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The Economics of Adventure

On the high cost of Himalayan climbing permits

> In this range [the Himalayas] are found the highest mountains in the world . . . we can count by the hundred summits of more than 6,000 metres; peaks less than 7,000 metres high are generally marked scornfully on the English maps by mere numbers: and it seems as if mountains do not deserve to have a name unless they reach a height of 8000 metres.
>
> Paul Bert, 1878
> *Barometric Pressure: Researches in Experimental Physiology*

Himalayan climbing has always been expensive. In 1953, Charlie Houston, Bob Bates and six other Yanks travelled to Pakistan and attempted K2. They spent $30,958 on equipment, travel and porters, or $3,869 per climber. That may seem cheap; but when inflated to year 2000 dollars, the cost amounts to roughly $24,200 per climber. Many contemporary Himalayan expeditions, especially guided ones, are still expensive. Some mountaineers shell out $65,000 to join guided Everest expeditions. Faced with such high costs, mountaineers may sometimes conclude that bankrolling a Himalayan expedition may be as challenging as the climbing itself. But one climber's obstacle is another's inspiration: Bill Tilman and Reinhold Messner both advocated climbing in small teams in part to beat the high cost of large-scale expeditions. In fact, Messner estimated that a four-person expedition to an 8000-metre peak in Pakistan in 1983 would cost only $6,800 per person in year 2000 dollars – vastly cheaper than large-scale expeditions. Whether climbing in a large or small team, prospective Himalayan mountaineers must budget for a climbing permit or 'royalty' from the host country. Such royalties didn't exist when the Houston-Bates expedition went to Pakistan in 1953. They certainly do now; in fact, the royalty payable to the Nepalese for attempting Everest via the South Col is a stratospheric $70,000 for a team of up to seven climbers! Added to that are additional fees for satellite phones, walkie-talkies, cine-films, environmental deposits and so forth. (See Box at end of article.) And, of course, basic expedition expenses must still be met.

It isn't surprising that the royalty for Everest is expensive in this era of the fourteen 8000-metre peaks and the Seven Summits. After all, Everest is Numero Uno, the ultimate mountaineering goal, and so will always be in

high demand. But how expensive are royalties for 'lesser' Himalayan peaks? They should cost less than Everest, but how much less? How does the amount of the royalty 'scale' relative to mountain height? Does any peak that is lower than Everest carry a proportionally lower royalty? Or do climbers pay a premium for access to the 8000m peaks, which they prize so highly? This would be apparent if, for example, the royalty were $500 for a 6000m peak, doubled to $1000 for a 7000m peak, but then quadrupled to $4000 for an 8000m peak. Finally, do mountaineers pay a special premium for access to virgin peaks or virgin routes?

Someone pondering these issues is likely to conjure up memories of a class in introductory economics. The unifying tenet of such courses is that the 'Law of Supply and Demand' governs the cost of all goods. Are Himalayan royalties subject to this law? Let's briefly review basic economic concepts of the marketplace. The Law of Supply and Demand holds that the price of a commodity, be it an apple or a piton, charged by producers will be adjusted higher or lower depending on the relationship between the supply of that commodity relative to the demand by consumers wishing to buy it. If a given commodity is rare but in high demand, the producer will naturally start to charge more and will get away with this because consumers will have to compete for that commodity. The resultant higher prices raise producer profits, encouraging producers to make more of the commodity; but this increase in supply then leads to a lowering in prices.

Thus commodity prices evolve toward an equilibrium. Such price stability is inevitably transient: producers can change the supply, new competitors might offer cheaper substitutes, or consumer preferences might change – witness the demise of the hob-nailed boot. Further, if prices are raised too much relative to demand, consumers might even choose not to buy at all. The price of oil is a familiar example. A few years before this article was written, there was a glut of oil on the world market and oil was cheap relative to historical levels. This was great for consumers, but bad for producers and also for stockholders of oil companies. In response, OPEC cut production; and the cost of oil inevitably increased.

Mountains aren't barrels of oil, so does The Law apply to Himalayan royalties? Well, the basic players seem roughly comparable: host countries – Nepal, China, Pakistan, India – are equivalent to producers, mountains are the supply , and climbers provide the demand. Even so, mountaineering and traditional 'markets' do differ in important ways. For instance, the number of mountains of different heights is fixed geologically; so the only ways in which 'producing' countries can adjust the supply is by opening or closing access to specific peaks, or by controlling the number of expeditions. Furthermore, climbers unwilling to pay the royalty fees for an 8000m peak cannot opt for a substitute peak elsewhere, since 8000m peaks occur only in the Himalaya. Even so, we can still think of mountains and mountaineers from a crude supply and demand perspective.

Supply

To predict how costs of royalties should change with mountain height, we must first determine how the supply or availability of peaks changes with altitude. Everyone knows, of course, that small peaks are common, that big peaks are rare, and that there can be only one tallest peak in the world. But at the risk of quantifying the obvious, let's look at the actual numbers for supply versus height.

Figure 1

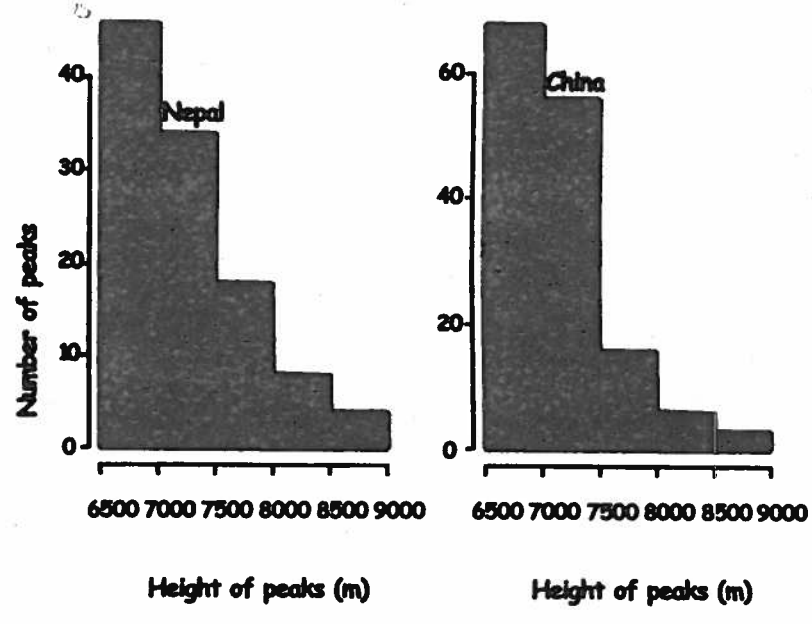


Figure 1 plots the number of peaks of different altitudes for Nepal and China. The Nepalese data are based on the number of peaks actually open to climbers as of spring 1999, whereas for China, the data are based on peaks above 6000 metres. (Information compiled by Jill Neate, in *Zhou Zheng* and Liu Zhenaki, in *Mountaineering in China*. Many of these peaks are not currently open.) As expected, the supply of peaks is inversely related to altitude – 6000m peaks are numerous, 7000m peaks are much less so, and 8000m peaks are decidedly rare. [1]

Demand

Next, consider climber demand for specific peaks. The intrinsic value a climber places on a given mountain is highly subjective and necessarily somewhat idiosyncratic. Even so, climbers often place high value on peaks

[1] *The footnote intended here was printed by mistake at the bottom of p. 169*

that are stunningly beautiful like Nanda Devi and Ama Dablam, or on those with a special history such as Nanga Parbat, K2 and Everest. Ease of access also increases demand. However, the most important determinant of value in the Himalaya seems to be altitude: bigger is better. Moreover, those few peaks that rise above 8000 metres – the 'eight-thousanders' – have epic value. Everest, of course, has the highest value of all. This special regard for 8000-metre peaks is hardly a late 20th century phenomenon, as Paul Bert's quote above attests. In any case, all else being equal, the bigger the peak, the bigger the demand.

However, two factors tend to decrease demand on the highest peaks, or on particular routes on the highest peaks, namely, the potential pool of mountaineers physically and technically capable of climbing them; demand should drop with an increase in altitude or in technical difficulty, although climber access to supplementary oxygen counteracts those trends. Assessment of demand can be made more objective by analysing the actual number of applications for permits to climb peaks of various altitudes. If climbers were to ignore height in selecting peaks to climb, then the number of permit applications per peak would be independent of the altitude of the peak. If, instead, climbers preferred big peaks, then the number of applications per peak should increase with peak size. Data for expedition permits granted by the Nepalese Government are available for 1994 and support expectations. Low-altitude peaks, between 6000 and 7999 metres, averaged far fewer than one permit per peak. The 8000-metre peaks averaged 3.7 permits, with Everest receiving eight permits, the maximum permitted in 1994. Interestingly, Ama Dablam (6812m) had the most permits with 17, undoubtedly reflecting its beauty, accessibility and the number of fixed ropes on its easiest route. For the spring 2000 season, the 8000-metre peaks in Nepal hosted more than 30 expeditions, of which more than half were for Everest, whereas all lower peaks (6500-7999m) had only 19 expeditions, with nine of these going to Ama Dablam.

Cost of Royalties

Given that big peaks are relatively rare (supply is low and fixed) but relatively prized by climbers (demand is high), The Law predicts that host countries will have adjusted fees so that the royalty increases with the altitude of peaks. In other words, bigger should be costlier. Moreover, the biggest and most highly prized peaks of all – the 8000-metre peaks – should be disproportionately costly.

That's the theory. What's the reality? I've compiled the costs of royalties for Pakistan (2001), China (1999), India (2001), and Nepal (2001). Comparing costs for different countries is complicated because the royalties are charged per expedition and host countries differ in the maximum number of climbers allowed per expedition. For example, royalties in China are currently based on expeditions with a maximum of 11 climbers, whereas the number is 12 in India, and seven in Nepal and Pakistan. So I've

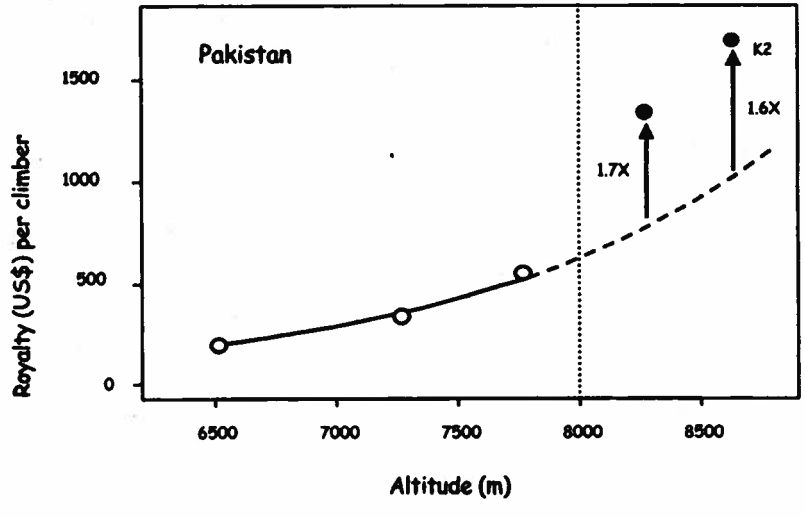
standardised royalties for each country to a cost per climber, assuming that an expedition has a full complement of climbers. For example, the royalty from Pakistan for K2 2001 is $12,000 per expedition, or $1714 per climber if the expedition has the full complement of seven climbers (but obviously more per climber if the expedition has fewer than seven climbers).

The range of royalties on a per-climber basis (from the cheapest to the most expensive) is 286 fold! At one extreme, the royalty for a Chinese peak smaller than 6000 metres is a bargain-basement rate of only $30 per climber. At the other extreme, the royalty for Everest via the South Col is a breath-taking $10,000 per climber. Let's examine each country separately to see whether and how royalties scale with the height of peaks.

Pakistan

Our expectation that bigger mountains are more expensive is clearly supported in Pakistan (Figure 2). For example, a royalty costs only $214 for peaks between 6000 and 7000 metres and $571 for peaks between 7501 and 8000 metres, but jumps to $1714 for K2. But are 8000m peaks disproportionately expensive, as would be predicted by The Law, because of their special value to mountaineers? This prediction can be checked by indirectly analysing cost data from the lower peaks and extrapolating to predict the royalty for the 8,000-metre peaks. If the actual 8000-metre royalty is higher than the predicted one, the expectation is supported.

Figure 2



The approach involves first selecting only the peaks below 8000 metres (open circles), and then using a statistical procedure ('exponential regression', which assumes that the royalty increases in proportion to altitude) to quantify how the royalty changes with mountain height. The solid curve in Figure 2 shows that calculated regression for the lesser peaks. The dashed curve shows the predicted royalties for the 8000m peaks. The actual royalties for K2 and that for the other 8000m peaks (averaged) are shown as black dots.

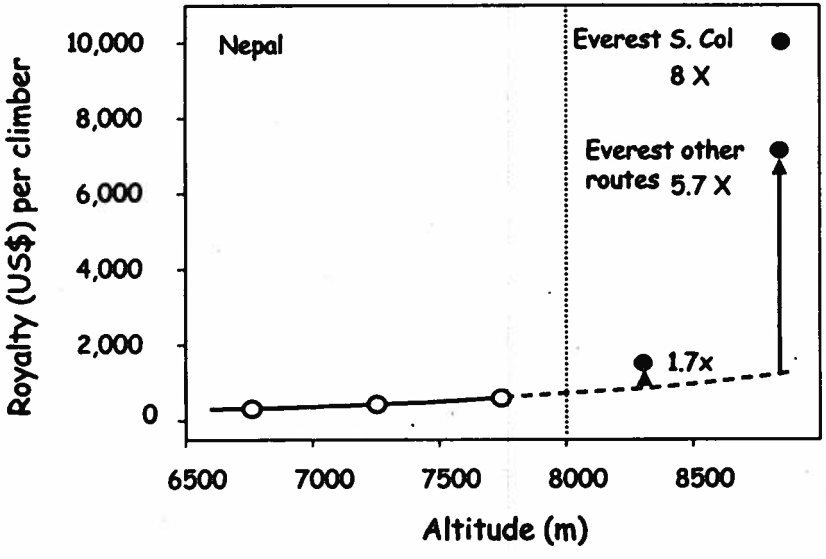
The prediction holds. The actual royalty for K2 is about 1.6 times more expensive than predicted, and the royalty for other 8000m peaks is about 1.7 times more expensive than predicted. The Ministry of Tourism in Pakistan is seemingly well aware of the special attraction of 8000-metre peaks and charges accordingly! In Pakistan, bigger is more expensive, and the 8000-metre peaks are especially so.

Nepal

Royalty data for Nepal in 2001 are shown in Figure 3, and they also support the expectation that bigger is costlier. The royalty is only $214 per climber for a peak below 6501 metres, $571 for a peak between 7501 and 8000 metres, and a whopping $10,000 for Everest via the South Col.

Are the 8000-metre peaks disproportionately expensive in Nepal, as in Pakistan? Yes. Nepalese 8000m peaks (other than Everest) are 1.7 times more expensive than predicted. Everest via the South Col is 8-fold more expensive than expected!

Figure 3

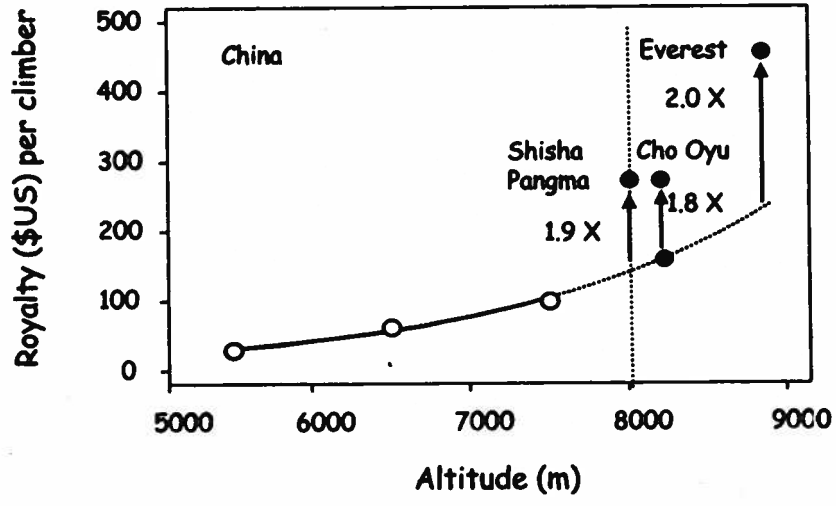


The Law even applies to different routes on Everest. The South Col route is of course in highest demand on Everest: other routes are either substantially more difficult and or more dangerous, and far less in demand. Not surprisingly, the royalty for the South Col route is 1.4 times more costly than that for an alternative route.

China

China has a complicated fee structure. A basic royalty in 1999 varied from only $30 per climber for peaks below 6000 metres to $455 per climber for Everest. However, the Chinese Tibetan Mountaineering Association has laid down special package costs for the three popular peaks: specifically, the cost per climber is $4300 for Everest, $3800 for Cho Oyu, and $3600 for Shisha Pangma (assuming 11 climbers per expedition). This CTMA fee covers not only the royalty, but numerous other fees as well, for example yak fees, transportation and liaison officer.

Figure 4



For present purposes I have analysed only the basic royalty, which increases with altitude of the peak (Figure 4). The popular peaks (Everest, Cho Oyu, Shisha Pangma) are 1.8 to 2.0 times more expensive than predicted. Curiously, royalties for the remaining 8,000 metres peaks of China (K2, Lhotse, Makalu, Gasherbrum I and II, Broad Peak) fall right on the predicted value and are thus not elevated. Thus China is exceptional in having elevated royalties only for certain 8000-metre peaks, but not for all. Why this is the case is not clear. The relatively low fee might be an incentive

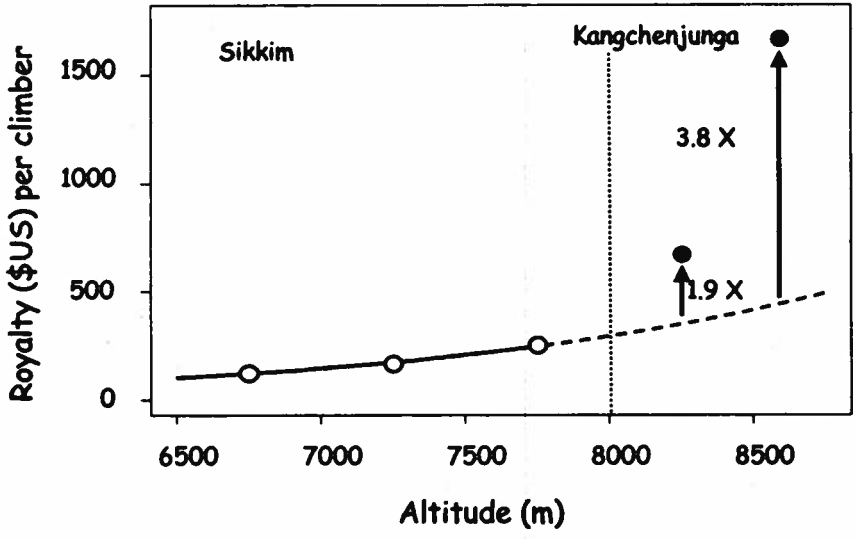
to attract climbers to China (see below), or perhaps it reflects the remoteness of access or route.

Sikkim

Indian Mountaineering Royalties are complex (www.indmount.com) and have changed recently. A base fee applies nationwide, but a supplemental fee is added in Sikkim. Also, special rates apply to peaks in the eastern Karakoram. Analyses here are on the cost to climb in Sikkim (IMF plus the Sikkim fee) and assume a full complement of 12 climbers per expedition.

Royalties in Sikkim – unlike those for other areas – increase only modestly with peak height, from $750 per climber for peaks below 6500m to $1000 for peaks above 8000m. However, Kangchenjunga (8586m) and its subsidiary summits are the only 8000-metre peaks in Sikkim, and Kangchenjunga is currently closed to climbing (Col. Ravinder Nath, personal communication). So it is unclear why Sikkim even lists a peak fee for peaks that can't be climbed. Prior to the ban on climbing on Kangchenjunga, Sikkim charged a special fee of $1667 for that peak, with the result that fees were elevated for the 8000m peaks, as in other areas.

Figure 5



Competition between Countries

Comparing the above figures, one can easily see that cost of royalties differs rather strikingly between countries, even for the same peak. The royalty to climb Everest via Nepal costs $10,000 per climber, but only $454 via China

(recall, however, that the CTMA imposes additional fees $4300 per climber). Similarly, climbing K2 via Pakistan costs $1714 per climber, but only $160 via China. Given such disparities, one might expect that climbers would flock to China, abandoning the traditional routes via Nepal and Pakistan. (Recall, of course, that the royalty is only a proportion of the total cost of an expedition, and extra fees and travel expenses might equalise total costs.)

To some extent this appears to be happening. Jon Krakauer (*Into Thin Air*) describes an incident involving the impact of changing Nepalese permit fees and regulations on Everest. In the autumn of 1993, the Ministry of Tourism in Nepal raised the permit fee to $50,000 for an expedition with five climbers, restricted the team size to a maximum of 12, and – perhaps most importantly – limited the number of expeditions to only four per season. At this time, China was charging only $15,000 per expedition and placed no restrictions either on the size or number of expeditions. As Krakauer notes: 'The flood of Everesters therefore shifted from Nepal to Tibet, leaving hundreds of Sherpas out of work. The ensuing hue and cry abruptly persuaded Nepal, in the spring of 1995, to cancel the four-expedition limit.'

Data on climbers who reached the summit of Everest via Nepal support Krakauer's conclusions. For the period 1988 to 1993, just before the restrictions were instituted, most summiters (84%) climbed via Nepal (averaging about 56 per year) rather than from Tibet (only about 11 per year). During the first year of the restrictions, the pattern remained similar: 45 summiters climbed via Nepal, and 6 climbed via Tibet. But after a lag of one year, patterns changed drastically: only 10 summiters climbed via Nepal, whereas 73 climbed via Tibet. Nepal was out; Tibet was in. When the Nepalese authorities removed restrictions on the number of expeditions, climber patterns rebounded back towards the norm: between 1996 and 1998 an average of 52 summiters per year climbed via Nepal, and 47 via Tibet. Note that the percentage of summiters who recently climbed from Nepal (53% for 1996-8) is still much lower than prior to 1994 (84%).* Whether this is due to the continuing disparity of permit fees, or simply an attempt by climbers to avoid crowds on the South Col route, or both, isn't clear. Although host countries adjust permit policies in an effort to compete for climbers, they are now beginning to co-operate in terms of permit fees and policies. In December 1998, delegates from mountaineering federations of the four Himalayan countries met to discuss common issues; and booking fees charged by all countries were circulated. From the summary of the discussions reported on the web (www.indmount.com/HIMCOM.html), the host countries were clearly in favour of exchanging information and ideas. Whether they form a high-altitude cartel remains to be seen.

* *Editor's note*: With the figures for 1999 and 2000 now available, the differential has widened. In 1999, 58% of 121 ascents were made from Nepal, while in 2000, 62% of 145 ascents were from Nepal.

The Costs of Climbing Virgin Peaks and Routes

We can extend our economic analyses by looking at another aspect of royalties. First ascents are highly prized in mountaineering, constituting a high demand. Host countries seem to appreciate this preference and charge extra for attempts on virgin peaks or even on virgin routes. In China, the cost of attempting a new route on a previously climbed peak is double that of attempting an existing route. Moreover, China adds a special fee for a virgin or newly opened peak: $1000 to $5000 per expedition for peaks between 6000 and 7000 metres; $1500 to $10,000 for peaks between 7000 and 8000 metres; and $27,000 to $41,000 for peaks greater than 8000 metres. (Given that all of main 8000m summits have long been climbed, the Chinese here are presumably referring to 'subsidiary' summits that top 8000m.) Until recently, the royalty for a virgin peak in Sikkim was double that of a climbed peak of the same height. However, this policy has apparently been discontinued (Col. Ravinder Nath, personal communication).

Historical Changes in Royalty Fees

Into Thin Air drew attention to the recent increases in royalties. In 1978, for example, the royalty for the South Col route on Everest was only about $1500 (around $4100 in year-2000 dollars) for an unlimited number of climbers, but is now $70,000 for a maximum of seven climbers. By any standards, and especially by those of climbers, this 17-fold increase above inflation in just over two decades is disconcerting. But is this dramatic increase for Everest typical of other peaks? How fast have royalties been increasing for the smaller peaks? Are they also increasing faster than inflation? Are fees for the biggest peaks increasing disproportionately fast, given the special attraction of the 8000m peaks?

For Nepal I've been able to obtain data from spring 1976 to the present. For Mount Everest on a per-climber basis (assuming seven climbers per expedition), the cost per climber has changed over that period from about $214 to $10,000 – nearly a 47-fold increase! This seems steep; however, the increase is really 'only' 15-fold, when the 1976 royalty is adjusted for inflation to year-2000 dollars ($681). Royalties for lesser peaks have also increased, but far less dramatically than for Everest. For non-Everest peaks above 8000m, the Nepalese royalty changed from about $200 per climber ($618 in current dollars) to $1428, a 2.3-fold increase when adjusted for inflation. For peaks between 7501 and 8000 metres, the royalty has changed from $171 per climber ($528 in current dollars) to $571, or only a 1.1-fold increase – thus barely changed at all.

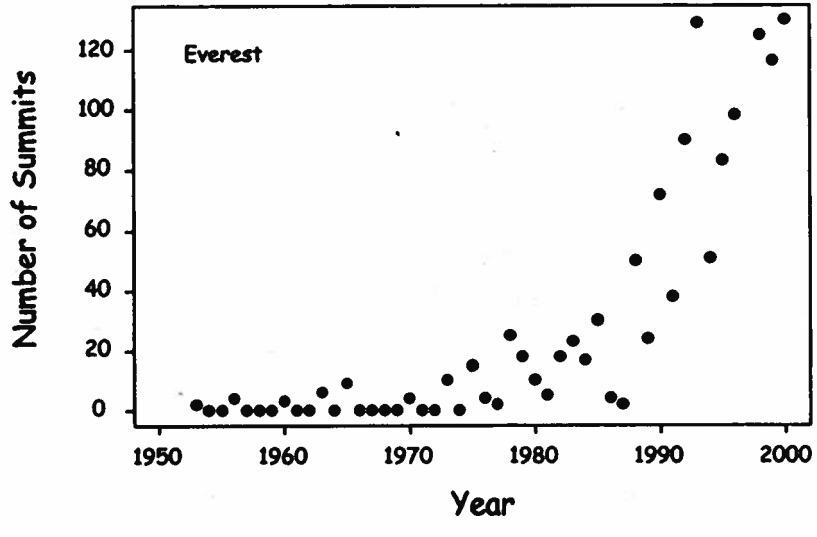
In Nepal, therefore, the primary increase in royalties since 1976 has been on the 8000m peaks, especially Everest. For example, the royalty for an 8000m peak was only 1.2-fold higher than of a peak between 7501 and 8000 metres in 1976, but is currently 2.5-fold higher. The royalty for the South Col route on Everest was only 1.1-fold higher than that for other 8000m peaks in 1976, but is currently seven-fold higher. In other words,

the relative royalty for 8000m peaks, especially that of Everest, have gone up far more than have the costs of lesser peaks. Demand comes at a cost.

My information from other countries is rather spotty. Reinhold Messner (*The Challenge*, 1977) reported that the royalty for his climb of Hidden Peak in Pakistan with Peter Habeler in 1975 was approximately $1000, or $500 per climber (about $1700 in current dollars). In 1983, he noted (*Mountain* 92:44-45) that the cost of a permit for a four-person expedition to an 8000-metre peak in Pakistan was £1000 (about $1620), or roughly $406 per climber ($790 in current dollars). In 2000, the rate per climber for a four-person expedition is $2375. For Pakistan, then, the increase per climber (1983 to 2000) is three-fold, after adjusting for inflation. For India between 1985 (cf *Mountain* 103:13) and 1999, permit costs have increased about 1.3 to 1.6-fold adjusted for inflation, depending on the height of the mountain. These crude analyses show that most royalties are increasing faster than inflation, but not hugely so. The real-dollar increase (excluding that for Everest, of course) over the past half century is roughly two to three-fold. What's driving this increase is, of course, the huge increase in climber-imposed demand (Figure 6).

For example, the number of climbers reaching the summit of Everest in 2000 was more than five times greater than in 1978, and in fact the number of summits in 2000 was greater than the total number of summits achieved for the years 1953 to 1981!

Figure 6



Subtle Impacts of Royalties

Royalties have an obvious impact on a climber's bank balance. But royalties may also influence climbers in more subtle ways. For example, because the royalty increases steeply with the size of the peak, budget-restricted climbers might choose to seek adventure on the many peaks smaller than 8,000 metres. The royalties of such peaks are less than the cost of a round-trip airfare from Europe or North America to Asia.

Royalties undoubtedly influence the size of expeditions. Recall that royalties are typically charged per expedition, not per climber. Thus, an alpine-style expedition to China with three climbers must pay the same basic royalty as an expedition of 11. Moreover, the CTMA special fee for Everest is $8,300 per climber for an expedition of one to three climbers, but only $3,300 per climber for expeditions of 28 to 30 climbers. Thus, a 'pay-by-the-expedition' policy in effect favors expeditions with a full complement of climbers and thus effectively discriminates against smaller ones (see also, L Griffin, High, June 1999, p. 3; and a private report by J McGuinness, http://www.project-himalaya.com/tourism-report/index.html). The motivation for a pay-by-the-expedition policy is probably economic as it directly increases revenues. Indeed, such policies may reflect intentional discrimination against small expeditions because they contribute relatively little to local economies. Galen Rowell (*In the Throne Room of the Gods*, p130, 1977) reports that Reinhold Messner, when applying for a permit to make an alpine-style attempt on Hidden Peak, was told by Pakistani officials that ". . . they would rather 'sell' the mountain to a large expedition that would employ more porters and bring more money into the country." Of course, climbers sometimes circumvent financial biases against small teams – two or more small teams can join forces to obtain a permit (and hence split the royalty and related fees), but then climb separately once on the mountain.

Royalty policies can also influence which peaks climbers attempt and when they attempt them. To achieve these ends, the Ministry of Tourism in Nepal has adopted rebates as incentives. For example, in an effort to increase economic growth in western Nepal, the Ministry can choose to give rebates to climbers attempting seldom-climbed peaks in this area. Similarly, rebates can be given to teams climbing outside the two traditional seasons (B. Shrestha, personal communication), presumably stabilizing the temporal input of foreign currency and jobs, and potentially reducing the seasonal impact on the mountains and peoples of Nepal.

Discounts can be available when expeditions include nationals from the home country, thereby encouraging local participation. In Pakistan, for instance, expeditions receive a 50% discount if half of the team is Pakistani. (In special cases the Tourism Division grants that discount if at least 1/3 the team is Pakistani.) Similarly, certain Nepalese peaks are completely closed to foreigners unless Nepalese climbers are included on the team.

Royalties could potentially be used to reduce crowding on popular routes. If, for example, the royalty is set relatively high for the standard route on a peak, climbers might be encouraged to try alternative routes, thereby allowing more expeditions on a given peak. To my knowledge, however, only Nepal has established route-specific royalties, and only on Everest.

Concluding Remarks

This article has outlined the economics of permits for the great Himalayan peaks. The basic patterns are clear: 1) pound for pound, bigger peaks (and especially the legendary 8,000-metre peaks) cost more, and 2) virgin peaks and virgin routes often cost more. These patterns are consistent with expectations based on economic fundamentals, namely, The Law of Supply and Demand. Big – or virgin – peaks cost more because they are rare, yet in high demand.

Although the economics of royalties seem understandable, the observation that royalties for the 8,000-metre peaks have been increasing much faster than inflation must be worrisome to mountaineers contemplating climbs in future years. Even so, mountaineers themselves are of course partially responsible for driving up royalties, simply because the increased number of mountaineers going to the Himalayan peaks (Figure 5) necessarily constitutes an increase in demand. One can't escape basic economics, even in thin air. The bottom line is that royalties are likely to continue to exist; and they will likely increase over the years. We can only hope that when mountaineers pay royalties to the governments of the Himalayan countries, they are thereby giving something back to the people who so graciously allow us to visit these special mountains that are their homes and sanctuaries. Ultimately, royalties constitute a reasonable mechanism to enable Himalayan host countries not merely to gain foreign currency, but also to control the impact that foreign climbers inevitably and increasingly place on a priceless environment and on unique cultures.

ACKNOWLEDGEMENTS

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What else is involved in obtaining permission to climb a Himalayan Peak?

The royalty is only one issue that climbers must deal with in obtaining permission to climb a Himalayan peak. Expeditions must of course apply for permission, pay various fees, as well as abide by mountaineering regulations and other laws and customs of the host country. Nepal is used here as an example. Complete details of regulations and procedures are given in a booklet *Some Provisions Relating to Mountain Tourism in Nepal*, obtainable from the Ministry of Tourism & Civil Aviation, Kathmandu. Note that different regulations can apply to so-called trekking peaks.

Application Procedures

An expedition must first submit an application requesting permission to climb a particular mountain and a particular route. A completed application includes miscellaneous details about the team (short biographical information and photographs of each member) plus descriptions of routes of access and of ascent, numbers of Nepalese workers who will be employed, etc. Each team must also submit an endorsement from their national mountaineering association. Applications should be submitted well in advance of a planned expedition, but no accompanying fee is required. A team must select a government-recognised trekking agency in Nepal to serve as a local liaison. Arrangements can be made after climbing permission is granted.

Assuming that the Ministry grants permission to an expedition, the leader is then required to pay the full royalty to the Ministry (in convertible foreign currency) within two months. Otherwise, permission is revoked.

Importation of Equipment

To obtain clearance to import food and equipment into Nepal, each expedition must submit a bill of lading or related documents to the Ministry. In addition, permission must be obtained to import communication equipment such as walkie-talkies, satellite links, as these are considered controlled articles. A new fee of US$5,000 is required for use of a satellite telephone. Special permission is required for filming (see below).

Miscellaneous Provisions

Each team will include one or more Liaison Officers, and will provide suitable provisions (equipment, clothing, food, medicine)

for that Officer as well as for the Sirdar, guides, workers, etc. The team must also check the health not only of team members, but also of any workers (Liaison Officer, porters). Further, personal accident insurance must be provided for all Nepalese participants; and the expedition is responsible for compensation for death or injury of uninsured workers. All workers must have wills.

Expeditions are charged with not polluting the environment. Rules govern whether particular types of garbage should be incinerated, buried, recycled, or exported. A (refundable) environmental deposit is required, and ranges from $2000 for peaks below 8000 metres to $4000 for Mount Everest. Penalties for violating Nepalese regulations are severe. For example, anyone attempting to scale a peak without permission can be banned from entering Nepal for up to ten years. Moreover, the government can impose a fine equal to twice the royalty.

The expedition must file weekly status reports to the Ministry. At the end of the expedition, team members must contact the Ministry. Moreover, the team leader must submit reports (with photographs) of the expedition details (number of members, maximum altitude reached, accidents, and expenditures). Teams will also be interviewed by Miss Elizabeth Hawley. These reports and interviews serve as a valuable source of information not only for the Nepalese government, but also for mountaineering historians and ultimately future mountaineers.

Special Provisions for Filming

Expeditions making feature films are charged between $1000 and $1500, or between $100 and $500 for other types of film. A film may not be distributed until approved by a Nepalese embassy, and a free copy of the film must be sent to the Ministry of Communication.

[1] These figures should not be confused with traditional 'supply curves' in economics, which plot the quantity of a good that would be supplied at various prices. Consider a country that charges $1000 for an expedition of up to 10 climbers, or thus $100 per climber. If the country instead charges $100 on a per-climber basis, it would receive only $900 for a nine-climber expedition. So the host country either breaks even or does better with a per-expedition system (G. Brown, personal communication), unless many small-scale expeditions choose to climb elsewhere (see a private report by J. McGuinness, http://www.project-himalaya.com/tourism-report/summary-mountain-tourism.html).