The Value of Hiking

Economic benefits of hiking and non-motorized outdoor recreation

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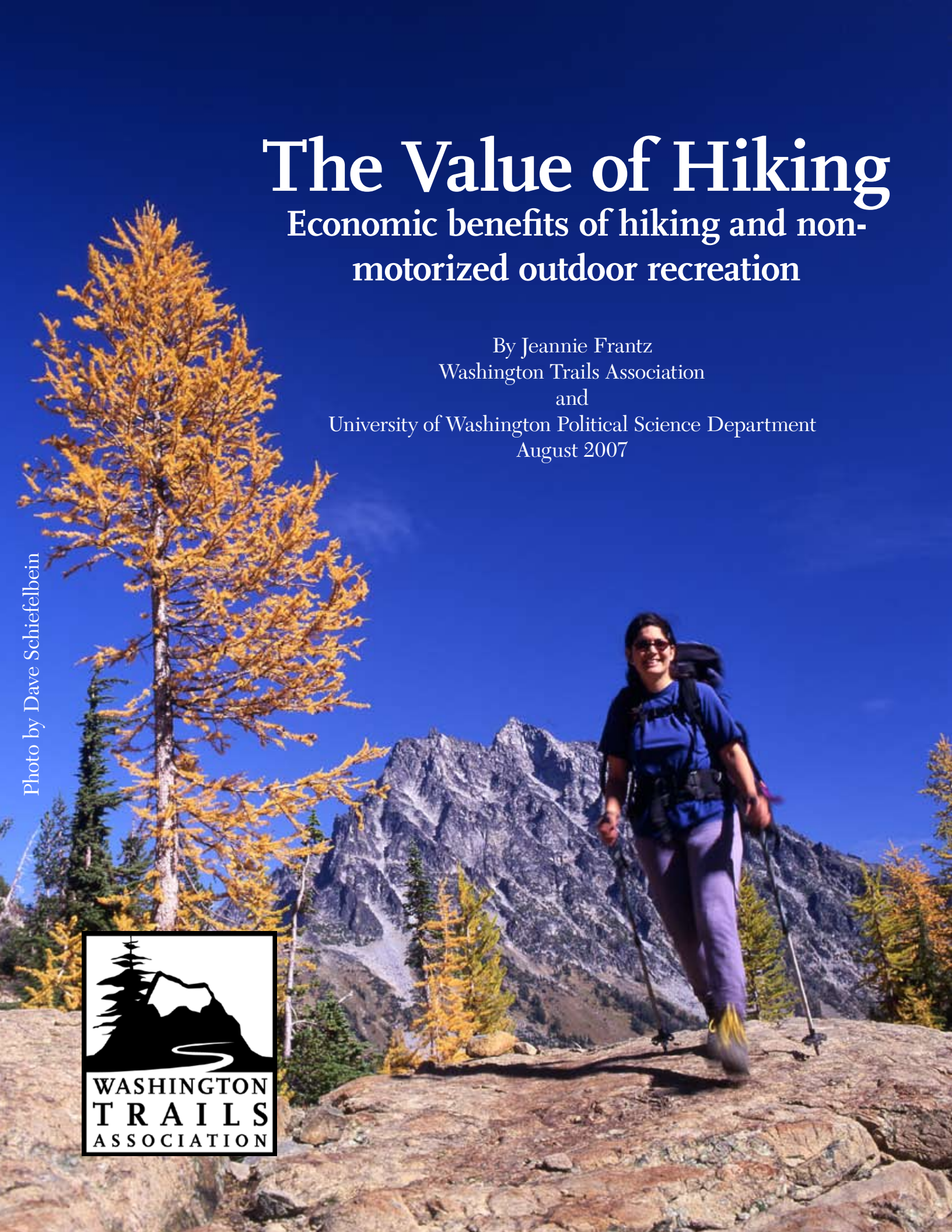

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WASHINGTON TRAILS ASSOCIATION

Introduction

More than one in three Washingtonians identify themselves as hikers, backpackers, trail runners, and climbers.[a] This interest group is represented at the state and national level by organizations such as Washington Trails Association[b] and the American Hiking Society. Advocates for trails are often confronted by policymakers who question the costs of trails and the value of such an investment for their community. The alternative to preserving an area for low-impact recreational use is often giving up the area to neglect, or opening it up to motorized recreation. Policy makers have been faced with the question of whether to fund rebuilding trails that have deteriorated due to neglect, overuse, or natural processes. Some policymakers may prefer to preserve a region without the added expense of maintaining public access. Advocates for low impact recreational use and public access to public lands must be armed with a repertoire of facts supporting recreation's benefit to local economies.

This paper will conduct a survey of literature discussing the economic impact of hiking, with a focus on Washington state in particular. It will address data on participation rates, the economic contribution of both the outdoor industry and individual consumers, and methods for gauging the economic *value* of low-impact outdoor recreation. Furthermore, I will argue that while current data may a useful tool for advocates, an updated and comprehensive survey of the Washington state hiking economy would greatly benefit the cause of preserving sustainable public access to public lands. This information can be gained from several sources, including surveys from public land management agencies, outdoor recreation business coalitions, and other advocacy groups.

I. Participation

Hiking is one of the most popular forms of outdoor recreation activities, and surveys reflect its popularity. Hiking combines several pursuits – an interest in scenery, wildlife, solitude, and discovery – all in a low-impact form of healthy recreation. In 2005, one in three Americans went hiking, making the activity one of their top three favorites forms of outdoor pursuits.[c] Hiking and backpacking remain the second most popular form of activity on outdoor-centered vacations.[d] Even more significantly, almost half of Westerners took off for a hike at some point during the year.[e] The majority of them were repeat offenders; the average Western hiker went out 11 times

during the hiking season.[f] Overall, Americans living on the West coast remain the most active in outdoor sports compared to other parts of the country.[g] Participation in hiking has grown enormously, up 194% from 1983/1984 to 2000/2001.[h] It seems that our image of the stereotypical Washingtonian – a Microsoft employee slurping Starbucks – should also be wearing muddy hiking boots and masterfully programming her GPS.

However, the vast majority of outdoor enthusiasts also must unfortunately balance play with work. Their ability to take off for the weekend varies depending on the economy. Outdoor recreation tends to decline both in times of booming economic growth (1998-'99) and times when the economy is poor (2003).[i] An individual's likelihood to take off to go hiking for the weekend lessens when either they are too busy working and consuming competing activities, or have little spare money to spend on outdoor gear and travel. However, because hiking is one of the cheapest and less demanding forms of outdoor recreation (compared to, for example, boating or climbing, which involve costly equipment), participation rates should tend to show less variance from year to year.

The popularity of hiking leads to an important question. How much do these consumers of wilderness and outdoor recreation contribute to the economy? Furthermore, how much do they value wilderness and their hiking experience? Can this value be used as an argument for preserving wilderness and maintaining access for low-impact forms of recreation on public lands?

II. Economic Contribution

The contribution of hiking and outdoor recreation in general has been measured both in terms of the contribution of the outdoor industry and the contribution of individual wilderness consumers. This data is discussed below.

Industry Contributions

One way to measure the economic worth of hiking as an activity is to look at the total economic impact, or contribution, of the outdoor industry to the national and state economy. Overall, low-impact outdoor recreation, which includes bicycling, camping, fishing, hunting, paddling, skiing, snowshoeing, climbing, hiking, backpacking, and wildlife viewing, contributed $730 billion in 2005 to the U.S. economy. The industry also supported 6.5 million jobs, generated $88 billion in annual state and national tax revenue, sold $289 billion worth of gear and services, and made up 1 in 12 dollars circulating in the economy.[j] It is second only to the

telecommunications industry in the value of sales.[k] Outdoor enthusiasts on the Pacific coast contributed more than any other region -- nearly $81.7 billion. In addition, they supported 762, 247 jobs, spent $46 million in trip expenditures, and contributed over $9 billion in taxes.[l] Trail-related activities generate 716,000 jobs and $11.2 billion in tax revenue.

The Washington active outdoor recreation economy contributes $11.7 billion to Washington's economy, supports 115,000 jobs, generates $650 million in annual state tax revenue, and produces $8.5 billion annually in retail sales and services statewide, accounting for 3.5% of the gross state product.[m] According to the IMPLAN economic modeling system,[n] this makes the outdoor industry one of the largest in the state. Only the Washington software industry is larger, contributing $13.2 billion.[o] The outdoor industry contributes to the Washington state economy more than the aerospace industry and the computer manufacturing industries *combined.*[p]

These figures are highly useful for advocacy groups and should be used to point out the significance of the outdoor industry. Gear warehouses such are REI depend on outdoor enthusiasts. Locally owned shops, restaurants and hotels in Leavenworth, Snoqualmie Pass, and Marblemount, located on the major Cascade mountain pass highways, see large amounts of economic benefits from wilderness consumer traffic. Supplementing this data on the contribution of the overall outdoor recreation industry are data on the expenditures of individual wilderness consumers.

Individual Consumer Contribution

Measuring individual wilderness consumer contribution to the economy is another useful way of gauging the economic benefits of hiking and low-impact outdoor recreation. Ernie Niemi and Ed Whitelaw of the U.S. Forest Service's Pacific Northwest Research Station propose that

> Using prices and incomes generated in the market sector of the economy generally will favor the demands of resource extraction and resource development industries over those of conservationists. Using the results of studies of recreationists' behavior, such as their expenditures on trips to visit developed-recreation sites, might yield insights into some of the consumptive demands for forest amenities, such as camping facilities…[q]

Washington trail users responding to an Outdoor Industry Foundation survey indicated spending an average of $39.05 per trip.[r] Annually, users spent $409 per person in travel expenditures, equipment, and services.[s] Though the survey had a limited sample size, the figures generally fall within a similar range as other surveys

conducted by the National Park Service and National Forest Service. The average visitor to a national forest intending to hike or bike spent from $20 to $37 per visit. Overnight visitors, including those on backpacking trips, spent from $87 to $246.[t]

Similarly, the average national park visitor on a day trip spends between $43 and $63 per visit. Because national parks have more restrictive usage regulations (such as no mountainbiking or motorized recreation), the majority of visitors will be participating in low-impact outdoor recreation – even if it's just driving through and stopping at scenic overlooks to take pictures. Overnight stays varied whether visitors were backcountry camping or staying in lodges – spending $45 per trip and $197 per trip respectively.[u] The average party to Olympic National Park spends $82 per day. Park visitors add $90 million to the local area and generate $29 million in direct personal wages and 1,900 jobs. Another $27 million is generated through secondary effects. Backcountry campers contributed $985,000 in 2000 on food in restaurants and bars, groceries, gas and oil, local transportation, and admission fees.[v] Parties visiting Mt. Rainier National Park spent $62 per day. Backcountry campers spent slightly less, around $28.57 per party *night*, for a total expenditure of $600,000 in 2000.[w]

In regards to gear expenditures, an informal survey of WTA members asked, "About how much does your household spend on outdoor gear each year? (Include maps, backpacking food, hiking equipment, footwear, clothing, etc.)." The largest percentage of respondents (38%) indicated that they spent between $250 and $499 per household. 23% of respondents spent $101 to $249. 22% of respondents spent $500 to $999. 9% of respondents spent more than $1000. 8% of respondents spent under $100.[x]

In summary, there is no single figure that best represents the economic contribution of the individual wilderness consumer at this point, let alone figures for hikers specifically. A survey gathering this information would be very helpful for advocacy purposes. However, ballpark figures from the Forest Service and National Park survey data can certainly be useful.

III. Economic Value

A more theoretical approach attempts to measure the economic *value* of *hiking*, in contrast to merely its

economic *contribution* of *hikers.* This practice is preferred by some analysts because it measures not only how much consumers spend on a given activity, but how much we intrinsically value our trip. While I may only spend $40 per trip to go hiking in the North Cascades, I value my trip to the North Cascades much more than that. According to survey data, households on the West coast--not surprisingly—seem to value wilderness more than those on the East coast.

An approach to calculating the value of hiking is to measure the value a hiker's time based on their "market wage rate," i.e. how much money they could be earning if they hadn't called in sick to work to go hiking. Economists also factor in the time and money spent traveling to and from the recreation site and any on-site costs. Some also may factor in the cost of gear and time spent preparing or training for a trip. The basic argument is that I choose to go hiking because it is more attractive than other goods or experiences I could buy with the same amount of money.

For example, let us pretend I earn $10 per hour (which I don't). The opportunity cost of me taking a ten-hour drive hike to Kendall Katwalk would then be $100. The actual cost of the trip to me, including gas, food, parking permits, and this trip's share of my investment in gear, could be around $40. My "consumer surplus" is then $60. The big problem with this analysis is that people tend to value their time in the outdoors differently than they value their time working. For example, even if my boss offered me $200 (twice my opportunity cost) to come to work on a sunny Saturday morning, I'd still refuse because I am morally against not hiking on weekends. I value my time outdoors much higher than my market wage rate.

Economists generally argue that their discipline does not give them time to deal with stubbornly irrational individuals like me. However, a team of economists from North Carolina, desperate to reconcile their number crunching with reality, thought of a better way to gauge how hikers value their wilderness experience: asking them.[y] They surveyed hikers: "If someone offered you the opportunity to work overtime instead of visiting [this m]ountain, at what hourly rate would they have to pay you for you to accept the offer?"[z] Hikers generally valued their hiking time at $20 more per hour than their actual wage earnings.[aa] Their study notes that three respondents to their survey responded that they would demand over $1000 per hour to work overtime instead of hiking; they deleted these entries from their sample, calling them "protest votes."[ab] Their consumer surplus, the difference between the actual amounts of money they spent on their trips and how much they really valued their time outdoors, was nearly $3000 per year. Nationwide, one scholar calculated that consumers receive an annual net surplus totaling $465.1 million from the existence of wilderness.[ac] The net consumer surplus to visitors to wilderness areas in western states was found to be around $20.56 per person per trip.[ad] The average national

household was willing to pay $67 per year for access to wilderness across several surveys.

Health Care

Hiking also lowers the risk of health care costs. Wilderness experiences are sought out by hikers to relieve stress, and outdoor experiences have been shown to decrease attention deficit disorder, obesity, and depression among children, if not adults as well.[ae] Being outdoors promotes self-reliance and an increased awareness of one's own coping abilities.[af] Obesity costs Washington state $1,330,000,000 in attributable medical procedures.[ag] High blood pressures, which can be reduced by hiking, cost $60 billion in health care spending in 2005 alone.[ah] Given that a good 6-hour day of hiking around Cascade peaks can burn a whopping 2600 calories in a 150 lb person, there's no excuse for America not to be putting on their hiking boots. The health care argument can certainly be added as a side note to the overall economic contribution of hiking and outdoor recreation.

IV. Conclusion

This paper has provided a comprehensive review of data applying to the economic contribution of hikers and wilderness users as a whole. The significant findings include the salience of the outdoor recreation industry in the economy, an estimated range of individual consumer contribution, and an overview of the economic surplus users receive from the existence of wilderness. In addition to these methods and findings, economists can also consider how a view of Mt. Rainier or a nearby trail increases property values, and how the preservation of the area's ecosystem protects a valuable natural resource needed by society – such as clean water supplies.[ai]

However, all of these methods vastly underestimate the true value of a wilderness experience. Advocacy groups should also be cautious to not overly rely on economic data when arguing for access to and protection of wilderness areas.[aj] Our *personal* value of wilderness does not summarize the entirety of its intrinsic value. Mt. Rainier is worth far more than just the opportunity costs of the hikers and visitors who clamber on its slopes, and is worth far more than the benefits human visitors garner from its existence. Still, data on the significance of hikers in contributing to both the national and Washington state economy is a useful resource for advocacy groups in

establishing credibility with and access to policymakers.

(Endnotes)

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