Entry Fees as a Responsible Gambling Tool: An Economic Analysis

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Abstract

Entry fees, or levies, have received increased interest as a responsible gambling tool and have been implemented or proposed in an increasing number of jurisdictions. Using comparative statics analyses, this study uses neoclassical economic theory to understand the distributional consequences of entry fees on players with and without gambling related problems. Overall, it appears that there is relatively weak theoretical support for entry fees' use as responsible gambling tool, as they primarily distort the demand of more price sensitive recreational gamblers. This creates a potentially large dead weight loss in the economy, and likely increases the share of revenue from players with a gambling disorder.

Keywords: entry fee; casino; levies; responsible gambling

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Introduction

Entry fees have received interest as a responsible gambling mechanism in recent years. These are levies charged to casino entrants, before they are allowed to step onto the casino floor or other controlled spaces. Fees to enter casinos are not necessarily a novel tool. For example, in the U.S., "admission" taxes appear in many riverboat casino jurisdictions as flat amounts required of every person entering the casino (Anderson, 2005). Similarly, many European countries charge admission fees to casino entrants – e.g. Germany (Marfels, 2011), Netherlands (Kingma, 2008), and Monaco (Israeli & Mehrez, 2000). However, these levies have historically been nominal fees, intended to be used as sources of public or private revenue, rather than as a harm reduction tool intended to reduce consumption of gambling.

With the opening of two integrated resorts in 2010, Singapore popularized the introduction of entry fees with an explicit policy goal of reducing problem gambling related harm. In Singapore, operators must collect an entry levy from citizens or permanent residents equal to 100 SGD (~74 USD) per 24 hours, or 2,000 SGD (~1,474 USD) annually. In the second reading of Singapore's Casino Control Bill 2006, DPM and Minister for Home Affairs, Wong Kan Seng, described that an entry fee for the casino would, "…discourage locals from developing into problem gamblers," and "…will also underscore the message that gambling is an expense and not a means to get rich." Foreigners are not subject to this fee (Casino Control Act, 2010).

Following the Singapore model, gambling disorder related entry fees or entry fee increases have received interest in several Asian countries. Entry levies have been proposed in Japan (Roberts & Johnson, 2016), the Philippines (Blaschke, 2017), Vietnam (Proença, 2017), Sri Lanka (Cohen, 2015), and South Korea (Kingsley, 2016), to varied levels of support. While entry fees appear to be growing in popularity, there is little theoretical or empirical research to support their adoption or exclusion as a responsible gambling tool. In this research note, an economic analysis of entry levies is provided, along with discussion of its implications for responsible gambling related outcomes.

Model

A two-consumer model similar to Philander (2014) is used in this study. In the domestic market, two consumer types are presented: one less numerous group of consumers with a gambling disorder (d), and one more numerous group of consumers without a gambling disorder (r). This unbalanced ratio is consistent with evidence from gambling prevalence studies (Hodgins, Stea, & Grant, 2011). Because foreign citizens are not subject to entry levies, there is no distortion to foreign demand and we exclude that group from analysis. The gambling disorder group is modeled with more inelastic demand. This implies that consumers with a gambling disorder will reduce their demand less to an increase in price than consumers without a gambling disorder. That approach aligns with the Diagnostic and Statistical Manual of Mental Disorders gambling disorder criteria (American Psychiatric Association, 2013), including, "repeated unsuccessful efforts to control, cut back, or stop gambling" and "[restlessness] or [irritability] when attempting to cut down or stop gambling". Clarke (2008), Forrest (2008), Quiggin (2000), Philander (2014), and Paldam (2008) have all similarly modeled this group as less price sensitive. Consistent with the Singapore model, entry fees are structured as a fixed sum applied to each representative consumer.

For ease of understanding intuition, the analysis is presented through a graphical approach, assuming perfect competition. Similar results can be produced using more formal modeling procedures, and in a market characterized by monopoly power.[1] In Figure 1, the representative model is illustrated in hypothetical markets with and without entry fees. The demand curve of consumers with a gambling disorder (left) is modeled as a relatively small population with inelastic demand (or low price sensitivity). The demand curve of consumers without a gambling disorder (center) is modeled as a relatively large population, with more elastic demand (or high price sensitivity). Aggregate demand for all consumers is the sum of both their demand curves, which is added horizontally (right). The slope of the curve is equal to D^d above *y*, and equal to D^r below *z*.

With no entry fee, equilibrium price (P^*) and quantity (Q^*) are defined where marginal cost (MC) equals the aggregate demand curve. With an entry fee, price rises to P^t and quantity falls to Q^t. Since P^t is still below D^d, the only consumers priced out of the market are consumers without a gambling disorder ($Q^* - Q^t = Q^{r*} - Q^{rt}$). The fee also creates a dead weight loss in the economy, equal to the shaded area *a-b-c*. For any consumers with a gambling disorder to have their demand decreased, the fee would have to be sufficiently large to move the equilibrium from *a* to above *z*. Due to the relative elasticities, the demand reduction from consumers without a gambling disorder will always be greater than the reduction from consumers with a gambling disorder until the fee is sufficiently large such that equilibrium reaches *y*, and there is only demand from consumers with a gambling disorder left in the market.
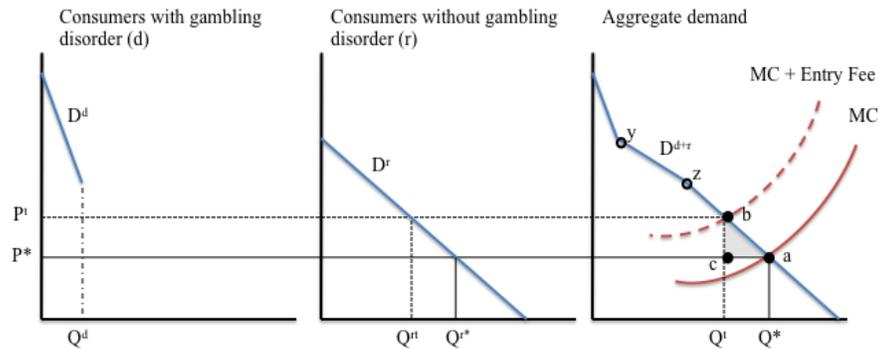

Figure 1 – Comparative statics of equilibriums with and without entry fees. Demand from consumers with a gambling disorder (left) is modeled as a smaller population and more inelastic than demand from consumers without a gambling disorder (center). Aggregate demand is the horizontal addition of both curves (right). With no entry fee, equilibrium price and quantity are P* and Q* respectively. With an entry fee, price rises to P^t and quantity falls to Q^t. Since P^t is still below D^d, the only consumers priced out of the market are consumers without a gambling disorder.

Discussion

Using an economic comparative static analysis, this study demonstrated that entry levies are not effective responsible gambling tools. If, as many authors have suggested, consumers with a gambling disorder are less price sensitive than other players (Clarke, 2008; Forrest, 2008; Quiggin, 2000; Philander, 2014; Paldam, 2008), then it is difficult to reduce their demand without significantly distorting the demand of recreational gamblers. This creates a potentially large dead weight loss in the economy, and predicts an increase the share of revenue from players with a gambling disorder.

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1 E.g. The model used by Philander (2014) is consistent with those approaches.

As the theoretical support for entry levies is weak, policy makers should be cautious about their appearance in legislation. Policymakers and operators would appear to be better served to focus on responsible gambling tools with strong evidence of effectiveness (Ladouceur, Shaffer, Blaszczynski, & Shaffer, 2017) and to develop RG programs in areas with emerging evidence, such as positive play (Wood & Griffiths, 2015; Wood, Wohl, Tabri, & Philander, 2017). More research is needed on entry fees, and without this insight, unintended consequences can emerge. For example, a fixed entry fee may increase the share of binge gambling sessions, as consumers seek to maximize their allotted time in the venue.

Limitations and Future Research

Based on this study and the absence of related work in the academic literature, it appears that there is relatively weak theoretical support for entry fees' use as responsible gambling tool. Similarly, empirical evidence of effectiveness has yet to emerge. However, other research perspectives are needed to fully understand impacts of these levies, before their usefulness can be dismissed. Inherent in the neoclassical framework used in this study is an assumption that actors will behave in ways that are rationally consistent with maximizing personal utility or firm profit. Behaviorally, consumers may not respond rationally to both entry fees and other consumption decisions, which can change outcomes. There may also be a dynamic effect of these barriers, where disincentivizing recreational gamblers prevents development of future gambling disorders. That said, if exclusion is the policy goal, this appears to be a relatively poor instrument.

Future research should look at both stated and revealed behaviors of players. Gamblers can be asked through primary data collection techniques whether entry fees would modify their behavior, and researchers can look for differences across gambling disorder related risk levels. In addition, useful natural experiments may be possible using data from jurisdictions that have previously implemented, removed, or changed admission fee rates. While the relatively small fees found in U.S. riverboat or European casino jurisdictions may not capture the marginal impacts of the high fees found in Singapore, they may provide some preliminary evidence of effectiveness.

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