Class Activities

# Chapter 13: Demand Forecasting Methods

**Activity 1: Activity for Small Groups**

Learning objective: Illustrate and distinguish between qualitative and quantitative types of forecasting methods, including their strengths and weaknesses

Have students find two other classmates to form a group. Assign each group one of the five qualitative forecasting methods: Expert opinion, Delphi method, sales force opinions, market research, historical life-cycle analogy. Discuss among one another in the group the characteristics, pros and cons of the forecasting method assigned. Illustrate the method with the use of an example. Present the group’s work to the rest of the class.

**Activity 2: Individual Exercise[[1]](#footnote-1)**

Learning objective: Illustrate and distinguish between qualitative and quantitative types of forecasting methods, including their strengths and weaknesses

Provide students with the following demand data for four items:

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Month** | **Item 1** | **Item 2** | **Item 3** | **Item 4** |
| 1 | 751 | 250 | 666 | 287 |
| 2 | 741 | 268 | 618 | 352 |
| 3 | 728 | 289 | 483 | 416 |
| 4 | 773 | 314 | 375 | 313 |
| 5 | 718 | 337 | 303 | 359 |
| 6 | 752 | 367 | 242 | 440 |
| 7 | 736 | 391 | 210 | 520 |
| 8 | 768 | 409 | 239 | 391 |
| 9 | 729 | 433 | 342 | 449 |
| 10 | 777 | 459 | 396 | 550 |
| 11 | 748 | 481 | 457 | 650 |
| 12 | 756 | 500 | 587 | 489 |

Have students graph each of the item and observe the demand pattern. Provide a product example for each of the demand pattern observed. Make a demand forecast for the next six periods for each item without using any forecasting methods. Have students turn in their forecast.

**Activity 3: Individual Exercise**1

Learning objective: Use the four forecast error measures to track forecast accuracy

Return students the demand forecasts from activity 2. Provide students with the following actual demand figures of each item for the next six periods:

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Month** | **13** | **14** | **15** | **16** | **17** | **18** |
| **Item 1** | 747 | 743 | 763 | 764 | 746 | 755 |
| **Item 2** | 528 | 553 | 576 | 605 | 633 | 662 |
| **Item 3** | 668 | 627 | 496 | 377 | 287 | 250 |
| **Item 4** | 539 | 673 | 835 | 647 | 738 | 832 |

Compute the forecast errors of each item using mean absolute deviation. For each item, the student whose forecast error is the lowest wins. Demonstrate how to use the appropriate forecasting method to forecast demand for each item.

1. Adapted from Snider, B.R., and Eliasson, J.B. (2013) “Beat the Instructor: An Introductory Forecasting Game,” Decision Sciences: Journal of Innovative Education, 11(2), 147-157. [↑](#footnote-ref-1)