

2023 CASE QUESTION:

Question:

There are currently 14 operating ski resorts in Utah that served over 7.1 million skiers this past winter after a record snowfall year.ⁱ On average, these resorts provide approximately 1,800 skiable acres with Park City Mountain, the largest resort in the state, boasting more than 7,000 skiable acres.

The Extell Development Company recently announced plans to build and operate a new ski resort called Mayflower Mountain in Utah, the first to be developed in North America since 1981.ⁱⁱ The resort will be approximately 4,100 skiable acres in size and will be constructed on former military land located between Deer Valley and the Jordanelle Reservoir. The first lifts are expected to be operational by 2025.

While concerns about climate change continue to threaten the long-term sustainability of ski industryⁱⁱⁱ, the number of skier days in the state of Utah is projected to grow by approximately 5% per year over the next decade. To combat the declining trends in snowfall, Mayflower plans to source water for snowmaking from the Jordanelle Reservoir. An estimated 80% of the water used in snowmaking will return to reservoir.

Assuming Mayflower Mountain is equally successful at attracting skiers as other resorts in Utah, **how many skiers can the new resort expect to serve by 2035?**

Solution:

Facts:

- The state of Utah currently has 14 operating resorts with an average size of 1,800 acres.
- Mayflower Mountain would add an additional 4,100 acres.
- The state of Utah had a record number of skiers this past year at 7.1 million skier-days
- Mayflower plans to open by 2024-2025.

Distracting Facts:

- Park City Mountain is the largest resort boasting over 7,000 skiable acres.
- An estimated 80% of the water from snowmaking will return to the Jordanelle Reservoir

Key Assumption

- The number of skiable acres is strongly correlated with the number of skiers such that the relative size of the resort roughly equivalent to the resort's market share in terms of skiers

Calculations:

- The state of Utah currently provides 25,200 skiable acres ($14 * 1,800$).
- The expected market share for Mayflower in terms of acres is 14% ($4,100 / 29,300$).
- The expected number of skiers in Utah in 2035 is expected to grow to 11.6 million ($7.1 * 1.05^{10}$).

Final Answer

- Therefore, the expected number of skiers Mayflower Mountain could expect to serve by 2035 would be 1.6 million (14% of 11.6 million)

2024 CASE QUESTION:

Question:

On April 11, 2024, American Airlines announced that they would begin service from the Provo Municipal Airport (PVU) in the fall of 2024 to two of its major hubs: Dallas-Fort Worth International Airport (DFW) and Phoenix Sky Harbor International Airport (PHX).

Allegiant Air, a competitor, operated as the sole provider of commercial flights at the Provo Municipal Airport for over a decade (2011-2021). One of its busiest routes has been the Provo to Phoenix Gateway Airport, located on the border of Mesa and Gilbert, Arizona. Both suburbs in the East Valley of Phoenix, Mesa and Gilbert have long been strongholds for members of the Church of Jesus Christ of Latter-day Saints. According to the most recent statistics, the Phoenix Metropolitan area boasts over 260,000 members.¹ BYU Alumni also estimated that over 20,000 alumni reside in the state of Arizona.² Given the strength of the LDS Church membership in Arizona, it is no surprise that this route (Provo to Phoenix) has grown rapidly over the past decade to nearly 130,000 passengers in 2023.

¹ As of 2020, the Association of Religion Data Archives' (ARDA) estimated that 266,448 individuals consider themselves to adherents to the LDS Church (see <https://www.thearda.com/>)

² See <https://alumni.byu.edu/alumni-stats>, updated on February 28, 2024.

Because of its relative distance from the state of Utah, the state of Texas does not have as many members of the LDS Church as the state of Arizona. However, the relative low-cost of living has attracted young LDS families in recent years. Consequently, the state of Texas contains a growing share of the Church membership in the US.

According to the most recent statistics, the Dallas-Fort Worth metroplex claims to have over 100,000 LDS members.³ As a whole, the state of Texas has nearly 18,000 BYU Alumni.⁴ Given this growth, it is likely that American Airlines forecasted a potential opportunity to tap the LDS market in the Dallas-Fort Worth Metro area by providing service from Provo (PVU) to Dallas-Fort Worth (DFW).

Given the growing strength of the LDS Church in Texas and American Airlines' intention of providing consistent flight service from Provo Airport (PVU) to Dallas-Fort Worth (DFW), **how often would you expect American to offer a flight between the two cities?**

Solution:

Actual Answer: According to a press release issued by Provo Mayor Michelle Kaufusi, American Airlines plans to provide two daily flights from Provo to DFW. If you look at the flight schedule for October, it appears that American plan to fly a CRJ700, a small regional jet with capacity of seventy-five seats.⁵

Helpful Facts:

- Allegiant Airlines, as a near local monopoly, flew 130,000 passengers from Provo to Phoenix in 2023.
- 260,000 members of the church live in the Phoenix metro area.
- 100,000 members of the church live in the Dallas-Fort Worth metro area.

Distracting Facts

- The states of Arizona and Texas boast 20,000 and 18,000 BYU alumni, respectively. This information is not helpful for answering the question because both states boast other cities with sizeable LDS populations (Tucson, AZ, and Houston and San Antonio, TX) which could skew the calculations. Given that we have numbers for the

³ As of 2020, the Association of Religion Data Archives' (ARDA) estimated that 105,071 individuals consider themselves to adherents to the LDS Church (see <https://www.thearda.com/>)

⁴ See <https://alumni.byu.edu/alumni-stats>, updated on February 28, 2024.

⁵ See <https://www.mayorkaufusi.com/post/american-airlines-is-coming-to-provo#:~:text=I'm%20beyond%20thrilled%20to,Worth%20and%20one%20to%20Phoenix>.

metro areas, it would make sense to use the metro-level statistics, not state-level statistics.

Key Assumptions

- Members of the church who are from the DFW metro area will travel from Provo to DFW at a similar rate as members that live in the Phoenix metro area.
- Given that Provo is a mid-size city, American will service the PVU to DFW route with a smaller regional jet (80-100 passengers).

Calculations

- There was a 1:2 ratio of passengers from PVU to PHX (130,000) to LDS members in Phoenix (260,000) in 2023
- Given a population of 100,000 LDS members in the Dallas-Fort Worth area and a similar assumption of rate of travel for LDS members in both cities, one might suggest a potential route size of 50,000 passengers per year. ($130,000 / 260,000 = 50,000 / 100,000$)
- If the student assumes a larger commercial plane (i.e., Boeing 737 with a capacity of 200) that would mean 250 flights a year ($50,000 / 200$), which would round to one flight per day ($250 / 365 = 0.68$ flights per day).
- If the student assumes a smaller regional jet (e.g., CRJ 700 with a capacity of 75) that would be 666 flights per year ($50,000 / 75$), which would round to two flights per day ($666 / 365 = 1.82$ flights per day).

Why Do Strategy Professors Like This Question?

- Students must sift through information to determine what is relevant and what is not.
- Students must make two assumptions, one about the rate of travel of LDS members across cities and the other about the potential type of airplane that American might fly on the route.
- Students must do quick mental calculations with rounded numbers.

¹ <https://ksltv.com/555831/utahs-ski-resorts-report-record-breaking-season/>

ⁱⁱ <https://www.gohebertvalley.com/Mayflower-Resort/>

ⁱⁱⁱ <https://www.deseret.com/utah/2021/12/9/22820603/what-will-ski-industry-look-like-50-years-study-paints-bleak-forecast-for-west-snow-climate-change>