

Allocation Currencies and Perceived Ability to Obtain Permits

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1. Abstract

This study examined the effects of different allocation currencies on recreationists' perceptions of chance of success to obtain a permit. Five allocation systems were used in this study: pricing, reservation, lottery, queuing, and merit. In general, results support hypotheses indicating there are specific currencies that affect recreationists' perceptions of obtaining a permit. For some allocation systems, additional currencies to those hypothesized were found to be significant.

2. Study Purpose

- To examine the “relationships between recreationists’ perceptions of allocation systems and the amount of currency that they control for each of the five commonly proposed allocation alternatives: pricing,...reservation, lottery, queuing, and merit.” (p. 138)
- The following hypotheses were tested:
 - | H1: For pricing system, “perceived chances of success should be related to income” (p. 139)
 - | H2: For reservation system, “perceived chances of success should be related to advance planning time” (p. 139)
 - | H3: For lottery system, “perceived chances of success should be related to both their advance planning time and notification lead time; either could be the relevant currency depending on when the lottery is held” (p. 140)
 - | H4: For queuing system, “perceived chances of success should be related to the amount of time that each has to stand in line.” Specifically in this study, “the time needed to get tot a potential queue measured by the distance from the floater’s home to the put-in.” (p. 140)
 - | H5: For merit system, “perceived chances of success should be related to the amount of skill and knowledge that they possess as represented by their river running experience” (p. 140)
- “For each allocation alternative, it was hypothesized that the relevant currency would show a significant relationship to perceived chance of success, whereas other currencies would have no significant effect.” (p. 140)

3. Findings

Response rate: 83%

3.1. Pricing

- H1 is supported
- Income is the strongest predictor of success followed closely by distance and planning horizon time
- This suggests larger incomes, further distance from river, and inability to plan far in advance result in a perceived greater chance of success in getting a permit

3.2. Reservation

- H2 is supported
- There is a significant relationship between advance planning time and perceived chance of success
- There is also a significant, and stronger, relationship between notification lead time and perceived chance of success
- “This suggests that those who could plan far ahead felt that a reservation alternative increased their chances of success, but those who require a longer time between notification and launch were even more likely to feel this way” (p. 141)

3.3. Lottery

- H3 is partially supported
- There is a significant relationship between notification lead time and perceived chance of success, but advance planning time was not significant
- There is also a significant relationship between river running experience and perceived chance of success
- This suggests that “floaters who are able to arrange trips on short notice feel that a lottery alternative favors them, as do those with more river running experience” (p. 141)

3.4. Queuing

- H4 is supported
- There is a significant relationship between distance from home to put-in and perceived chance of success
- Other variables also found to be significant: income, notification lead time, and river running experience
- This suggests “those who live closer to the river, those with higher income, those who need less notification time to prepare for a trip, and those with more river running experience all feel that queuing systems give them better chances of obtaining a permit” (p. 141)

3.5. Merit

- H5 is supported
- There is a significant relationship between river running experience and perceived chance of success
- There is also a significant relationship between income and perceived chance of success for this allocation system
- This suggests “floaters who had run more rivers and those with greater incomes feel that a merit system would improve their chances of success” (p. 142)

4. Key Discussion Points

- The idea that perceived chance of success is affected by various allocation currencies is generally supported by this study
- “Costs imposed by allocation systems are not necessarily straightforward and...recreationists may consider several variables when evaluating a particular system” (p. 142)
- For reservation systems, notification lead time may be a better measure of being able to plan for obtaining a reservation than advance planning time
- For lottery systems, experience was likely determined a significant currency due to river runners’ familiarity with this system. Experienced river runners understand the likelihood of no-shows and cancellations that make available additional permits.
- Queuing systems appear to be more complex than hypothesized with four currencies showing an effect.
 - Distance to put-in significant as hypothesized due to the advantage of living closer
 - A negative significance value for notification lead time “suggests that the more spontaneous users favor queuing, perhaps because they are better able to go during mid-week or the off-season, when lines would be short” (p. 143)
 - Experience is likely significant because knowledgeable boaters may be better able to determine when lines will be shorter
 - Income may have an effect because those who are better off are less concerned about travel costs expended to get to the queue
- For merit systems – income effects may be explained with those who are better off having a greater ability (more money) to obtain the skills needed to get a permit with this system
- “Allocation systems invite a kind of competition among recreationists, but the competitors in the game may not have a clear understanding of the way the game is played or how it can be won” (p. 143) Users may not analyze the alternatives with the most relevant variables.
- Users do not have complete information to make their analysis of the alternatives – they do not know how much currency they control compared to other users, nor do they know how much is needed to be successful without first trying the system

- Users may alter their situation to obtain more currency and increase their chances – for example, getting up very early to get in a queue

5. Management Recommendations

N/A

6. Research Design

Survey research, census

6.1. Study Area

Hells Canyon reach of the Snake River, Idaho and Oregon

6.2. Data Collection Instruments

Questionnaire handed out on-site and mailed back

6.3. Study Population

River runners at Heller Bar take-out during August 4-22, 1978

6.4. Sample Size

167 commercial boaters and 128 private boaters

6.5. List of Variables and Operational Definitions

Two sections of the questionnaire were used in this analysis. One section addressed currency variables and another addressed perceived chance of success in obtaining a permit.

6.5.1. Currency variables

- Income - “total family income before taxes, with response categories in \$4000 increments” (p. 140)
- Advance planning time - “how far in advance floaters’ jobs allowed them to plan vacations each year” (p. 140)
- Notification lead time - “(assuming that a lottery system was adopted), measured in terms of the minimum lead time that floaters would need between notification of a successful application and their intended launch date” (p. 140)
- Distance from floaters’ homes to put-in - Zip codes were used to calculate this distance
- Experience - “Number of previous white-water trips that they had taken” (p. 140)

6.5.2. Perceived chance of success in obtaining permit

- Users were given descriptions of five allocation alternatives (pricing, reservations, lottery, queuing, and merit) and were asked to consider each assuming all users would be required to get a permit for their respective area.
- Closed-ended question asked, “How does this system affect your chances of obtaining a Hells Canyon float permit?” (p. 140)

- Responses ranged from “It wouldn’t affect my chances at all; I could obtain a permit whenever I wished to float the Snake” to “I could never obtain a permit under this system”, or “I don’t know.” (p. 140)

7. Theories Used in Study

- Distributive Justice – as it relates to this study, this is the idea that allocation of a resource is conducted in a fair manner as described by the following competing goals:
 - Equality – “all individuals have the same rights to certain benefits” (p. 62)
 - Equity – “those who put more in should get more out” (p. 62)
 - Need – “individuals or groups may have requisites which are indispensable for normal functioning” (p. 62)
 - Efficiency – “maximized if a resource is put to its most highly valued use” (p. 62), which would give permit priority to those most valuing river running
- The authors use these concepts to understand how the five allocation systems studied “affect the broader resource allocation goals” (p. 63)