

CASINO GAMBLING: THE ECONOMICS AND THE SOCIOLOGY

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ABSTRACT:

This paper is essentially a methodological analysis of the underpinnings of casino gambling or casino gaming from the perspective of the Economics and the Sociology involved. It is a thought piece for those who have the desire to play the game. It is designed to highlight some methodological issues at a time in the region when the region is now looking towards this form of entertainment as a tourist attraction. But, it is presented, also, because local consumption of casino gaming is widespread. On the whole, casinos are designed to attract tourists. Casinos are linked with hotel building. But only some of these features are real. Many of the patrons of casinos in the region are locals. And the many hotels that should come with the casinos do not materialize.

INTRODUCTION

Over the last ten years, and certainly within the last five years, many Caribbean countries have been trying all kinds of ways and means of generating revenues. Many countries now have lotteries. Several have casinos. It is believed that casinos and lotteries can provide quick money. This quick, easy money is sometimes stratified along the lines of the rich. The rich play the stock market and the not so rich play casino, whe-whe and the lottery.

In the USA, according to estimates of Lyle Stuart (1996:13), "More than 90 million people visit casinos each year. ...Casinos are proliferating so fast that it is estimated that by the year 2000, 95% of all Americans will live within a three-hour drive of a (casino). Given the past behavior in the region as it relates to things USA, we are of the view that if people in the region see something happening in the USA, sooner rather than later, the leaders will contend that if it is working in the USA, it could work in the Caribbean. In the Caribbean, casino and other non-traditional type financing are taking on a momentum of their own.

In this paper we wish to focus on a methodology of casino gambling as a far-fetched type of investment with quick, almost instantaneous returns or losses. The rationale here is to highlight that there are some societal means of making money in the casino, but also, we wish to demonstrate that there are some risk-rewards features that must be taken into consideration when one plays in a casino. Our focus will be on the slot machines at the casino, as opposed to other games. Our reason for doing this is to capture the most popular type of play, for the ordinary player, at the casino. Our observations have come from having played in casinos all over the Caribbean as well as in Las Vegas, Detroit and Iowa.

Casino gaming is nothing more than a short-run, instantaneous application of a stock market type behavior. But while there are rules and regulations in the stock market, in the casino market, the rules and regulations are of your own making, your risk profile, your addictiveness or non-addictiveness, your capacity to discipline your self, and the rest.

What are some of the useful ideas both from an economic and sociological perspective that ought to be taken into consideration? First, it must be realized that the

objective should be to enjoy the game. Casino gaming is not like the stock market in one perspective. In the stock market, investments permit one to appreciate that the greater the risks, the greater the return. In the casino market, that is not the case. Why? Because you lost one hundred, that does not mean if you spend another one hundred you will get back your money or that you will win anything. Our objective is not to tell you or show you how to win at the slot machines. Nobody knows how to win or beat slot machines, unless they understand and know all of the permutations of the random generated numbers of the slot machines. And since that is impossible, nobody can tell you the real odds. Some people have calculated odds. For example, it has been established that there is a **one in twenty-two chances** that a person will win at slot machine. (Stuart, 1995).

It is important to know that when you put your money in a slot machine, you have two possibilities: you win something, or you loose you money. At any one time, the probability is 50:50. However, what you win is not in direct proportion to what you put in. What you could win may have some bearings on the denominations of the machines and on the combinations on the machines.

Let us explain. Your knowledge of the various winning combinations is limited. Hence there is an asymmetric information base. Your knowledge of the payout ratio is limited; here again, there is asymmetric information. Whenever there is asymmetric information, the odds are always in favor of the person who controls or manipulates the information. Hence the institutional strictures that are imposed on you are enormous when it comes to what you may win. It is very clear, however, that ***you are guaranteed to lose money when you play***. From all of our observations, the house has the upper hand. Some research shows that **casinos have a 10% edge in slots**. (Stuart, 1995:5). From some literature, it suggests that the house gets 90 cents out of every dollar played in the slot machines. In some Caribbean casinos, those where the regulations may not be strictly adhered to, the payout ration may be lower that 90 percent.

How do you play with some semblance of getting some returns? It is our view, that a person who engages in casino gaming is seeking capital appreciation and capital preservation. If they had invested in the stock market, they would have added current income to these two objectives. When a person plays one dollar to win \$10,000 or \$3 to win \$10,000, these high odds should be explained and the payout ratios should also be

explained. The casino time frame is short, and almost instantaneous. If "luck" is in your favor, you win. If luck is not in your favor, you will not win. Luck, however, is uncertain.

Unlike the stock market, the "investment" in the casino, all vanishes if the investor-player loses his investment. Capital is not preserved in the loss. Note, however, that there is a similarity here to companies that go bankrupt. Except for those who own preferred shares, the owners of common stock could get nothing or cents on the dollars of their investment. This marginal similarity is an important informational base on which to advise the public that risk and rewards are inherent in both the stock market and the casino market.

Casino owners have a monopoly over some information. They do not freely pass on the full knowledge of the risks associated with casino gaming. This monopoly of information, particularly the non-dissemination of the ideas, is asymmetric information, to cite Nobel Laureates William Vickrey and James Mirlees.

All in all, informational asymmetries are at the heart of this problem of casino gaming as it pertains to slot machines or "one-armed bandits" as they are aptly called. What, therefore, must be done to narrow the gap between the perception and the reality of casino markets? How can people feel less apprehensive about playing slot machines? What could be done about the inadequate informational flow? What must be done about asymmetric information?

Casino playing, for instance, particularly the lower level "slot machine," or "one-armed bandit," is nothing more than an attempt of an individual to benefit from capital preservation and capital appreciation. If a person goes to a slot machine and plays \$20, on a machine that has as its highest payout, \$1,000, what the person is doing is "investing" with the hope that a return of 5000% is possible. In the normal scheme of things, however, the probability of that person hitting the jackpot is so low, that the jackpot may not be attained in one in a million times. If, however, the person wins \$20, \$100, or some other play, and did not hit the required 777 on the slot machine, that person would have achieved some of his expectations, namely, some level of capital appreciation and capital preservation. Furthermore, the person would have achieved his or her rewards over a relatively short period of time, maybe ten minutes, an hour or more, depending on the

time the person wants to invest in the game. It may be that the electronic timing of the machine was such that the person was lucky.

On the other hand, if the person loses all of his \$20 and more, then capital loss, loss of principal, is the feature he has to contend with. His winning or losing may have to do with the alleged timing of when he went to play the machine. Nobody can say, for sure, that a casino will play at five o'clock on Saturday after many persons have played. The fact that the machines are preset, electronically, to have a certain payout, is the fundamental issue at hand. That information is vital. That information should be told to patrons who play casino. In some cases in the region people know, up front, what the payout is on lotteries. The same should apply to casino.

In the stock market, there is much ado about timing. There is an old adage, in the equity market, that the only timing that is relevant is not the timing of the market, but rather the time in the market. A shrewd, non-addictive, casino player will play for a certain time or play a certain amount and will stop playing if he wins or loses. In fact, in instructions on playing slot machines, it has been said that a winner should put aside 75% of the winnings and play the remaining 25%. When this 25% is lost, the person should stop playing. Since a slot-machine player is playing against very low odds, the person should quit while they are ahead. The reality is, however, many persons who play the slot machines play with view of winning the "big one."

The slot machines person, the lottery person, and so on, focus on capital appreciation. The lottery player plays one dollar to get back one million dollars. The slot machine player plays two dollars to win \$5,000 or three dollars to win \$10,000.

All things being equal, the traditional ways of describing peoples' attitudes toward risk are the underlying features that characterize who invests in stocks and who invests or plays the slot machines. People can be *risk-averse*, *risk neutral* and *risk lovers*. Risk adverse persons are those who want more than a fair odd to accept a bet. This would be like someone who invests in the stock market with a portfolio of "blue-chip " stocks. A risk-neutral person is one who is not concerned with risk. This person is only concerned with the average payout. This investor is not concerned if there is a small chance of catastrophic ruin or a small chance of gigantic payoffs. [Fischer and Dornbusch, 1983: 477].

This risk-neutral person would play casino slot machine or one-armed bandit and think nothing of losing. Finally, the risk-lover is a person who thrives on risk. As Fischer and Dornbusch (1983:478) note, this person "pays to have the privilege of taking bets that are stacked against him." Here, too, casino gaming slot machine play falls in this category.

Given the social fabric of the people, it may be possible to galvanize a scenario that clearly delineates the odds of winning at the slot machine, or any other form of casino gaming. First, it must be clearly stated that success in the pass on a machine does not guarantee continued success or future success. And yet, there is a high probability that if you play one machine, for periods of time, you have some chances of winning something. You may not win back your money. You may win something, or you may lose everything. It is worth repeating: *Success in the pass is no guarantee of success in the future.*

More people should know more about the nature of the games of chance in the casino market. And if they are playing the slot machines, the one-armed bandit, on which we are focusing, they should be advised before hand, what are their chances of winning. The odds should be clearly outlined. The playing field should be level.

If the asymmetric information continues to be at play, then how can one play the slot machines and win something? How can one set targets to win? What strategy should be used to "reap" some rewards?

First, people who play the slot machines must know that it is best not to assume that every time you play your coins, you are going to win. Second, you have to develop a strategy to win something based on what you play. It is recommended by some people that whatever amount you play on a given machine, your objective should be to get back at least half of your money in winnings. Note we said winnings. We did not say profits. This suggests that if you play, \$20, you should try to get back \$10. If you play \$100, you should try to get back \$50. In other words, set your target and stick to your target. What if you played \$100 and the machine on which you are playing does not give you back the expected \$50? Then it is suggested that you move to another machine. Why? Remember that you are playing in the casino. You are not playing that machine only. Societal trappings may suggest that you stick to one machine, because it is your lucky machine,

your favorite or some such other societal wishful thinking. The fact is, if you won on a machine in the past, there is no guarantee that you will win on that machine in the future. An if you see someone win on the machine, there is no guarantee that you will win on the machine. Slot machines are programmed. They have a random access memory chip. A random number is generated to put forth sequence of payment. Because your friend next t you won a few times, that does not mean that your machine will play.

So what should you do? It is recommended that if three machines require three quarters, two dollars or three dollars to play them play those amounts. **Always play the maximum amount.** When the maximum amount is played, the odds are that if a payout is made, you will get the maximum returns, if you have the combination leading to the maximum. To put it in a nutshell. If a machine requires three dollars be played to win \$10,000, you should play the maximum all times. For some people this is a difficult proposition. Their strategy s to play one dollar or one quarter at a time. Their rationale is, the one-one play will permit them to play longer. That is true from a superficial manner. There is a paradox in this extensive play approach. If your play of one dollar turns out to generate the winning combinations of 777 or **WILD, WILD, WILD**, you will be giving the company a large portion of your money. Le us say on a given machine there are the following combinations:

Play	\$1.00	\$2.00	\$3.00
Win	\$2000	\$5000	\$10000

If you played anything less than the maximum, you would be giving the company \$8,000 in the case of a \$1.00 play and a winning combination win. And you will be giving the company \$5,000 on a \$2.00 play and a winning combination. Now, for many one-armed bandit or slot machine players, a \$2,000 win or a \$5,000 win is big money. In this regard, they may be satisfied with the win. If that is your perspective, then there is nothing problematic with the one dollar-one dollar strategy. On the other hand, too often those people who claim that they are only playing one dollar or one quarter at a time, end up playing more in total that those who play the maximum. How is this known?

People who play the maximum normally play a certain amount of money and stop. This is another recommendation. Play money that you could afford to lose. Play a certain amount and stop. Never play your winnings. Note, earlier, we said that out of every \$100 you should try to get back \$50. Note this means that if you win \$50, you have lost \$50. Here we use the term win to mean a payout from the machine. Win here does not mean that you have net winnings of \$50.

Casino players play based on a herd-type mentality investment. When someone wins a jackpot, many persons assume that they, too, can win. In the one-armed bandit area, when players hear and see others next to them winning, they, too, conclude that they will win. Seldom do these optimistic people know how much the new winners have spent to get to their winning position. In the one-armed bandit area, some machines are always making noise. The length of the noise indicates the closeness to a jackpot. It should be obvious in the slot market that past success is no guarantee of future success.

In the slot market arena, there is no players beware sign. Some literature on gambling, for example Ali (1979), Figlewski (1979), Dolbear (1993) and Goodwin (1993), indicates that the knowledge of "final odds fail to provide unbiased predictions of the probability of various outcomes." Furthermore, as Ali (1979), Metzger (1985), Terrell (1994) and Terrell and Farmer (1996: 846) point out, a bias such as the gambler's fallacy influences betting patterns. **The gambler's fallacy is an incorrect belief that the probability of an event is lowered when the event has recently occurred.**

In the final analysis, if you are one of those persons who have to play in a casino, if you have to play the one-armed bandit, the slot machine, pace yourself. Give yourself a set time to play. Move away from the machine if the machine is not playing. Move away from smoke if smoke bothers you. Drink, if you must, but avoid drinking hard liquor. Hard liquor tends to dull your senses, and tends to seduce you to spend more than you plan to spend. Most casinos give free drinks, hard and soft. There is rationale to the tender-heartedness.

The Caribbean region has many casinos: from the luxurious to the ordinary. From the massive casinos to the tiny ones. All of them are designed to relieve you of your money. If you are so inclined, and you have a risk tolerance, you may want to play. If you have an addiction, you are in harm's way to yourself and to your society. Some Caribbean

governments are now tying casinos to the building of hotels. Some have used casino money to assist in education. Whatever the good and bad associated with casino, it should be very clear that the region and many people in the region are now caught up in this fanfare. While governments strive to pry revenues from the casino patrons, it is incumbent upon the same governments and or perhaps the casinos themselves, to inform the patrons of the monetary risks, the social risks and the psychological risks of casino gaming. In the final analysis, people have to make their own choices. But they would tend to make informed choices, if the information is available to them. Casino gaming in the Caribbean is here to stay. Since our people are here to stay for time, and since our people will play in the casinos, unless prohibited by law, the states in the region should ensure that their people enjoy the game, and not succumb to the scourges of the game. Casino gaming could be stress relieving. The political directorate and the owners of casinos should be implement programs to minimize the stress-inducing aspects of casino gaming.

REFERENCES

- Ali, Mukhtar M. (1977). "Probability and utility estimates for racetrack bettors." *Journal of Political Economy*, vol. 5 (4), pp. 803-15
- Dolbear, F. Trener, (1993). "Is racetrack betting on exactas efficient?" *Economica*, vol. 60, pp. 105-11.
- Figlewski, Stephen (1970). "Subjective information and market efficiency in a betting market." *Journal of Political Economy*, vol. 87, no. 1, pp. 75-88.
- Fischer, Stanley and Rudiger Dornbusch (1983), *Economics*, New York: McGraw-Hill Book, Company.
- Goodwin, Barry in Terrell and Farmer (1996). "Semi-parametric testing of speculative efficiency in a pari-mutuel gambling market." (mimeo.

Grinblatt, Mark, Sheridan Titman and Russ Wermers (1995), "Momentum Investment Strategies, Portfolio Performance, and Herding: A Study of Mutual Fund Behavior", *The American Economic Review*, vol. 85, no. 5, pp. 1088-1105.

Haliassos, Michael and Carol C. Bertaut (1995). Why Do So Few Hold Stocks?" *The Economic Journal*, vol. 105, no. 432, pp. 1110-29

Harvey, C. (1995), "Predictable Risks and Returns in Emerging Markets," *Review of Financial Studies*, no. 8, pp. 773-816.

Jones-Hendrickson, S. B. (1994) Cross-Border Trading in the Caribbean, *Occasional Paper Series*, No. 2, Regional Programme of Monetary Studies.

Jones-Hendrickson, S. B. (1995). "A Caribbean Stock Exchange and the Internet." Annual Monetary Studies Conference, Basseterre, St. Kitts, November 8-11.

Stuart, Lyle (1995), "What Casinos Don't Want You To Know," *Bottom Line Personal*, vol. 16, no. 21, pp. 13-14.

Terrell, Dek (1994). "A Test Of The Gambler's Fallacy: Evidence From Parimutuel Games," *Journal of Risk and Uncertainty*, vol. 8, pp. 309-17.

Terrell, Dek and Amy Farmer (1996). "Optimal Betting an Efficiency in Pari-mutuel Betting Markets with Information Costs," *The Economic Journal*, vol. 106, no. 437, pp. 846-868.

FOOTNOTES

1. Slot machines players, for example, should know that because two sevens played on a previous spin, it does not follow that three sevens will come on a subsequent spin. Likewise, stock market investors should know that because a stock price increased today, it does not mean it will increase tomorrow, or the next day for that matter. What goes up can and does come down.

2. Who you are is not important as what you want. Stocks may require a larger down-payment than lottery to ensure a purchase, but it must be pointed out to all that several small amounts of a money could be added up to buy stocks. It could also be pointed out that several persons can combine to buy stocks, just like several persons play lottery in a pooling system. In a word, the regional stock market should be demystified; the regional lotto, lottery market should be highlighted and be given more financial attributes.

3. The similarities between betting, gambling, lotto, lottery and the stock market is a highly debated area. Figlewski (1979), for example, compares the bettor's use of market analysis and brokerage houses. Terrell and Farmer (1996) look at "Optimal Betting and Efficiency in Pari-mutuel Betting Markets With Information Costs."

*Professor Jones-Hendrickson is currently on leave from the University of the Virgin Islands as the Ambassador of St. Kitts and Nevis to the OECS, CARICOM and the ACS.