropriate when the data is a sample from a larger population. Since our data set is basically the entire population (we include all baseball teams) a fixed effects estimator is more appropriate. The fixed effects model assumes that we can capture any differences between the teams by estimating a different intercept for each team. After estimating a fixed effects model, an F-test will test us if the intercepts for each team are actually different. A significant F-statistic would then indicate that factors like differences in quality of the managers/ front office personnel may also have an impact on differences in winning percentage.

V. RESULTS

We find evidence to support the owner's contention that small-market franchises are adversely affected through payroll considerations. As reported in Table 1, there is a direct and highly significant relationship (p-value = .0000) between payroll and winning. Given our variable definitions, if a team's payroll is equal to the MLB average the value of p_t will be equal to one, and if the team's payroll is 50 percent higher than the average the value of p_t is 1.5. Thus, the parameter estimates indicate that a team whose payroll is equal to the MLB average should win 50 percent of its games (0.4058 + 1 * 0.0942). A team with a payroll 50 percent higher than the average has an expected winning percentage of 54.71 percent (0.4058 +

1.5 * 0.0942). Thus, our results indicate that a team with an average payroll will have average results (win half its games) and the more a team's payroll exceeds the average, the greater will be its winning percentage. ***Success apparently can be bought!*** We are able to explain a considerable portion of the variation in team records (adjusted R^2 = 21.38%) by differences in payrolls.

more parity among teams. It is common for teams which play in the Super Bowl to not even make the playoffs in the following year. Thus, if a team has the same payroll as all other teams do (as is the case in the NFL), it can win consistently only if it also has superior front office and coaching staff. The New England Patriots and the Philadelphia Eagles are examples of such

Table 1
Impact of Payroll on Winning Percentage

	Coefficient	T-statistics (p-values)
Constant	0.4058	41.88 (0.0000)
p_t	0.0942	10.23 (0.0000)

Adjusted R^2 = 0.2138

A large portion of the variation in winning percentage remains unexplained. As stated in the methodology section, these results may be due to other team specific factors that could be responsible for a team's winning percentage (like quality of coaching, quality of the front office, etc.). As described above, the choice of a fixed effects estimator is appropriate for our data set. Use of this technique results in an adjusted R^2 of 0.2361 (which is only slightly above the R^2 reported in table 1). The F-statistic which tests whether the intercepts are equal for all cross sections is an insignificant 0.35. This implies that there are no significant differences in the cross-sections (the teams). Therefore, we are unable to show that team specific factors play a significant role in determining the success of a team. This result suggests that any team specific factors that may be able to explain differences in winning records are probably bid away. Perhaps a good player or manager is hired away from a small market team by a large market team. Perhaps remaining differences result from factors like luck or other unforeseen events like injuries to key players.

These results support the position of baseball management that payroll is directly related to a team's success. This is consistent with the conclusion of the Commissioner's Blue Ribbon Panel (who only looked at the period 1995-99) and Zimbalist (2003) who did an annual cross-section study of all teams during the period 1980 – 2001. This also contradicts findings by authors like Horowitz (1997), Eckard (2001 a, b), Schmidt and Berri (2001, 2002) that competitive balance has improved in MLB since free agency. Since free agency implies free movement of talent, the team(s) with the most resources should be able to corner most of the talent, and therefore improve their performance. Since there is no revenue sharing in baseball, large market teams have an inherent advantage compared to small market teams since not only will they have large gate receipts, but advertising revenues will be greater. This also supports the conclusion that increasing the competitive balance in MLB will require some restraints on spending on players' salaries by large market teams through some form of a salary cap. The existence of a hard salary cap (and revenue sharing) in the NFL appears to have led to increased competitive balance. Since every team has exactly the same amount to spend on players, there is much

teams. In fact the Patriots have won three of the last four Super Bowls even though they are know for paying their players less than the market rate.

The success of MLB teams like the Angels, Marlins and Diamondbacks is held up as an example of increasing competitive balance, but what is overlooked in the same analysis is that even though the Yankees have not won the World Series since 2000, they have reached the World Series twice during this period, and lost to the Diamondbacks in the seventh game of the championship series as a result of a play in the bottom of the 9th inning. This is as good an example of "white noise" or "luck" as we will see. The Yankees are the only team (other than Toronto in 1992-93) to repeat as World Series Champions in consecutive years, and they did it for three consecutive years (and in the fourth year they lost in the 7th game in the bottom of the ninth inning). Over the last 15 years, other than the Yankees, the only teams to even reach the division championship series in the year following an appearance in the World Series are Oakland (1988-89), Atlanta (1991-99), Toronto Blue Jays (1992-93). In 1992 and 1993, when Toronto repeated as the World Series champion, they had the highest payroll, and during 1991 – 99 Atlanta's payroll was consistently in the top 5 except in 1991-92. Another team to appear in multiple World Series during this period was Cleveland in 1995 and 1997, and it had the 7th highest payroll in 1995 and the 3rd highest in 1997. Minnesota (World Series winners in 1987 and 1991) is, however, an exception to this relationship.

We also provide some support for the contention that teams are perched on a slippery slope ---- that past success causes increases in future payrolls that as we have just seen leads to increases in winning percentage records. As given in table 2 we find an insignificant relationship between changes in payroll and attendance from the previous year. Winning records do, however, cause a significant increase in payrolls. Winning records may provide the financial success to purchase additional success in the future. Or past success may require payment to the labor that provided the success. Nonetheless, the relationship between past success and future payroll increases and between payroll increases and future successes suggests a cycle that does not bode well for small franchise teams.

Table 2
Impact of Past Success on Change in Payroll

	Coefficient	t-statistics (p-values)
Constant	-0.1756	-1.9268 (0.0548)
W_{t-1}	0.0774	1.8555 (0.0322)
A_{t-1}	0.2068	1.0204 (0.1541)

Adjusted $R^2 = 0.0163$

Regression F statistic = 3.9054, p-value = 0.0210

p-values on the t-statistics are for one-sided tests.

The inability of any teams other than the Yankees and the Blue Jays to repeat as World Series champions in consecutive years since 1990 may be viewed as stark evidence that small-market franchises cannot (or will not) overcome their inherent disadvantages with temporary success. It is certainly possible that teams will take advantage of success and high attendance in any year to increase the team's profits instead of adding to costs by increasing the payroll the following year. While this is a perfectly valid business objective, it would not support the contention that baseball is a social good, and therefore requires price controls.

VI. CONCLUSION

As mentioned above, some authors have come to the conclusion that competitive balance has improved since free agency. Our results indicate that at least during our sample period this is not true. It is our contention that our finding that the unexplained variation in winning percentage is white noise and is probably responsible for the spurious conclusion that competitive balance has improved over this period. The ability of small market teams like the Minnesota Twins and Toronto Blue Jays or even the Yankees in 1998 (when they had the eighth largest payroll) in winning the World Series is probably due to random variation, which to some extent may be "luck"; players may get injured, they may have up or down years, etc., all of which may result in a team with a smaller payroll winning (or team with a larger payroll losing).[3] This would be a topic for further research, but would require information about individual player salaries and their performance in relevant years.

NOTES:

1. Siegfried and Zimbalist (2002) come to the conclusion that there is no statistically significant evidence that expenditures on a professional sports team have a significant local impact. In the absence of an economic impact, there would have to be a significant non-economic, or social, impact to justify regulation of sports.

2. Team payroll as a percent of MLB payroll will indicate a team's payroll relative to its competitors. Moreover, during our sample period (1986-99), MLB expanded twice, from 26 teams to 28 teams in 1993, and from 28 teams to 30 teams in 1998. Since the change in number of teams obviously could have an impact on the MLB payroll, we standardize payroll data. We achieve standardization by multiplying the percent of total payroll, pt, by the number of teams.   Thus before 1993 a team with average payroll would have a payroll equal to 1/26 of the total payroll. When this value is multiplied by 26, p =1. Thus, a value of p =1 is the benchmark to determine relative payroll value. From 1993 forward a team with average payroll would have a payroll equal to 1/28 of the total payroll. When this value is multiplied by 28, the same bench value of 1 would occur for p.

3. The Yankees in 2005 are a good example. With a payroll of about $200 million (about $80 million greater than the next team), they currently trail the Red Sox in the AL East and are involved in a close struggle with Oakland Athletics, the Angels, and the Cleveland Indians (all three teams have payrolls significantly lower than the Yankees) in the wild card race. However, the Yankees starting pitchers have all been injured at various points of time during the season, some of them missing a significant amount of time (like Kevin Brown, Carl Pavano, and Jared Wright). The fewer number of injuries to its major competitors have probably allowed them to stay close to the Yankees even though their payroll is considerably less.

REFERENCES:

Baseballstats.net website (http://www16.brinkster.com/bbstats/).

Burger, John D., and Stephen J. K. Walters, (2003), "Market Size, Pay, and Performance: A General Model and Application to Major League Baseball," *Journal of Sports Economics*, Vol. 4, No. 2, 108-125.

Eckard, E. Woodrow, (2001 a), "Free Agency, Competitive balance, and Diminishing Returns to Pennant Contention," Economic Inquiry, Vol. 39, No. 3, 430-443.

Eckard, E. Woodrow, (2001 b), " Baseball's Blue Ribbon Economic Report," Journal of Sports Economics," Vol. 2 No. 3, 213-227.

Horowitz, Ira, (1997), "The Increasing Competitive Balance in Major League Baseball," *Review of Industrial Organization*, 12, p 373-387.

Humphreys, Brad R., (2002), "Alternative Measures of Competitive Balance in Sports Leagues," *Journal of Sports Economics*, Vol. 3, No. 2, p 133-148.

Levin, Richard C., George J. Mitchell, Paul A. Volcker. and George F. Will, "The Report of the Independent Members of the Commissioner's Blue Ribbon Panel on Baseball Economics, July 2000."

Rottenberg, Simon, (1956), "The Baseball Players' Labor Market," *Journal of Political Economy*, 64, 242-258.

Schmidt, Martin B. and David J. Berri, (2001), "Competitive balance and Attendance: The Case of Major League Baseball," Journal of Sports Economics, Vol 2, No. 2, 145-167.

Schmidt, Martin B., and David J. Berri, (2002), "Competitive Balance and Market Size in Major League Baseball: A Response to Baseball's Blue Ribbon Panel," *Review of Industrial Organization*, 21, p 41-54.

Siegfried, John and Andrew Zimbalist, (2002), "A Note on the Local Economic Impact of Sports Expenditures," Vol. 3 No. 4, p 361-366.

Zimbalist, Andrew (2003), "May the Best Team Win: Baseball Economics and Public Policy," Brookings Institution Press, Washington, D.C.

EMOTIONAL INTELLIGENCE AND DISPOSITIONAL AFFECTIVITY: AN EXPLORATORY STUDY OF THE FACTORS INFLUENCING WORKPLACE AGGRESSION

Elizabeth J. Rozell, Missouri State University
David E. Gundersen, Stephen F. Austin State University
Amanda J. Quebbeman, Missouri State University

Emotion is a relatively untapped field in management literature. However, there exists much interest in the area of emotional intelligence on the part of both academic scholars and practitioners (Fox, 2000). Mayer and Salovey (1995) define emotional intelligence as "the capacity to process emotional information accurately and efficiently, including that information relevant to the recognition, construction, and regulation of emotion in oneself and others" (p. 197). Individuals with high emotional intelligence are likely to be more aware of their own feelings as well as the feelings of others, better able to identify their feelings, and better able to communicate them when appropriate (Mayer & Salovey, 1993). Emotions often influence behavior choices in the workplace and can undermine rational selection of optimal courses of action (Leith & Baumeister, 1996).

Dispositional affectivity is also a significant determinant of work attitudes and may impact an individual's behavior at work. The two dimensions of dispositional affectivity are trait-positive affect (PA) and trait-negative affect (NA) (Cropanzano, James, & Konovsky, 1993). Positive affect is the disposition to experience positive affective states while negative affect is the disposition to experience negative affective states. Affect is strongly related to job attitudes (Fisher, 2000) and to reactions to stress in the workplace (Burke, Brief, & George, 1993; Chen & Spector, 1991; Dua, 1993; Moyle, 1995; Schaubroeck, Ganster, & Fox, 1992).

Emotional intelligence and dispositional affectivity are individual difference variables that may impact aggressive behaviors in the workplace. The presence of workplace aggression in organizations has received considerable attention in recent literature (Aquino, Grover, Bradfield, & Allen, 1999; Bulatao & VandenBos, 1996; Neuman & Baron, 1998). Workplace aggression is the process by which an individual attempts to physically injure a coworker; workplace violence is the outcome, or the consequences, of those attempts (O'Leary-Kelly, Griffin, & Glew, 1996). Baron and Neuman (1996) found workplace aggression to be relatively verbal, passive, indirect, and subtle rather than physical, active, direct, and overt. However, for some individuals, even the slightest incivility at work can spiral into intense aggressive behaviors (Andersson & Pearson, 1999). In a study by Baron and Neuman, 44.5% of respondents reported workplace aggression against a coworker, 31.4% reported aggression against a supervisor, and 26.8% reported aggression against a subordinate (Neuman & Baron, 1998). In addition, Bulatao and VandenBos (1996) note that while many incidents of workplace aggression go unreported, aggressive acts can cost corporations hundreds of thousands of dollars in damages and increased workers' compensation

premiums. Organizational costs can also include lost wages and missed days of work, as evidenced by Bachman (1994), who reports these costs to be $55 million in lost wages resulting from 1,751,100 missed days of work on the part of half a million employees.

Aggression and its relationship to emotional intelligence and dispositional affectivity has not been empirically tested and this relationship could have multiple effects on individuals in organizations. Therefore, the purpose of this paper is to conduct exploratory research to empirically test the relationships between emotional intelligence, dispositional affectivity, and workplace aggression. This research significantly contributes to the literature in that it empirically describes these variables never before in combination and lays the foundation for future research concerning individual difference variables and workplace aggression.

THEORETICAL FOUNDATIONS

Emotional Intelligence

Emotional intelligence is a relatively new concept among researchers and practitioners. Salovey and Mayer (1990) were the first to formally conceptualize and use the term "emotional intelligence." Their conceptualization of emotional intelligence included three mental processes: a) the appraisal and expression of emotions in oneself and others, b) the regulation of emotion in oneself and others, and c) the utilization of emotions to facilitate thought. Although the model is general in nature, it addresses individual differences in mental processes and abilities (Mayer & Geher, 1996; Mayer & Salovey, 1993; Mayer & Salovey, 1995; Salovey & Mayer, 1990). Goleman's (1995) book "Emotional Intelligence" builds on many of the foundations laid by Salovey and Mayer (1990). Goleman (1995) identifies five competencies that make up the whole of emotional intelligence: self-awareness, self-regulation, self-motivation, social awareness (empathy), and social skills (relationship management).

Knowing one's emotions and having the ability to monitor one's feelings on an ongoing basis is important to psychological insight and self-understanding. Emotionally intelligent individuals may have a clearer emotional picture of life events and events within the workplace. Therefore, individuals who can monitor and regulate their emotions may be less likely to engage in aggressive behaviors in the workplace. Friedman and Miller-Herringer (1991) suggest that emotional regulation is as important as emotional expression itself. Andersson and

Pearson (1999) note that individuals that cannot easily regulate their behaviors are more likely to engage in uncivil actions in the workplace. Further, several studies have linked aggressiveness with the failure of self-control (Aspinwall & Taylor, 1992; Lennings, 1997). Caspi et al. (1994) found that an individual's poor self-control and negative emotions can lead to antisocial acts.

Individuals with higher emotional intelligence may be better able to avoid behaving aggressively at work. For instance, those individuals possessing greater empathy may be more accurate in interpreting the actions of others. Empathy strongly inhibits aggressive behaviors in individuals (Ohbuchi & Ohno, 1993). In addition, emotionally intelligent individuals are likely to have more effective social skills. Social skills account for differences in the expression of emotion (Friedman & Miller-Herringer, 1991). In fact, studies have shown that underdeveloped social skills can lead to antisocial behavior (Sutton, Cowen, Crean, & Wyman, 1999). Therefore, greater emotional intelligence in the workplace may prevent future incidents of aggression.

Dispositional Affectivity

Dispositional affectivity literature focuses on the identification of the specific personality traits that underlie dispositional tendencies (Cropanzano et al., 1993). Past research has indicated that there are two general dimensions of affective response: trait-positive affect (PA) and trait-negative affect (NA). Positive and negative affect have traditionally been described as independent of one another, rather than as opposite ends of a single continuum (Berry & Hansen, 1996; Diener & Emmons, 1985). Thus, an individual can be high on both, low on both, or high on one but not the other (George, 1992; Watson & Tellegen, 1985). However, recent research has challenged the independence of positive and negative affect, while postulating the bipolarity of these dimensions (Feldman Barrett & Russell, 1998; Russell & Carroll, 1999a; Russell & Carroll, 1999b; Russell & Feldman Barrett, 1999).

Despite recent discussion on the bipolarity of positive and negative affect, this study measures the dimensions as independent variables. Individuals with high PA describe themselves as enthusiastic, excited, and confident (Berry & Hansen, 1996) as well as self-efficacious and pleasurably engaged interpersonally (George, 1992). In addition, most individuals who rate high on PA can be described as confident, exhilarated, excited, and enthusiastic; on the other hand, persons who rate low on PA are characterized as lethargic, listless, and apathetic. These scores reflect an absence of positive feelings, rather than the presence of negative emotions. Conversely, individuals with high negative affect describe themselves as nervous and fearful and report more health complaints than individuals with high positive affect (Berry & Hansen, 1996). Persons who rate high on NA are often fearful, anxious, angry, nervous and tense. Individuals that score low on NA report feelings of calmness, contentedness and placidity (Cropanzano et al., 1993).

Affect in a workplace setting is a significant piece of overall job attitude (Fisher, 2000). For example, studies have shown that there is an inverse relationship between NA and job satisfaction (Levin & Stokes, 1989; Staw, Bell, & Clausen, 1986). Other research shows that NA may be negatively correlated with job satisfaction and organizational commitment, but positively correlated with turnover intentions; PA has the exact opposite pattern of correlations (Cropanzano et al., 1993; Gardner, Rozell, & Barnes, 1999). These relationships may be explained by the fact that work attitudes are primarily a function of how an individual affectively responds to his or her work environment; the individual, therefore, is influenced by his or her underlying affective disposition. Consequently, high PA individuals are likely to respond positively to their work environment through their work attitudes, while NA individuals generally exhibit extreme negative responses to their work situations (George, 1992). Further, the relationship between dispositional affectivity and work attitudes is likely to impact the presence of aggression in the workplace. Marcus-Newhall, Pedersen, Carlson, and Miller (2000) suggest that affective processes can contribute to negative interactions and high levels of aggression.

Gable, Reis, and Elliot (2000) found that positive daily events are significantly related to positive affect while negative daily events are significantly related to negative affect. Daily events, as interpreted by an individual's dispositional affectivity, could lead to aggression in the workplace. Affective reactions such as frustration, anger, and aggression, often result from stress in daily events (Narayanan, Menon, & Spector, 1999) as well as high trait anger and arousal in the individual (Smith, Mullis, Kern, & Brack, 1999). In fact, frustrated individuals may engage in destructive behaviors with important organizational consequences (Narayanan et al., 1999). Therefore, dispositional affectivity is likely an important variable in explaining workplace aggression.

Research Questions

The current study examined the relationship of workplace aggression with a host of demographic variables such as age, gender, education, marital status, job status, compensation type, organizational tenure and job tenure. We predicted that males would be more inclined to display aggressive tendencies. In line with past findings, we also posited that negative affect and positive affect would be influential variables on workplace aggression. Consistent with past research, we expected to find a strong relationship between negative affect and workplace aggression. Specifically, we expected that as negative affect increased, so would workplace aggression. Similarly, we expected that as positive affectivity increased, the degree of workplace aggression would decrease. In addition, we anticipated emotional intelligence to be a significant variable in relation to workplace aggression. We expected that as a person's emotional intelligence increased, his or her ability to control negative emotions would be enhanced and, therefore, workplace aggression would decrease.

METHOD

SUBJECTS

The population consisted of 347 salaried and hourly employees of a behavioral health organization located in the Midwestern United States. Of the survey packets distributed, 110 were completed and returned for a response rate of 32 percent. Table 1 provides a summary of the demographic attributes of the subjects.

MEASURES

Workplace Aggression. A measure of workplace aggression developed by Buss and Perry (1992) was employed in this study. This scale is composed of 29 5-point Likert-type questions where respondents indicate the degree to which the statements are "extremely uncharacteristic of me" to "extremely characteristic of me." Examples of questions include, "I have trouble controlling my temper," and "Sometimes I fly off the handle for no good reason."

TABLE 1

Demographic Attributes of the Subjects

Attribute	Mean	SD
Age	37.18	11.89
Company Tenure		
Job Tenure	3.46	4.26

Attribute	Frequency	Percentage
Gender		
Male	29	26.4
Female	81	73.6
Education		
High School Degree	6	5.5
Some College	23	20.9
AA or 4-Year Degree	40	36.4
Masters Degree	27	24.5
Ph.D. or Equivalent	14	12.7
Marital Status		
Single	29	26.4
Married	63	57.3
Divorced-Separated	18	16.3
Job Status		
Management	25	22.7
Professional	66	60.0
Clerical	19	17.3
Compensation Type		
Hourly	33	30.0
Salary	77	70.0

A confirmatory factor analysis was conducted to determine if the current data established similar factors from findings identified by Buss and Perry (1992). Additionally, this procedure provides for data reduction and summarization helping simplify further analyses (Hair, Anderson and Tatham, 1987). To assess the appropriateness of the data for factor analysis, several key statistics were examined. First, a review of the communalities derived from the factor analysis was conducted. These were all relatively large suggesting that the data set is appropriate (Stewart, 1981). Next, the Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy was computed. Based on Kaiser and Rice's (1974) evaluative criteria, the result of .855

is considered "meritorious." Finally, the statistic for Bartlett's (1950) sphericity test was 1645.6 (p < .000), providing further evidence that the population of variables are independent and appropriate for factor analysis. Factor loading criteria of at least .50 was used for selecting items for a factor. Seven items had low loadings across all factors indicating lack of fit with the established factors and were systematically removed according to a procedure prescribed by Comrey (1973). The resulting factor structure provided four (4) factors of workplace aggression as seen in Table 2. These results strongly replicate the factors found by Buss and Perry (1992).

Table 2

Factor Analysis of Workplace Aggression Items Across All Respondents

Items	Loadings	Alpha
Factor 1: (Verbal Aggression)		**.8455**
I often find myself disagreeing with people	.737	
My friends say that I am somewhat argumentative	.676	
I can't help getting into arguments when people disagree with me	.661	
I know that "friends" talk about me behind my back	.625	
When people annoy me, I may tell them what I think of them	.613	
I sometimes feel that people are laughing at me behind my back	.584	
Factor 2: (Physical Aggression)		**.8406**
Once in a while I can't control the urge to strike another person	.848	
I get into fights a little more than the average person	.845	
Given enough provocation, I may hit another person	.718	
There were people who pushed so hard we came to blows	.630	
If I have to resort to violence, I will	.619	
Factor 3: (Hostility)		**.8366**
At times I feel I have gotten a raw deal out of life	.839	
Other people always seem to get the breaks	.810	
I wonder why sometimes I feel so bitter about things	.679	
I am sometimes eaten up with jealously	.573	
I have become so mad that I have broken things	.567	
Factor 4: (Anger)		**.8313**
I flare up quickly but get over it quickly	.746	
I am an even tempered person	.701	
When frustrated, I let my irritation show	.669	
I have trouble controlling my temper	.625	
Some of my friends think I am a hothead	.604	
I sometimes feel like a powder keg ready to explode	.511	

The reliability of the factors was checked to support any measures of validity that might be employed. All factors were checked for internal consistency using Cronbach alphas. According to Nunnally (1978), the Cronbach alpha procedure is an estimate of reliability based on the average correlations between items within each factor where 0.6 is sufficient. All four of the coefficient alphas were above 0.80 which are acceptably high.

Several assessments were made to determine the construct validity of the factors. An individual principle components analysis was conducted on each factor to determine if its set of variables would form a single factor independent of other variables (Nunnally, 1978). All factors were shown to be unifactorial, suggesting each was a valid construct. The KMO measure of sampling adequacy was also used to provide empirical evidence supporting the appropriateness of the data for each unifactorial determination. The KMO values are acceptable and considered primarily ranging in the "meritorious" category according to Kaiser and Rice (1974). The results of the unifactorial tests, the percentage of variance in the original variables explained by the factor and the KMO statistics, are provided in Table 3.

Table 3

Unifactorial Tests of Workplace Aggression

Factor	KMO	(%) Variance Explained
Factor 1:	.795	57.1
Factor 2:	.779	66.8
Factor 3:	.790	61.9
Factor 4:	.831	56.7

Dispositional affectivity. Positive and negative affect were measured using the Positive and Negative Affect Schedule (PANAS) developed by Watson, Clark, and Tellegen (1988). The PANAS includes a list of 20 mood-relevant adjectives, of which 10 indicate positive (e.g., active, enthusiastic) and 10 indicate negative (e.g. angry, afraid) mood states. Respondents are instructed to "indicate to what extent you generally feel this way, that is, how you feel on the average." Extensive validity evidence is provided by Watson et al. (1988), Watson, Clark, and Carey (1988), and Watson (1988a; 1988b). Alpha coefficients for the PA scale range from .86 to .90, while those of the NA scale range from .84 to .87, and are thus acceptable. Similarly, coefficient alphas of .85 and .83 for the PA and NA scales, respectively, were obtained in the current study. For use in later analyses, a summation of positive items was used to measure positive affectivity and a summation of negative items was used to measure negative affectivity. Positive and negative affectivity items can be seen in Table 4.

Table 4
Positive and Negative Dispositional Affectivity Items

Positive Items
Enthusiastic
Inspired
Determined
Proud
Excited
Interested
Alert
Attentive
Strong
Active

Negative Items
Ashamed
Guilty
Scared
Hostile
Irritable
Upset
Nervous
Jittery
Distressed

Emotional intelligence. A measure of emotional intelligence developed by Schutte et al. (1998) was employed in the current study. Development of the scale was based on the model of emotional intelligence proposed by Salovey and Mayer (1990). The scale is a 33-item self-report measure that includes items such as "By looking at their facial expression, I recognize the emotions people are experiencing," and "I easily recognize my emotions as I experience them." Respondents use a 5-point scale, on which a "1" represents "strongly disagree" and a "5" represents "strongly agree," to indicate to what extent each item describes them. Schutte et al. (1998) provide extensive validation and reliability evidence and report coefficient alphas in the range of .90. The coefficient alpha for the current study was .92. Table 5 contains a list of all emotional intelligence items that were used in the study. As suggested by the nature of the uni-dimensional emotional intelligence scale (Schutte et al.; 1998), a summation of the items was used in further analyses.

Table 5
Emotional Intelligence Items (EI)

1. I know when to speak about my personal problems to others.
2. When I am faced with obstacles, I remember times I faced and overcame similar obstacles
3. I expect that I will do well on most things I try.
4. Other people find it easy to confide in me.
5. I find it hard to understand the non-verbal messages of other people.
6. Some of the major events of my life have led me to re-evaluate what is important and not important.
7. When my mood changes, I see new possibilities.
8. Emotions are one of the things that make my life worth living.
9. I am aware of my emotions as I experience them.
10. I expect good things to happen.
11. I like to share my emotions with others.
12. When I experience a positive emotion, I know how to make it last.
13. I arrange events others enjoy.
14. I seek out activities that make me happy.
15. I am aware of the non-verbal messages I send to others.
16. I present myself in a way that makes a good impression on others.
17. When I am in a positive mood, solving problems is easy for me.
18. By looking at their facial expressions, I recognize the emotions people are experiencing.
19. I know why my emotions change.
20. When I am in a positive mood, I am able to come up with new ideas.
21. I have control over my emotions.
22. I easily recognize my emotions as I experience them.
23. I motivate myself by imagining a good outcome to tasks I take on.
24. I compliment others when they have done something well.
25. I am aware of the non-verbal messages other people send.
26. When another person tells me about an important event in his or her life, I almost feel as though I have experienced this event myself.
27. When I feel a change in emotions, I tend to come up with new ideas.
28. When I am faced with a challenge, I give up because I believe I will fail.
29. I know what other people are feeling just by looking at them.
30. I help other people feel better when they are down.
31. I use good moods to help myself keep trying in the face of obstacles.
32. I can tell how people are feeling by listening to the tone of their voice.
33. It is difficult for me to understand why people feel the way they do.

PROCEDURE

The administration of the instrument packets was conducted in cooperation with contact members of the targeted organization. Specifically, convenience sampling was employed whereby the contact persons distributed the instrument packets to all hourly and salaried employees in their work units. Respondents completed the instruments during normal work hours, and returned them directly to the researchers using a pre-addressed and pre-paid postage envelope.

STATISTICAL ANALYSES

Following data collection and the factor analysis described previously, a variety of statistical analyses were used to investigate the research questions. First, the multivariate analysis of variance (MANOVA) procedure with post-hoc assessments was conducted to determine if any categorical demographic variables were predictors of workplace aggression. Regression analyses were then used to analyze metric-level variables to identify influences on workplace aggression. Predictor relationships that were analyzed included other demographic variables including age, years with the employer and years in current job. Dispositional affectivity and emotional intelligence were also analyzed as to their influence on workplace aggression. The results of these investigations are presented in the next section.

RESULTS

DEMOGRAPHIC INFLUENCES

Multivariate analysis of variance (MANOVA) was used to determine whether participant groups classified by demographics differed in their predisposition to workplace aggression. Univariate analyses were used to identify significant individual factor contributions. Table 6 contains the results of the MANOVA used to assess demographic influences on workplace aggression in the current study.

Table 6
Significant Demographic Main Effects: Multivariate and Univariate Analyses of Workplace Aggression

Gender	F	Group Means	
		Male	Female
Multivariate: F Approximation	8.439***		
Univariate:			
Verbal Aggression	.018	2.04	1.87
Physical Aggression	19.983***	1.88	1.22
Hostility	1.43	1.93	1.60
Anger	2.35	1.93	1.91

Education	F	Group Means				
		HS	Some College	Bachelor	Masters	Ph.D.
Multivariate: F Approximation	2.372**					
Univariate:						
Verbal Aggression	.352	2.08	1.78	2.02	1.69	1.85
Physical Aggression	.308	1.66	1.31	1.48	1.23	1.48
Hostility	2.268*	2.23	1.48	1.89	1.54	1.47
Anger	.759	2.38	1.89	2.01	1.77	1.76

* $p \leq .05$; ** $p \leq .01$; *** $p \leq .001$

Gender, as expected and supportive of one of our research propositions, was influential on workplace aggression. The MANOVA F approximation of 8.439 (p ≤.001) indicated that being either male or female would influence the level workplace aggression exhibited. Univariate analyses indicated that only the factor representing physical aggression (p ≤ .001) was shown to be significant. Group means indicate that physical aggression is displayed more frequently for males as opposed to females. Verbal aggression, hostility and anger were not influenced by gender.

Education was also shown to significantly influence workplace aggression. The MANOVA F approximation of 2.372 (p ≤ .01) indicated that the level of education would affect the amount of workplace aggression displayed. Univariate analyses indicated that only one workplace aggression factor representing hostility (p ≤ .05) was influenced by education. Group means indicate that those with only a high school education are more likely to feel hostility compared with other groups who have at least some college education. Verbal aggression, physical aggression and anger were not influenced by educational achievement.

Age was found to effect workplace aggression. Regression results indicate that the factor of verbal aggression (Factor 1) was sensitive to the age of the respondent (F = 4.432, p ≤ .05). Further analysis revealed that an inverse relationship exists between the age of the respondent and the level of verbal aggression exhibited. Years worked for the employer and years in current job were also analyzed as to their influence on workplace aggression. No relationships were found for these variables.

DISPOSITIONAL AFFECTIVITY AND EMOTIONAL INTELLIGENCE

Regression analyses were used to investigate the relationships dispositional affectivity and emotional intelligence as predictors of workplace aggression. Dispositional affectivity was analyzed as negative or positive based on the categories provided in Table 4. A check for multicollinearity was conducted to ensure the independence of positive, negative, and emotional intelligence measures used in the study. A collinearity tolerance statistic was generated during the regression analysis for each of the variables entering into the equation. All values were approaching 1.0 indicating that multicollinearity was not impacting on the findings from this analysis (Hays, 1988). Table 7 contains the results of these investigations and will be presented next.

Table 7
Regression Results for Dispositional Affectivity (DA) and Emotional Intelligence (EI) Influencing Workplace Aggression

Predictor Variables	Verbal Aggression (Factor 1) Model $Adj.R^2$	F	Beta	t	Physical Aggression (Factor 2) Model $Adj.R^2$	F	Beta	t	Hostility (Factor 3) Model $Adj.R^2$	F	Beta	t	Anger (Factor 4) Model $Adj.R^2$	F	Beta	t
Negative D A	.164	21.42***			.039	5.21*			.126	16.02***			.120	15.18***		
			.415	4.62***			.220	2.28*			.367	4.00***			.358	3.89***
Positive D A	.025	3.67*			.020	3.16			.091	11.44**			-.007	.28		
			-.186	-1.91*			-.173	-1.77			-.316	-3.38**			-.053	-.536
EI	.012	2.30			.037	5.04*			.043	5.64*			.002	1.15		
			-.148	-1.51			-.216	-2.24*			-.228	-2.37*			-.105	-1.076

* ≤ .05; ** ≤ .01; *** ≤ .001

Verbal aggression (Factor 1) was significantly influenced by both negative (F = 21.42; p ≤ .001) and positive (F = 3.67; p ≤ .05) affectivity. Negative affectivity was associated with an increased level of verbal aggression (t = 4.62; p ≤ .001) in respondent groups. Conversely, positive affectivity had an inverse relationship with verbal aggression (t = -1.91; p ≤ .05). As positive affectivity increased, verbal aggression decreased. Emotional intelligence was not found to influence verbal aggression.

Both negative affectivity (F = 5.21; p ≤ .05) and emotional intelligence (F = 5.04; p ≤ .05) were predictors of physical aggression (Factor 2) in this study. Negative affectivity had a positive influence (t = 2.28; p ≤ .05) on physical aggression. Emotional intelligence had an inverse affect (t = -2.24; p ≤ .05) on physical aggression. Positive affectivity was not shown to influence physical aggression.

Hostility (Factor 3) was affected by negative affectivity (F = 16.02; p ≤ .001), positive affectivity (F = 11.44; p ≤ .001), and emotional intelligence (F = 5.64; p ≤ .05). Negative affectivity had a positive influence (t = 4.00; p ≤ .001) on predicting hostility. The more negative affectivity the more hostility was found. Conversely, positive affectivity (t = -3.382; p ≤ .01) and emotional intelligence (t = -2.37; p ≤ .05) had inverse relationships or a diminishing effect on hostility.

Anger (Factor 4) was found significantly higher when respondents exhibited higher levels of negative affectivity (f = 15.18; p ≤ .001). Positive affectivity and emotional intelligence were not found to affect anger in the current study.

DISCUSSION

Our finding that emotional intelligence is an influential variable on workplace aggression is both noteworthy and compelling. Further, this study is the first of its kind to investigate the impact of emotional intelligence and dispositional affectivity on workplace aggression. Given the sparse research conducted on aggression in the workplace and its predictors, this study provides additional insight into the complexities of workplace aggression. Our results consistently show the impact of emotional intelligence and dispositional affectivity on workplace aggression through regression analysis.

Indeed, our findings supported many of the research questions posited at the outset of this study. Gender was found to be related to workplace aggression. Specifically, as expected, men were more prone than women to engage in physical aggression. This finding is consistent with past research.

Education and age was also found to be associated with workplace aggression. Specifically, the results showed that those individuals with less education were found to feel more hostility as compared to other educational groups. Similarly, age was found to be inversely related to verbal aggression. The fact that younger workers were more inclined to be verbally aggressive may be indicative of the emotional maturity of these participants.

As expected, our finding supports the notion that positive affect is inversely related to workplace aggression. Specifically, it was found that positive affect was associated with a lower incidence of verbal aggression and hostility. The finding has significant selection implications. In addition to being valuable for human resource development, dispositional affectivity evaluation may be useful as a selection tool. Further research may determine optimal dispositional affectivity ranges for various types of workers. Applicants who fall outside these ranges may be unsuitable for careers in potentially volatile occupations. In such cases, these businesses might use dispositional affectivity scales as a tool for use in identifying candidates for certain positions. Evaluation of applicant scores on the dispositional affectivity could provide valid information for selection decisions and could yield information regarding training needs.

Our research confirms that, as expected, individuals with lower emotional intelligence and high negative affect are more likely to engage in aggressive behaviors. Because these individuals are more likely to engage in aggression, organizations should seek to hire and retain employees with high emotional intelligence and low negative affect. Incorporating emotional intelligence and positive dispositional affectivity into daily organizational life will include training for emotional intelligence, revising selection and placement practices, counseling, encouraging constructive behaviors through the organization's performance appraisal and reward structure, and incorporating organizational strategies to reduce situations that might trigger aggression.

Although emotional intelligence may be somewhat influenced by genetic predisposition, research supports the idea that emotional intelligence may be learned (Goleman, 1995; Goleman, 1998; Mayer & Salovey, 1997). Training might be conducted in a group setting to familiarize employees with the concepts of emotional intelligence. Emotional intelligence training involves assessment of the job, assessment of the individual, motivation, self-directed change, performance feedback, practice, support, encouragement, reinforcement, and evaluation (Goleman, 1995). This training should focus on improving employee skills through participation in a non-threatening environment. Once employees gain support by learning in a group setting, they can practice what they have learned and apply emotional intelligence to specific situations in the workplace.

Organizations should adapt their selection practices to recruit and hire people who will engage in constructive behaviors at work. While tight labor markets are a concern, organizations are still careful when considering applicants for select managerial positions. Andersson and Pearson (1999) suggest hiring people whose characteristics are expected to facilitate courteous interaction and curtail aggression. Selecting for emotional intelligence has received recent attention especially among life insurance companies. Seligman and Schulman (1986) showed that optimism, one component of emotional intelligence, impacts the productivity of life insurance agents. Therefore, companies such as Metropolitan Life have begun testing applicants for optimism as a selection tool for life insurance agents (Seligman, 1990). Productivity may increase and aggression may be prevented if organizations are aware of the

aspects of emotional intelligence and dispositional affectivity when selecting employees.

In some cases, employees may require in-depth counseling for emotional intelligence. This counseling would apply to individuals possessing very weak emotional skills, yet who are valued highly by the organization. In-depth training would be conducted on an individual basis to help the employee acquire emotional skills most effectively.

Organizations that train for emotional intelligence should follow through by incorporating these important behaviors into their performance appraisals and reward structures. Emotionally intelligent behaviors that promote adaptive and constructive responses to conflict and stress should be rewarded. The importance of emotional intelligence and positive affectivity should be communicated at all levels of the organization and employees should receive feedback on their efforts to behave constructively in stressful situations.

Another implication of the current research findings is that organizations should adopt strategies to decrease events that might trigger aggression in the work environment. The organization may need to incorporate policies and procedures that encourage a process approach to decreasing workplace aggression. For instance, the organization could make a concerted effort to seek and implement employee suggestions. Employee assistance efforts and fair treatment policies could also positively impact the work environment and reduce triggering events caused by the organization.

CONCLUSION

The exploratory research conducted in this study was intended to be an initial step in identifying individual differences in the process of workplace aggression. Limited empirical data reveals a great need to uncover the mystery of this topic. Although our focus in the current article was on dispositional affectivity and emotional intelligence, two critical variables we propose to influence workplace aggression, we realize further theoretical development and clarification is needed for both of these variables.

Like many studies of this type, this research has specific limitations. First, being relatively new concepts in workplace aggression, emotional intelligence and dispositional affectivity levels are somewhat exploratory in their nature with regard to this topic. Thus, measures of these dimensions require consistent development and evaluation. This factor leads to an important limitation, the measures themselves. The findings and conclusions of this study are obviously limited by the accuracy of the measures. The measurement of emotional intelligence has inherent difficulties. There is potential for socially-desirable response bias even when anonymity controls are in place as they were in the current study. This problem, combined with the issue of self-measurement indicates that perhaps these dimensions require additional evaluation.

Based on these limitations, certain recommendations can be made for future research. First, replications should be conducted to determine whether the scales used in the research are valid and reliable measures of dispositional affectivity and emotional intelligence. To reduce potential self-report bias, each of the measures used in this research might be assessed using customers or managers to evaluate these factors. In addition, emotional intelligence could be compared with other related dimensions that have been analyzed previously in workplace aggression research. A final avenue of future research could focus on additional workplace samples. Subjects could include workers from a variety of occupations.

In light of increasing aggression in the workplace and its associated costs and consequences, there are several compelling reasons for researchers to pursue theoretical development and empirical study in this area. Understanding the complexities of workplace aggression would significantly benefit the organizational environment and society as a whole. Likewise, it would enable organizations of all types to make the most of their valuable human resources.

REFERENCES

Andersson, L. M., & Pearson, C. M. (1999). Tit for tat? The spiraling effect of incivility in the workplace. *Academy of Management Review*, 24(3), 452-471.

Aquino, K., Grover, S. L., Bradfield, M., & Allen, D. G. (1999). The effects of negative affectivity, hierarchical status, and self-determinization on workplace victimization. *Academy of Management Journal*, 42(3), 260-272.

Aspinwall, L. G., & Taylor, S. E. (1992). Modeling cognitive adaptation: A longitudinal investigation of the impact of individual differences and coping on college adjustment and performance. *Journal of Personality and Social Psychology*, 63(6), 989-1003.

Bachman, R. (1994). *Violence and theft in the workplace*. Washington, D.C.: Bureau of Justice Statistics, U.S. Department of Justice.

Ballard, R. (1992). Short forms of the Marlowe-Crowne social desirability scale. *Psychological Reports*, 71, 1155-1160.

Bartlett, M. S. (1950). Tests of significance in factor analysis. *British Journal of Statistical Psychology*, 3, 77-85.

Baron, R. A., & Neuman, J. H. (1996). Workplace violence and workplace aggression: Evidence on their relative frequency and potential causes. *Aggressive Behavior*, 22, 161-173.

Berry, D. S., & Hansen, J. S. (1996). Positive affect, negative affect, and social interaction. *Journal of Personality and Social Psychology*, 71(4), 796-809.

Bulatao, E., Q., & VandenBos, G. R. (1996). Workplace violence: Its scope and the issues. In G. R. VandenBos & E. Q. Bulatao (Eds.), *Violence on the job: Identifying risks and developing solutions*. Washington, DC: American Psychological Association.

Burke, M. J., Brief, A. P., & George, J. M. (1993). The role of negative affectivity in understanding relations between self-reports of stressors and strains: A comment on the applied psychology literature. *Journal of Applied Psychology*, 78(3), 402-412.

Buss, A. H., & Perry, M. (1992). The aggression questionnaire. *Journal of Personality and Social Psychology*, 63(3), 452-459.

Caspi, A., Moffitt, T. E., Silva, P. A., Stouthamer-Loeber, M., Krueger, R. F., & Schmutte, P. S. (1994). Are some people crime-prone? Replications of the personality-crime relationship across countries, genders, races, and methods. *Criminology*, 32, 163-195.

Chen, P. Y., & Spector, P. E. (1991). Negative affectivity as the underlying cause of correlations between stressors and strains. *Journal of Applied Psychology*, 76(3), 398-407.

Comrey, A. L. (1973). *A First Course in Factor Analysis*. Academic Press: New York,NY.

Cropanzano, R., James, K., & Konovsky, M. A. (1993). Dispositional affectivity as a predictor of work attitudes and job performance. *Journal of Organizational Behavior*, 14, 595-606.

Crowne, D. P., & Marlowe, D. (1960). A new scale of social desirability independent of psychopathology. *Journal of Consulting Psychology*, 24(4), 349-354.

Diener, E., & Emmons, R. A. (1985). The independence of positive and negative affect. *Journal of Personality and Social Psychology*, 47(5), 1105-1117.

Dua, J. K. (1993). The role of negative affect and positive affect in stress, depression, self-esteem, assertiveness, Type A behaviors, psychological health, and physical health. *Genetic, Social & General Psychology Monographs*, 119(4), 517-552.

Feldman Barrett, L., & Russell, J. A. (1998). Independence and bipolarity in the structure of current affect. *Journal of Personality and Social Psychology*, 74(4), 967-984.

Fisher, C. D. (2000). Mood and emotions while working: Missing pieces of job satisfaction? *Journal of Organizational Behavior*, 21, 185-202.

Fox, S. (2000). *Where's the intelligence in "emotional intelligence?"*. Paper presented at the Academy of Management Annual Meeting, Toronto, Ontario.

Friedman, H. S., & Miller-Herringer, T. (1991). Nonverbal display of emotion in public and in private: Self-monitoring, personality, and expressive cues. *Journal of Personality and Social Psychology*, 61(5), 766-775.

Gable, S. L., Reis, H. T., & Elliot, A. J. (2000). Behavioral activation and inhibition in everyday life. *Journal of Personality and Social Psychology*, 78(6), 1135-1149.

Gardner, W. L., Rozell, E. J., & Barnes, J. H. (1999). *Dispositional affectivity and explanatory style as predictors of work attitudes, behavior, and performance*. Paper presented at the Academy of Management Meetings, Chicago, Illinois.

George, J. M. (1992). The role of personality in organizational life: Issues and evidence. *Journal of Management*, 18(2), 185-213.

Goleman, D. (1995). *Emotional intelligence*. New York: Bantam Books.

Goleman, D. (1998). W*orking with emotional intelligence*. New York: Bantam Books.

Hair, J.E., Anderson, R.E. & Tatham R.L. (1987). *Multivariate Data Analysis* (2nd Ed.). Macmillan: New York.

Hays, W.L. (1988). *Statistics* (4th Ed.). Holt, Reinhart and Wilson: New York.

Kaiser, H. F. & Rice, J. (1974). Little Jiffy Mark IV. *Educational and Psychological Measurement*, 34, 111-117.

Leith, K. P., & Baumeister, R. F. (1996). Why do bad moods increase self-defeating behavior? Emotion, risk taking, and self-regulation. *Journal of Personality and Social Psychology*, 71(6), 1250-1267.

Lennings, C. J. (1997). Adolescent aggression and imagery: Contributions from object relations and social cognitive theory. *Adolescence*, 31(124), 831-840.

Levin, K., & Stokes, J. P. (1989). Dispositional approach to job satisfaction: Role of negative affectivity. *Journal of Applied Psychology*, 74, 752-758.

Marcus-Newhall, A., Pedersen, W. C., Carlson, M., & Miller, N. (2000). Displaced aggression is alive and well: A meta-analytic review. *Journal of Personality and Social Psychology*, 78(4), 670-689.

Mayer, J. D., & Geher, G. (1996). Emotional intelligence and the identification of emotion. *Intelligence*, 22, 89-113.

Mayer, J. D., & Salovey, P. (1993). The intelligence of emotional intelligence. *Intelligence*, 17, 433-442.

Mayer, J. D., & Salovey, P. (1995). Emotional intelligence and the construction and regulation of feelings. *Applies & Preventive Psychology*, 4, 197-208.

Mayer, J. D., & Salovey, P. (1997). What is emotional intelligence? In P. Salovey & D. Sluyter (Eds.), *Emotional development, emotional literacy, and emotional intelligence*. New York: Basic Books.

Moyle, P. (1995). The role of negative affectivity in the stress process: tests of alternative models. *Journal of Organizational Behavior*, 16, 647-668.

Narayanan, L., Menon, S., & Spector, P. E. (1999). Stress in the workplace: A comparison of gender and occupations. *Journal of Organizational Behavior*, 20, 63-73.

Neuman, J. H., & Baron, R. A. (1998). Workplace violence and workplace aggression: Evidence concerning specific forms, potential causes, and preferred targets. *Journal of Management*, 24(3), 391-419.

Nunnally, J. C. (1978). *Psychometric Theory*, McGraw-Hill; New York.

Ohbuchi, K.-I., & Ohno, T. (1993). Empathy and aggression: Effects of self-disclosure and fearful appeal. *Journal of Social Psychology*, 133(2), 243-253.

O'Leary-Kelly, A. M., Griffin, R. W., & Glew, D. J. (1996). Organization-motivated aggression: A research framework. *Academy of Management Review*, 21(1), 225-253.

Russell, J. A., & Carroll, J. M. (1999a). On the bipolarity of positive and negative affect. *Psychological Bulletin*, 125(1), 3-30.

Russell, J. A., & Carroll, J. M. (1999b). The phoenix of bipolarity: Reply to Watson and Tellegen (1999). *Psychological Bulletin*, 125(5), 611-617.

Russell, J. A., & Feldman Barrett, L. (1999). Core affect, prototypical emotional episodes, and other things called emotion: Dissecting the elephant. *Journal of Personality and Social Psychology*, 76(5), 805-819.

Salovey, P., & Mayer, J. D. (1990). Emotional intelligence. *Imagination, Cognition, and Personality*, 9, 185-211.

Schaubroeck, J., Ganster, D. C., & Fox, M. L. (1992). Dispositional affect and work-related stress. *Journal of Applied Psychology*, 77(3), 322-335.

Schutte, N. S., Malouff, J. M., Hall, L. E., Haggerty, D. J., Cooper, J. T., Golden, C. J., & Dornheim, L. (1998). Development and validation of a measure of emotional intelligence. *Personality and Individual Differences*, 25, 167-177.

Seligman, M. E. P. (1990). *Learned optimism*. New York: Pocket Books.

Seligman, M. E. P., & Schulman, P. (1986). Explanatory style as a predictor of productivity and quitting among life insurance sales agents. *Journal of Personality and Social Psychology*, 50(4), 832-838.

Smith, S., Mullis, F., Kern, R. M., & Brack, G. (1999). An Adlerian model for the etiology of aggression in adjudicated adolescents. *Family Journal*, 7(2), 135-147.

Staw, B. M., Bell, N. E., & Clausen, J. A. (1986). The dispositional approach to job attitudes: A lifetime longitudinal test. *Administrative Science Quarterly*, 31, 56-77.

Stewart, D. W. (1981). The application and misapplication of factor analysis in marketing research. *Journal of Marketing Research*, 18, 51-62.

Sutton, S. E., Cowen, E. L., Crean, H. F., & Wyman, P. A. (1999). Pathways to aggression in young, highly stressed urban children. *Child Study Journal*, 29(1), 49-67.

Watson, D. (1988a). Intraindividual and interindividual analyses of positive and negative affect: Their relation to health complaints, perceived stress, and daily activities. *Journal of Personality and Social Psychology*, 54(6), 1020-1030.

Watson, D. (1988b). The vicissitudes of mood measurement: Effects of vaying descriptors, time frames, and response formats on measures of positive and negative affect. *Journal of Personality and Social Psychology*, 55(1), 128-141.

Watson, D., & Clark, L. A. (1988). Development and validation of brief measures of positive and negative affect: The PANAS scales. *Journal of Personality and Social Psychology*, 54(6), 1063-1070.

Watson, D., Clark, L. A., & Carey, G. (1988). Positive and negative affectivity and their relation to anxiety and depressive disorders. *Journal of Abnormal Psychology*, 97, 346-353.

Watson, D., & Tellegen, A. (1985). Toward a consensual structure of mood. *Psychological Bulletin*, 98, 219-235.

Midwestern Business and Economic Review

Manuscript Submission Guidelines

The *Midwestern Business and Economic Review* invites submission of original manuscripts and research by individuals in the public and private sector in the areas of economics and business administration. Of particular interest are topics dealing with issues relevant to Texas and the Southwestern United States. Each manuscript submitted is anonymously reviewed by members of the Editorial Review Board and *ad hoc* reviewers as needed. To meet the interest of a broad spectrum of the academic and business community, readability and expository clarity are considered essential in the review process.

All manuscripts submitted for review must meet the following guidelines

- The manuscript should be doubled spaced, 12 point Times New Roman, with 1" margins, and should not exceed fifteen pages, excluding tables, figures, and references
- The first page should include the title of the article and an abstract 50-75 words in length
- Endnotes are preferred over footnotes
- References should follow the *American Psychological Association* guidelines
- All tables and figures should be included on separate pages

A cover letter should be included with the submission containing the following:

- Title of the manuscript
- Name, degree, rank, and affiliation of each author
- Contact information for each author (mailing address, telephone number, and email address)

Four copies of each manuscript must be accompanied by a PC compatible electronic copy of the manuscript formatted in Microsoft® Word or rich-text (RTF) formats.

All manuscripts should be submitted to:

Editor, *Midwestern Business and Economic Review*
Bureau of Business and Government Research
Midwestern State University
3410 Taft Boulevard
Wichita Falls, Texas 76308-2099

Bureau of Business and Government Research
Midwestern State University
3410 Taft Boulevard
Wichita Falls, TX 76308-2099

ADDRESS SERVICE REQUESTED