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Analysis of casino table game tipping by Comdex conventioneers

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ANALYSIS OF CASINO TABLE GAME TIPPING

BY COMDEX CONVENTIONEERS

by

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ABSTRACT

Analysis of Casino Table Game Tipping by Comdex Conventioneers

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This study analyzed the mean tips earned per table game dealer of a mega-resort casino located on the Las Vegas "strip" during Comdex, a large annual computer convention located in Las Vegas. Members of the media and gaming authorities have claimed that Comdex conventioneers do not gamble or tip as much as most convention attendees, yet no substantiated and documented explanation has been offered to explain why. This study hypothesized that Comdex conventioneers have the "programmer personality," which is low in the personality dimensions of neuroticism and extraversion. Since the amount tipped has been shown to positively correlate with high levels of neuroticism and extraversion, lower levels of tip revenue should be observed if the "programmer personality" prevails among Comdex conventioneers. However, the results of the investigation failed to find lower mean tips earned per dealer during Comdex over a three year period.

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CHAPTER 1

INTRODUCTION

The author would have liked to analyze the casino table game tipping of Comdex conventioneers. Unfortunately, management in the gaming industry considers any gaming related data sensitive and not for public use. Therefore, the approach of this study was indirect. My purpose was to increase our understanding of the phenomenon of tipping. The field of psychology has relatively few studies analyzing the psychological origins of tipping, so the aim of the study was to add depth to both the understanding of the psychological motivation of tipping and to the personality characteristics which contribute to this motivation. The results of this study may add to the art of earning tips for the numerous service employees, whose wages depend upon tipping. In addition to service employees, casino management, which must tailor its business toward gaming revenue, may also have an interest in the results of this study due to the direct relationship between gaming revenue and tipping proceeds.

Studies in the gaming industry are severely limited by the reluctance of casino management to provide data or assistance. Consequently, the present study obtained its tip data from a table game employee of a Las Vegas casino. The exceptional size of the Comdex Convention in Las Vegas (approximately 200,000 people), may allow for an individual casino in Las Vegas to record an economic impact from this population of conventioneers. It was the intention of this study to measure this impact in comparison

with the normal gambling population. This experimental design unfortunately presents numerous confounding variables and compares samples of quasi-representative groups. Therefore, the purpose of this study was merely to provide prelimenary evidence in support of a hypothesis explaining the Comdex Conventioneers reputation of causing reduced tip revenue.

The History of Tipping

Because a consideration of motives for tipping is of interest to this study, it is important to explore the history of tipping, as it pertains to its development and evolution. Unfortunately, gathering reliable data on the history of tipping from the Middle Ages through to the early 20th century is limited by several factors. First, the history of tipping has not been an area of strong political, historical, or scientific attention. Second, the area of tipping has historically been primarily of concern to servants and the working class and thus has lacked institutional sponsorship. Furthermore, social changes within the history of tipping were gradual and thus less news worthy (Segrave, 1998). Consequently, the history of tipping before the 20th Century has been scattered among hundreds of newspaper articles, which have been written over the past centuries. Fortunately, Segrave has written a comprehensive compilation of the history of tipping in his book published in 1998. The present study is relying on Segrave for the majority of its historical account of tipping, due to a lack of more comprehensive and effective resources, and thus the study is subject to the biases inherent in Segrave's work.

Tipping is believed to have originated in Europe in the Middle Ages. This was a time of paternalism and wardship. In its earliest use, tipping consisted of the master or lord of the manor giving his own servants a small sum of money during a time of

hardship, such as a family illness, or for work above and beyond the servants usual duties. Thus, tipping came to mean a gratuity given for additional service or effort. Over the centuries the custom became more prominent and burdensome for the tippers. During the period of Tudor England (1485-1603), visitors to private houses were expected to leave tips, called "vails" at the time, to the servants of the house at the end of their stay. This practice became increasingly common, to the degree that visitors became sparse, doctors made less house calls, and at least one lord (who was in the practice of sharing in his servants vails) would have large and frequent parties to supplement his income (Segrave, 1998).

As the custom of tipping evolved, members of the working class struggled to increase the prevalence of the custom, while there is record of a number of attempts by masters to abolish the practice of tipping. Efforts of working class members to increase tips ranged from making impolite comments to rioting in London in 1764. This riot took place because many of the masters in London would not allow their servants to accept vails. Thus, at the Ranelagh House the coachmen, footmen, valets, and other servants reportedly broke the lamps and windows of the manor and then physically attacked the guests and master. The servants attacked with brick-bats and were eventually run through with swords. Despite these extreme measures the prevalence of tipping continued to thrive (Segrave, 1998).

In America, a similar economic struggle was occurring. The custom of tipping servants was imported from Britain. However, Americans are given credit for increasing the amount of tips. When traveling abroad in Europe they would tip larger amounts than what was custom in Britain or elsewhere. After World War I, the controversy of whether

to tip servants abated because fewer people were able to bear the expense of sustaining huge estates with servants (White, 1956).

The term "tip" may have originated in the 16th century as an acronym from the phrase "to insure promptitude." This phrase was printed on boxes in English taverns, and was later shortened to its acronym, "TIP." Later in the 18th century, a coffee house in London reportedly placed a bowl on each table with the same phrase printed upon it. The word "tip" also has various linguistic relations that may indicate its origin. For example, "stips" is a Latin word meaning gift, and "tip" in many foreign languages is associated with drinking (*Gratuitous gratuity*, 2000).

The Oxford English Dictionary, whose first entry on "tip" dates to the 18th century, defines a tip as "a small present of money given to an inferior, especially to a servant or employee of another for a service rendered or expected." Although tipping began with the traveling aristocracy in the age of paternalism, when it was common and natural to regard servants as inferior; the Oxford English Dictionary's (1989) edition still defines a tip as a gift to an inferior, despite the rise of wage labor in industrial capitalism (Segrave, 1998).

The practice of tipping has evolved and reinvented itself numerous times since its inception. Check concessions (the service of holding one's hat and coat, usually at a restaurant), and washroom concessions were common at fine restaurants in the early 20th century. The practice of check concessions was invented in America. Restaurant and hotel owners have been quick to capitalize on the practice of tipping as well. Many owners instituted the policy of making their service employees rely entirely on tips, or charging their workers for the privilege of working for tips. The distribution of tips has also been an issue. The owners of some establishments have claimed all tips as property

of the house. However, these efforts at confiscation were usually discouraged by reduced revenue from employees who would hide their tips from management or from the resultant bad publicity for management (Segrave, 1998).

In 1895, it was common for waiters in Europe to receive no salary at all. This made servers entirely dependent on tips to make a living, and created the need to standardize the tip process. In Europe the standard tip became 5% of the bill, in contrast to America at 10% plus wages. Although, some expensive American restaurants reportedly had waiters paying for the privilege of working as late as 1902 ("Americans blamed," 1908).

Countless attempts have been made over the centuries to abolish the practice of tipping. These efforts have included: businesses posting signs forbidding it; newspaper articles condemning it; and governments passing laws which made tipping a misdemeanor offense. In fact, in the early 20th century the states of Mississippi, Washington, Arkansas, Tennessee, and Iowa made tipping illegal and punishable by fines and or jail time. All of these laws were later repealed between the years 1919 to 1926. Despite the numerous efforts to eliminate the practice of tipping, the "great motivater of money" has persevered throughout the decades, and remains a strong and entrenched custom of society today (Segrave, 1998).

Theories of Tipping

A recent poll reported that 40% of Americans hate to tip, yet Americans are renown for being the world's most lavish tippers. In America alone, tipping yields 16 billion dollars per year. Why do the vast majority of Americans tip, when 40% say that they hate the practice (*Gratuitous gratuity*, 2000)? A logical analysis of tipping reveals

that tipping, unlike most economic transactions, is a non-obligatory payment for a service that has already been received. The widespread payment of these avoidable expenses truly makes the practice of tipping an interesting phenomenon. The lack of rationale behind the custom of tipping indicates that psychological and sociological motivations influence the prevalence of this custom in each culture (Lynn, 2000).

Surveys have shown that people feel tips are supposed to be an incentive or reward for good service. However, Seligman compared the results of numerous studies which showed that tip size is only very weakly related to service quality (the mean was $r = .13$). In fact, it has been reported that only 4% of the variability in tips can be explained by the evaluated level of service (Seligman, 1998). If research has shown that tips are not given for the reason that most people say that they are, then this leaves open what motivates people to tip.

Bodvarson and Gibson (1997) attempted to explain the phenomenon of tipping using neo-classical economics. They surveyed nearly 700 diners in seven Minnesota restaurants. The results of their study were inconclusive, and the authors admitted that they were unable to explain the phenomenon of tipping via neo-classical economics, as they had intended. Despite the overall failure of the study, it was able to derive some basic conclusions and demonstrate that an in-depth explanation of tipping cannot be derived from economics. Among the basic conclusions of this study were the findings that lone diners tip more, and that people follow a standard (e.g., tip = 15% of the bill). Regression of the amount of tips on a constant clearly indicates that the size of the bill is the most important variable in determining the tip.

Lynn and Graves (1996) arrived at a similar conclusion. They collected interview data on several situational variables of subjects patronizing a restaurant in order to

discover the determinants of tip size. A total of 161 interviews were retained for analysis. Using a simultaneous multiple regression model the significance of various variables was determined. Results indicated that bill size was the single largest predictor of tip size, which suggests that tipping is primarily norm-driven behavior.

Lynn and Latane (1984) examined the relationship of several variables to the percent tipped. Their data were gathered via interviews with 169 diners and with records kept by servers. Results showed that the percent tipped was related to various customer variables such as group size, the customer's gender, and the method of payment (cash or credit). However, tipping was not related to non-customer variables such as: service quality, service effort, server's gender, restaurant atmosphere, or restaurant food. These results further indicate that, contrary to popular belief, tips are largely determined by social and psychological factors related to the customer, and not variables connected to the server or the restaurant.

A cultural analysis of tipping shows extreme differences among countries. The act of tipping can yield a variety of very different reactions. For example: in North Korea, one can be arrested; in China it has been outlawed; in Japan it is frowned upon; in Scandinavian countries it is considered an insult to a waiter; and in the Vatican City it is expected, as it is in most of Europe and America (*Hot tip*, 1998).

One investigator who has examined the phenomenon of tipping from a cultural perspective is Lynn. In one of his more than 25 scholarly articles (Lynn, 1994), he conducted a cross-cultural study comparing the level of neuroticism of a country to the number of professions that are tipped in the country. After removing 5 of the 18 countries as outliers, the results produced a large positive and statistically significant correlation ($r = .86$, $p < 0.0002$). Of the 5 outliers that were removed, 4 had a greater

number of tipped professions than would be expected from their neuroticism scores, and all 4 of these countries share a common cultural and political heritage, which may explain their deviation from the strong correlation of the other 18 countries. The results appear to support Lynn's hypothesis that neuroticism is directly related to the prevalence of tipping within a country. National levels of neuroticism in this study were taken from Lynn & Hampson's previous study (1975), which derived neuroticism levels from theoretically relevant demographic and epidemiological data, such as national rates of alcoholism and suicide. Neuroticism has been correlated with embarrassability, shame, self-consciousness, and anxiety. All of these traits are capable of producing the motivation for an individual to adhere to a social standard such as tipping 15% of the cost of the services (Lynn, 1994).

Several years later, Lynn (2000) conducted a subsequent study to replicate the previous study's conclusions. He used a more conventional measure for neuroticism. Data from several sources were compiled on the Eysenck Personality Questionnaire (EPQ), in order to determine national averages for 21 nations. The EPQ is designed to measure personality on three dimensions: neuroticism, extroversion, and psychoticism. The national averages were used as predictor variables for the prevalence of tipping within each nation. The prevalence of tipping was derived from Star's (1988) International Guide to Tipping. A regression analysis using Rousseeuw's least median of squares method found 2 of the 21 countries to have standardized residuals from the regression line below -3.0. Thus, Japan and Iceland were deleted from the sample as significant outliers. An analysis of the remaining 19 countries showed that the number of tipped professions correlated at $r = .32$ ($p < .20$) with national extraversion, at $r = .56$ ($p < .02$) with national neuroticism, and at $r = -.06$ ($p < .80$) with national psychoticism.

Furthermore, a simultaneous multiple regression analysis of the number of tipped professions on national levels of extraversion, neuroticism, and psychoticism yielded a model R^2 of 62% ($F(3,15) = 8.08$, $p < .005$) along with significant regression coefficients for national levels of extroversion (Beta = .50, $t(15) = 3.03$, $p < .01$), neuroticism (Beta = .77, $t(15) = 4.45$, $p < .001$), and psychoticism (Beta = -.40, $t(15) = 2.28$, $p < .04$). Overall the results of Lynn's study supported the hypothesis that high national levels of extroversion and neuroticism correlate with a higher number of tipped professions in most countries (Lynn, 2000).

Tipping and the Gaming Industry

Las Vegas is a city heavily invested in the service industry. In fact, many of the aging service employees long for the old days when organized crime had a strong presence, tips were higher and were undeclared. Over the last few decades organized crime has been replaced with large corporations, corporations which have changed Las Vegas into more of a family-oriented vacation spot. In the late 1980's, the federal government started sending investigators into the service industries of Las Vegas to collect an estimated statewide revenue of an additional $60 million dollars annually in undeclared tips. The federal government had to derive an estimate for each resort because tips can vary significantly from one to another. Throughout the 1990's, the IRS has been urging casino managers to establish "tip contracts" with the IRS or to have the casinos pool all tips and distribute them via a paycheck so that the full amount can be taxed. Before the IRS's investigations the vast majority of casino table game dealers were keeping their own tips (Berns, 1995). Today, no Las Vegas dealers at the large resorts keep their own tips. Instead, the tips are pooled and distributed as cash (in an envelope on

a daily basis), or via a paycheck (usually on a bimonthly basis). Variation also exists in the manner that the tips are pooled for distribution. Tips may be pooled for each shift individually (day, swing, and graveyard), for all shifts for a 24 hour period, or for an entire week depending on what management decides (*From the...*, 1998).

A substantial amount of Las Vegas gaming revenue comes from its continuous stream of conventions; the largest and best known of which is Comdex. Comdex is an acronym for Computer Dealer Expo. The Comdex convention is the nation's largest trade show, which showcases computers and technology. The convention was created in 1979 by Sheldon Adelson. Typically, Comdex brings an excess of 200,000 industry executives, engineers, programmers, and other computer related workers to Las Vegas (Simpson, 2000).

Conventioneers of Comdex are known for not gambling, and the casino companies are aware of their lack of interest in gambling and tipping at the tables. Jan Jones, a spokeswoman for Harrah's Entertainment Inc. (the second-largest U.S. casino operator), commented on Comdex, "As a group, they just aren't big gamblers. We don't get as much casino business from them as we do from some other groups." The casino industry has found a way of making up for the lost gaming revenue. A typical hotel room on the Strip costs $279 per night during the Comdex convention. The following week, before the Thanksgiving rush, the same room will cost about $50 per night (Bloomberg, 1999). Gaming executives are aware of the Comdex conventioneer's lack of interest in gambling, yet a review of the literature shows that they are unable to provide an explanation for this lower interest.

The extrordinary size of the Comdex convention creates a unique scenario in Las Vegas. Typically the size of the week-long Comdex convention is equal to the average

monthly number of visitors to Las Vegas. All hotel rooms that are available to the general public sell out for the entire week. The lack of availability of hotel rooms combined with the significant increase in the price of the rooms, can be a strong deterrent for the average tourist. The result is that the usual population of tourists is replaced by conventioneers from Comdex during the week in November when Comdex is held. In fact, the Las Vegas Convention and Visitor Authority recorded that for November 1998 the number of convention room nights was 1,216,633, which is almost double the monthly average for 1998 of 642,416. Naturally this rise above the average is attributed to Comdex, which is further reflected by November's monthly number of tourist room nights (vs. convention) being 579,894 below the 1998 monthly average (Las Vegas Convention and Visitors Authority, 2000). The concentrated population of individuals with a connection to the computer industry visiting the unique environment of Las Vegas produces an interesting opportunity for analysis.

The Programmer Personality

Pocius (1991) conducted an extensive review of the literature on personality factors in human-computer interaction. One of his findings was that introverts and individuals with traits characterizing the introvert tended to perform better in computer programming courses. In addition, a low level of stress and anxiety appeared to be positively related to programming aptitude and achievement (1991). Therefore, there is evidence to suggest that an individual with the personality characteristics of introversion and low levels of neuroticism is associated with interest or skill at performing computer-related tasks.

Although only a few studies have been conducted on the "programmer personality," the term, "programmer personality" has become a cliché. Pocius's review of the literature examined the "programmer personality" via a comparison of the programmer to the general population using Jungian personality dimensions. According to Poicus, it is estimated that in the United States 75% of the general population show a preference for extroversion, while 67% of the computer professionals surveyed were introverts (Pocius, 1991).

Kagan and Pietron (1986) conducted an experiment on 90 students enrolled in a computer literacy course called "Computers in Business." This course was designed to teach non-computer science majors how to use basic software related to their field. The students were given a Programming Aptitude Test, The Compulsiveness Inventory (which contains three subscales: Indecision and Double-checking, Order and Regularity, and Detail and Perfectionism), and The Dispositional Stress Scales (containing five sub-scales: Overload, Lack of Self-confidence, Time Urgency, Need to Keep Busy, and Anxiety). Results showed significant correlations for individuals with high scores on the Overload (stress) and Order and Regularity (compulsiveness) scales, who performed poorly on the Programming Aptitude Test. The degree to which the sub-scales of Overload (stress) and Order and Regularity (compulsiveness) reflect neuroticism, is the degree to which these results suggest that individuals with high levels of neuroticism would perform poorly on the Programming Aptitude Test. Thus, these results further suggest that aptitude in the skill of programming is associated with low levels of neuroticism.

Hypothesis

The hypothesis of this study is that mean tips per dealer received during Comdex for each day of the week are significantly less when compared to that day of the week's average for the rest of the year. The present study intends to determine whether over the almost three year period from 1996 through 1998, the daily average tip earned per dealer's eight hour shift when the Comdex convention is in Las Vegas will be significantly less than the dealers daily average tip earned per shift during their absence. A review of the literature has indicated a positive correlation between the prevalence of tipping and high levels on the personality dimensions of neuroticism and extroversion. Furthermore, the "programmer personality," has been correlated with introversion and characteristics which are the antithesis of neuroticism. The city of Las Vegas presents a unique opportunity to examine the interaction of these correlations, which would not be possible if the Comdex convention was not exceptionally large. If the Comdex convention has the effect of replacing tourists with a large number of individuals with the "programmer personality," then the interaction of personality correlations should create the senario for reduced mean tip revenue per dealer.

CHAPTER 2

METHOD

The data for this study are archival, consisting of the personal tip record of an employee at a major Las Vegas casino. The employee kept track of his tips by writing down the daily amounts, and later transcribing them to a spreadsheet. On days that this employee did not work he was able to obtain the tip amount from a calendar that was posted in the break-room. Thus, the daily tip amounts were publicly available to employees, and the spreadsheet record was made available to the author of the present study.

The casino selected for this study is located on the Las Vegas "strip," and is considered a "Mega-resort." This casino's location makes it attractive to conventioneers because of its close proximity to the Las Vegas Convention Center. Typically, the standards of achieving mega-resort status include: 1000 or more rooms, large casino with 50 or more table games, numerous restaurants, large race/ sports book, luxurious pool, live shows, and several lounges/ bars. Mega-resorts have casinos, restaurants, and bars open 24 hours a day.

While the dependent variable in this study is a daily measure of the average tip proceeds earned per dealer's eight hour shift, it is not a measure of tipping for the populations being studied. The dependent variable consists of the average tips earned by a table game dealer for working eight hours at the casino in question. The dependent

variable is based on the pooling of all the tips earned by table game dealers for a 24-hour period. The tips are pooled by a group of dealers appointed to be members of the Toke Committee. The Toke Committee is responsible for pooling, counting, calculating, and distributing tips. The pooled daily tips are collected and totaled. This total is then divided among the dealers who worked in that 24 hour period, (total daily tips collected/ number of dealer hours worked x 8 = dependent variable for each day). The study was limited to this dependent variable because of a lack of access to a direct measure of tipping. The two factors influencing the tip data are: 1) the total amount of tips collected, which is the measure of interest, and 2) the number of dealer hours worked. The number of dealer hours worked is a confounding variable, but its influence is limited by a control provided by casino management. It is in the best interest of management to keep the player/ dealer ratio low. In other words, if there is a lack of players in the casino, then casino management will send dealers home. This helps to keep the player/ dealer ratio relatively constant. Thus, the dependent variable is a number reflective of the mean tips earned per dealer shift from patrons for any given day. Analyzing this daily measure over almost a three-year period from January 1, 1996 to December 27, 1998 permits an examination for a correlation between the presents of the Comdex Convention population and the mean tipping proceeds earned per dealer on a daily basis in a Las Vegas casino.

CHAPTER 3

RESULTS

Table 1 displays the mean tips earned per dealer in dollars both during Comdex days (n = 21), and during Non-Comdex days (n = 1071) based on the day of the week. Over this almost 3 year period, from January 1, 1996 to December 27, 1998, the average tip for a Comdex day was $101.4 (SD = 18.7), while the average tip for a non-Comdex day was $100.2 (SD = 29.6).

Table 1

Mean Tips Earned Per Dealer in Dollars With Comdex Present and Without Comdex Present

	Day of the Week							
Group	Mon.	Tues.	Wed.	Thur.	Fri.	Sat.	Sun.	Total
Comdex	111.7	86.0	83.0	98	102.7	102	126.3	101.4
Non-Comdex	94.1	83.3	89.1	94.3	111.1	119.5	110.1	100.2

The relatively high standard deviation for the dependent variable (SD = 29.4), was expected to be largely explained by consistent variations among the days of the week, yet the standard deviation scores for each individual day of the week ranged from 24.5 to 32.6. This variation can be largely accounted for by examining the range of mean scores for the days of the week (M = 83.2 to 119.2), and for the months of the year (M = 87.3 to 110.1).

Table 2 provides a summary of the results of the two-way analysis of variance, which only yielded one significant finding. This table shows the day of the week variable was significant F (6, 1091) = 2.49, $p < .05$. The Comdex variable and the interaction of the Comdex and day of the week variables both received an F score which was less than 1.

Table 2

Summary Table for Two Way ANOVA

Source	df	SS	MS	F	Sig.
D (Day of the Week)	6	10789.220	1798.203	2.49	.021*
C (Comdex vs. Non-Comdex)	1	29.603	29.603	< 1	.840
D X C	6	3170.319	528.386	< 1	.624
Error	1078	778090.065	721.790		
Total	1091				

Note. D = day of the week; C = Comdex vs Non-Comdex.

* $p < .05$

CHAPTER 4

DISCUSSION

The hypothesis of this study was not supported by the results. In fact, contrary to the hypothesis, mean tips earned per dealer during Comdex were slightly higher than during the Non-Comdex period by $1.20. The day of the week variable reported a significant finding F (6, 1091) = 2.49, $p < .05$. This significance can be better understood by comparing the Non-Comdex mean tips per dealer from Friday, Saturday, and Sunday to the rest of the week. The highest average from the rest of the week is $94.30 on Thursday, while the lowest average from Friday, Saturday, and Sunday is Sunday's average of $110.10. The discrepancy of weekday to weekend mean does not represent any direct relevance to the hypothesis of this study.

This study hypothesized that the massive Comdex convention brings an insurgence of clientele with the "programmer personality," which would negatively affect tipping revenue because these individuals would have personalities low in neuroticism and extraversion (personality traits that research has indicated to be positively correlated to tipping). This study was unable to control for the contingency of these individuals low in neuroticism and extraversion not gambling at all. In fact, casinos would typically react by closing tables in the casino to keep the dealer/ player ratio low, which would make the Comdex sample much smaller and composed of fewer individuals with the programmer personality.

When analyzing the results of this study it is important to consider that throughout the Comdex Convention Las Vegas is virtually at full capacity for accommodating visitors (Bloomberg, 1999). The city-wide hotel and motel occupancy percentage for 1996-1998 is below full capacity at 87.5% (Las Vegas Convention and Visitors Authority, 2000). Thus, despite the increased number of visitors during Comdex in Las Vegas, the results of this study show no significant increase in mean tips per dealer.

This study theorized that Comdex Conventioneers would consist of a population with a high occurrence of the programmer personality. The proportion of Comdex Conventioneers with the programmer personality is unknown, thus it is possible that this proportion is low, or that Comdex Conventioneers without the programmer personality consists of a confounding population which could skew the results, such as wealthy business owners. Thus, potentially causing the results of this study to misrepresent its underlying theories.

Due to a lack of more appropriate and representative data the present study has several limitations that limit the scope and strength of its results. These limitations include: an n of 1; a dependent variable confounded by variation in the player/ dealer ratio; a Comdex sample that does not consist solely of Comdex Conventioneers; a virtually unlimited number of potential confounding variables; a conventioneer of Comdex is associated with computers, but does not necessarily have the programmer personality; an unlimited set of alternative explannation for Comdex Conventioneers not gambling or tipping; and a set of data and research which is highly correlational, and thus may not be used to create causal connections. The present study was conducted despite its limitations, due to a perceived lack of adequate explanations for why Comdex Conventioneers create a scenario of reduced gaming revenue.

Although the results of this study did not support the hypothesis, the results do not necessarily negate the theories which the hypothesis was based upon. The hypothesis stated that the average tips earned per dealer during Comdex for each day of the week are significantly less when compared to that day of the week's average for the remaining portion of the year. However, this essentially compares a population high in conventioneers with the standard Non-Comdex population, which this paper has provided evidence to show that it is lower in conventioneer traffic. Therefore, if Comdex Conventioneers were compared with other Non-Comdex Conventioneers, then the results of this study would not be confounded by the interaction of vacationers. The interaction of vacationers represents one flaw in the experimental design, which may account for non-significant results.

Considering the limitations of the experimental design, the lack of significance in the results should not be viewed as evidence to the contrary of the proposed hypothesis. Thus, the results of this study should be considered inconclusive.

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