PART 1
Week 7
Behavioural Aspects of Budgeting
FNSACC503A
Manage Budgets and Forecasts
By the end of PART 1 of this lesson, you will be able to...

1. Discuss what a budget it used for.
2. List and briefly discuss some of the behavioural aspects of budgeting.
Budgets: what do we use them for?

1. **PLANNING**: necessitates the setting of goals and deciding on the actions needed to reach those goals (i.e. *where are we going and how are we going to get there?*)

2. **ORGANISING**: involves the allocation of resources (i.e. *how are we going to use what we’ve got to get there?*)
Budgets: what do we use them for?

3. **LEADING**: involves communicating the goals of the organisation to your team & keeping them motivated.

**MOTIVATION** → defined as the process that *initiates*, *guides* and *maintains* goal-oriented behaviour. Motivation is what causes us to act, whether it is getting a glass of water to reduce thirst or reading a book to gain knowledge.
Budgets: what do we use them for?

4. **CONTROLLING**: the process of:

- setting standards (e.g. budget)
- measuring current performance (CHAPTER 8) (comparing actuals versus budget → variance)
- taking remedial action if required.

*(i.e. monitor progress & make adjustments if necessary).*
Behavioural aspects of budgeting

- Budget managers need to find ways to cultivate and maintain supportive and co-operative relationships with their staff.
- Level of support and participation depends on the manager’s approach to budgeting.
The use of PUNISHMENT for underperformance (authoritarian style) tends to encourage attempts to ‘beat the system’ as well as other dysfunctional behaviour e.g. padding the budget (TOP-DOWN APPROACH).

PARTICIPATION in the budgetary process tends to result in increased productivity and satisfaction (BOTTOM-UP APPROACH).

PADDING the budget involves inflating budget costs or underestimating budget revenue to make budget targets easier to achieve. This gives rise to what is known as BUDGETARY SLACK which is the difference between the padded estimate and the real estimate.
PARTICIPATION in the budgeting process

THE BENEFITS...

1. Improved communication.
2. A greater understanding of what’s involved.
3. An opportunity to work out any problems before the budget is set.
4. Increased acceptance of the budget.
5. Improved commitment.
6. Improvement in the quality/accuracy of the budget because individual managers who are experts in their own area provide valuable input.
Factors affecting behaviour

- We have already mentioned that budgets can be used to measure managerial performance.
- If this is linked to a reward (or punishment) system, then managers may try and distort the information they pass on to their supervisors e.g. by trying to under-emphasise unfavourable items.
- This type of dysfunctional behaviour is both undesirable and counter-productive.
- Other budgetary problems that may lead to dysfunctional behaviour include the following…
## Factors affecting behaviour

<table>
<thead>
<tr>
<th>Situation</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>Budget targets are too difficult for employees to achieve.</td>
<td>Employees may start to feel resentful and/or stressed out.</td>
</tr>
<tr>
<td>Budget targets are not challenging enough i.e. they are too easy to achieve.</td>
<td>Poor performance by staff.</td>
</tr>
<tr>
<td>Insufficient flexibility makes it difficult for employees to use their own initiative.</td>
<td>Loss of autonomy and motivation.</td>
</tr>
<tr>
<td>Narrow-minded managers focusing on their own department at the expense of the organisation as a whole.</td>
<td></td>
</tr>
<tr>
<td>Emphasis on financial goals to the detriment of non-financial goals e.g. cutting corners to save costs</td>
<td></td>
</tr>
</tbody>
</table>
PART 2
Week 7
Performance Reports

FNSACC503A
Manage Budgets and Forecasts
By the end of PART 2 of this lesson, you will be able to…

1. Define **responsibility accounting** and describe what a **responsibility centre** is.
2. Prepare a basic **performance report**.
3. Explain the term ‘**management by exception**’.
4. List the main **objectives** of responsibility accounting.
What is goal congruence?

= an organisational planning process that:

- logically groups business activities;
- establishes lines of management authority and responsibility; and
- establishes corporate policy

enabling both the company and the employee to realise their objectives.
Responsibility accounting

What is responsibility accounting?
It is:
* a management accounting system (MAS)
* that attempts to encourage & measure

GOAL CONGRUENCE.
Responsibility accounting

A key output of this MAS is a performance report which should:

- address the various levels of management
- emphasise factors over which they have control
- be developed on the basis of the organisation's operational structure.
Responsibility accounting
(the planning cycle)

BUDGET

PERFORMANCE REPORT

Plan → Action → Results

Revise ← Remedy →

Comparison of ACTUAL results to BUDGET → VARIANCE
Responsibility centres

- Each division, branch or other sub-unit within an organisation is known as a responsibility centre.
- The manager of each responsibility centre has both the authority and responsibility to make decisions relating to its activity and is therefore held accountable for its performance.

Responsibility centres may include:

- Cost centres
- Revenue centres
- Profit centres
- Investment centres
Responsibility centres
A quick look at how an organisation could be structured...
Performance reports

- **PERFORMANCE REPORTS** are prepared on a regular basis (at least monthly) to help assess the performance of each responsibility centre.

- Performance reports are used to highlight any **variances** that may arise when the **actual** results achieved are **compared to the budget**.

- A **VARIANCE** which represents the difference between the budgeted figure and the actual figure.

- A performance report needs to be both **timely** and **accurate** so that corrective action can be taken in time and should provide detailed information allowing management to **analyse performance** and **identify responsibility**.
Performance reports

*How much information should you include in a performance report?*

- The **MASTER BUDGET** contains some confidential information that should only be made available to top management.

- However, without disclosing any information that is either irrelevant or confidential, performance reports should provide each responsibility centre manager with enough information to enable the effective management of his or her area of operation, especially if he or she is going to be held accountable for its performance.

- This could include info. about actual performance and the criteria used to assess performance.
Variances

A **VARIANCE** represents the **difference** between the **budgeted figure** and the **actual figure**.

Variances indicate areas that require **further investigation** by the sub-unit manager. They are not necessarily indicative of a problem that needs to be fixed.
Variances

You get two (2) types of variances:

**Favourable variances (F)**
where actual income is >budgeted income or actual cost is <budgeted cost.

**Unfavourable variances (U)**
where actual income is <budgeted income or actual cost is >budgeted cost.
Variances

- Both the **NATURE** and the **SIZE** of the variance should be taken into account.
- Any **LARGE** (those that exceed an acceptable limit) or **UNUSUAL** variances should be investigated by the manager of the organisational sub-unit and appropriate remedial action taken.
- What is considered material or significant **varies from business to business**.
- Reasons for variances → external factors (no control); internal factors (may be able to change).
OBJECTIVES of responsibility accounting

- It is impossible for managers to keep track of every little detail concerned with operating a business.
- The principle of **MANAGEMENT BY EXCEPTION** is often used to enable management to concentrate on the things that matter. Time is not wasted investigating those areas of responsibility that are already performing at or above an acceptable standard of performance. They only concentrate on the EXCEPTIONS i.e. **those areas that are performing below standard**.
- **PERFORMANCE REPORTS** can be used to highlight areas needing attention by expressing each variance as a % of the budget. Only those items that exceed a certain limit e.g. plus or minus 5% are investigated.
OBJECTIVES of responsibility accounting

- Responsibility accounting is **NOT about trying to find out who is to blame.** Blaming others leads to defensive behaviour and game-playing by staff. Their main objective then becomes ensuring that they achieve their set targets and budgets at all costs, regardless of the consequences to others in the organisation.

- A properly used responsibility accounting system (RAS) provides accurate information and identifies who should be consulted about specific situations or variances.

- Both **financial** and **non-financial** measures should be used to measure performance.
Example: performance report

<table>
<thead>
<tr>
<th>Item</th>
<th>Budget ($)</th>
<th>Actual ($)</th>
<th>Variance ($)</th>
<th>Variance (%)</th>
<th>U or F</th>
</tr>
</thead>
<tbody>
<tr>
<td>Salaries</td>
<td>$21,000</td>
<td>$22,620</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Stationery</td>
<td>$750</td>
<td>$690</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Telephone</td>
<td>$840</td>
<td>$864</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Electricity</td>
<td>$1,020</td>
<td>$960</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rates</td>
<td>$500</td>
<td>$520</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Depreciation</td>
<td>$750</td>
<td>$750</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>$24,860</strong></td>
<td><strong>$26,404</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Required:**
Prepare a performance report showing the variance in dollars ($) and expressed as a percentage (%). Please also state whether the variance is FAVOURABLE (F) or UNFAVOURABLE (U).
### Example: Performance Report

<table>
<thead>
<tr>
<th>Item</th>
<th>Budget ($)</th>
<th>Actual ($)</th>
<th>Variance ($)</th>
<th>Variance (%)</th>
<th>U or F</th>
</tr>
</thead>
<tbody>
<tr>
<td>Salaries</td>
<td>$21,000</td>
<td>$22,620</td>
<td>$1,620</td>
<td>7.7%</td>
<td>U</td>
</tr>
<tr>
<td>Stationery</td>
<td>$750</td>
<td>$690</td>
<td>$60</td>
<td>8.0%</td>
<td>F</td>
</tr>
<tr>
<td>Telephone</td>
<td>$840</td>
<td>$864</td>
<td>$24</td>
<td>2.9%</td>
<td>U</td>
</tr>
<tr>
<td>Electricity</td>
<td>$1,020</td>
<td>$960</td>
<td>$60</td>
<td>5.9%</td>
<td>F</td>
</tr>
<tr>
<td>Rates</td>
<td>$500</td>
<td>$520</td>
<td>$20</td>
<td>4.0%</td>
<td>U</td>
</tr>
<tr>
<td>Depreciation</td>
<td>$750</td>
<td>$750</td>
<td>$0</td>
<td>0%</td>
<td></td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>$24,860</strong></td>
<td><strong>$26,404</strong></td>
<td><strong>$1,544</strong></td>
<td><strong>6.2%</strong></td>
<td><strong>U</strong></td>
</tr>
</tbody>
</table>

**Formula for calculating variance %:**

\[(\text{Variance} / \text{Budget}) \times 100\]

e.g. Salaries variance % = \((1,620 / 21,000) \times 100\) = 7.7%

Note that TOTAL variance % is NOT the sum of the figures in the ‘variance (%)’ column.
PART 3
Week 7
Flexible Budgets
FNSACC503A
Manage Budgets and Forecasts
By the end of PART 3 of this lesson, you will be able to...

1. Prepare a performance report that discloses contribution margin.
2. State the flexible budget formula.
3. Prepare a basic flexible budget.
Flexible budgets

**STATIC** budget:
→ prepared for **one** level of planned activity.

**FLEXIBLE** budget:
→ covers a **range** of activity within which an organisation might operate.
→ gives different budget allowances for various levels of output i.e. it shows what costs should have been incurred at the actual level of activity.
## Jellybeans Inc.
### Performance report for the year ended 30 June

<table>
<thead>
<tr>
<th></th>
<th>Budget</th>
<th>Actual</th>
<th>Variance</th>
<th>U or F</th>
</tr>
</thead>
<tbody>
<tr>
<td>Units sold</td>
<td>80,000</td>
<td>75,000</td>
<td>5,000</td>
<td>U</td>
</tr>
<tr>
<td>Sales</td>
<td>$700,000</td>
<td>$630,000</td>
<td>$70,000</td>
<td>U</td>
</tr>
<tr>
<td>Less: COGS</td>
<td>542,500</td>
<td>511,000</td>
<td>31,500</td>
<td>F</td>
</tr>
<tr>
<td><strong>Gross profit</strong></td>
<td>157,500</td>
<td>119,000</td>
<td>38,500</td>
<td>U</td>
</tr>
<tr>
<td>Less: Operating expenses</td>
<td>80,500</td>
<td>74,270</td>
<td>6,230</td>
<td>F</td>
</tr>
<tr>
<td><strong>Net profit</strong></td>
<td>77,000</td>
<td>44,730</td>
<td>32,270</td>
<td>U</td>
</tr>
</tbody>
</table>
Cost behavior:
The more knowledge we have of how our costs behave, the more accurate our budgeting process can be.

- **Fixed costs:** in total remain the same in the short run within a given range of activity e.g. factory rent.

- **Variable costs:** in total vary as the level of activity changes e.g. direct labour.
Fixed Costs

Fixed Costs in Total

Fixed Costs per unit

Activity

Activity
Variable Costs
### Jellybeans Inc.

**Performance report for the year ended 30 June**

Having identified the fixed and variable costs:

*a.* the company’s performance report can be restated as follows; and

<table>
<thead>
<tr>
<th></th>
<th>Budget</th>
<th>Actual</th>
<th>Variance</th>
<th>U or F</th>
</tr>
</thead>
<tbody>
<tr>
<td>Units sold</td>
<td>80,000</td>
<td>75,000</td>
<td>5,000</td>
<td>U</td>
</tr>
<tr>
<td>Sales</td>
<td>$</td>
<td>$</td>
<td>$</td>
<td></td>
</tr>
<tr>
<td>Less: VARIABLE COSTS</td>
<td>518,000</td>
<td>476,000</td>
<td>42,000</td>
<td>F</td>
</tr>
<tr>
<td>Contribution margin</td>
<td>182,000</td>
<td>154,000</td>
<td>28,000</td>
<td>U</td>
</tr>
<tr>
<td>Less: FIXED COSTS</td>
<td>105,000</td>
<td>109,270</td>
<td>4,270</td>
<td>U</td>
</tr>
<tr>
<td>Net profit</td>
<td>77,000</td>
<td>44,730</td>
<td>32,270</td>
<td>U</td>
</tr>
</tbody>
</table>

*b.* The relationship between activity and total expenses can be expressed as a formula…this is known as the **FLEXIBLE BUDGET EQUATION**.
Flexible budget equation

Total budgeted expenses =

\[
\text{Budgeted VARIABLE COSTS per activity unit} \times \text{Total activity units} + \text{Budgeted FIXED COSTS}
\]

Budgeted VARIABLE COSTS per activity unit = \[
\frac{\text{budgeted variable costs}}{\text{budgeted units sold}}
\]
Jellybeans Inc.
Flexible Budget Equation

Budgeted variable costs per activity unit
= Budgeted variable costs / Budgeted units sold
= $518,000 / 80,000
= $6.475 per unit

Therefore, Jellybean Inc.’s flexible budget formula is:
Total budgeted expenses
= (Budgeted VC per activity unit x number of units sold) + Budgeted FC
= ($6.475 x number of units sold) + $105,000

The average budgeted sales price per unit is $8.75
(i.e. $700,000 / 80,000 units)

<table>
<thead>
<tr>
<th></th>
<th>Budget</th>
</tr>
</thead>
<tbody>
<tr>
<td>Units sold</td>
<td>80,000</td>
</tr>
<tr>
<td>Sales</td>
<td>$700,000</td>
</tr>
<tr>
<td>Less: VARIABLE COSTS</td>
<td>$518,000</td>
</tr>
<tr>
<td>Contribution margin</td>
<td>$182,000</td>
</tr>
<tr>
<td>Less: FIXED COSTS</td>
<td>$105,000</td>
</tr>
<tr>
<td>Net profit</td>
<td>$77,000</td>
</tr>
</tbody>
</table>
Jellybeans Inc.
Flexible budget for the year ended 30 June
Management could prepare a flexible budget to see what the effect of other likely activity levels might be on profits.

<table>
<thead>
<tr>
<th></th>
<th>Level 1</th>
<th>Level 2</th>
<th>Level 3</th>
<th>Level 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Units sold</td>
<td>70,000</td>
<td>75,000</td>
<td>80,000</td>
<td>85,000</td>
</tr>
<tr>
<td>Sales</td>
<td>$612,500</td>
<td>$656,250</td>
<td>$700,000</td>
<td>$743,750</td>
</tr>
<tr>
<td>Less: VARIABLE COSTS</td>
<td>$453,250</td>
<td>$485,625</td>
<td>$518,000</td>
<td>$550,375</td>
</tr>
<tr>
<td>Contribution margin</td>
<td>$159,250</td>
<td>$170,625</td>
<td>$182,000</td>
<td>$193,375</td>
</tr>
<tr>
<td>Less: FIXED COSTS</td>
<td>$105,000</td>
<td>$105,000</td>
<td>$105,000</td>
<td>$105,000</td>
</tr>
<tr>
<td>Net profit</td>
<td>$54,250</td>
<td>$65,625</td>
<td>$77,000</td>
<td>$88,375</td>
</tr>
</tbody>
</table>
Flexible budget calculations

(shown below for LEVEL 1 only as an example)

**SALES:**
$8.75 \times \text{number of units sold}
\text{e.g.} \quad $8.75 \times 70,000 = $612,500

**VARIABLE COSTS:**
$6.475 \times \text{number of units sold}
\text{e.g.} \quad $6.475 \times 70,000 = $453,250

**FIXED COSTS:**
REMAIN THE SAME
(it is assumed that activity levels are within the relevant range)
PART 4
Week 7
Variance Analysis

FNSACC503A
Manage Budgets and Forecasts
By the end of PART 4 of this lesson, you will be able to...

1. Analyse a flexible budget and identify the **activity volume variance** and the **flexible budget variance**.
2. Calculate **price** and **quantity variances**.
3. Discuss the importance of reviewing the cause of a variance and taking appropriate action.
Flexible budget analysis

Flexible budgeting techniques will reveal variances between the original budget and the actual results that are due to differences in:

P RICES
(known as a ‘spending variance’)

Q UANTITIES
(known as a ‘volume or capacity variance’)

[Image: Northern Sydney Institute logo]
## Jellybeans Inc.
Information for the year ended 30 June

<table>
<thead>
<tr>
<th></th>
<th>MASTER BUDGET</th>
<th>FLEXIBLE BUDGET</th>
<th>ACTUAL RESULTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Units sold</td>
<td>80,000</td>
<td>75,000</td>
<td>75,000</td>
</tr>
<tr>
<td></td>
<td>$</td>
<td>$</td>
<td>$</td>
</tr>
<tr>
<td>Sales</td>
<td>700,000</td>
<td>656,250</td>
<td>630,000</td>
</tr>
<tr>
<td>Less: VARIABLE COSTS</td>
<td>518,000</td>
<td>485,625</td>
<td>476,000</td>
</tr>
<tr>
<td>Contribution margin</td>
<td>182,000</td>
<td>170,625</td>
<td>154,000</td>
</tr>
<tr>
<td>Less: FIXED COSTS</td>
<td>105,000</td>
<td>105,000</td>
<td>109,270</td>
</tr>
<tr>
<td>Net profit</td>
<td>77,000</td>
<td>65,625</td>
<td>44,730</td>
</tr>
</tbody>
</table>
Flexible budget analysis

<table>
<thead>
<tr>
<th>STATIC budget variance</th>
<th>ACTIVITY VOLUME variance</th>
<th>FLEXIBLE budget variance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Difference between actual results and master budget figures.</td>
<td>Difference between master budget figures and budgeted figures recalculated for actual volume achieved. Shows what portion of the variance was due to the actual volume being different from the desired volume as per the master budget.</td>
<td>Difference between the actual results and budgeted figures recalculated for actual volume achieved. Shows the variance when the actual volume achieved is used to recalculate the budget figures.</td>
</tr>
</tbody>
</table>

Volume levels may be based on:

- Number of units sold
- Professional hours
- Machine hours
- Student contact hours
<table>
<thead>
<tr>
<th></th>
<th>MASTER BUDGET</th>
<th>ACTIVITY VOLUME VARIANCE</th>
<th>FLEXIBLE BUDGET</th>
<th>FLEXIBLE BUDGET VARIANCE</th>
<th>ACTUAL RESULTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Units sold</td>
<td>80,000</td>
<td>5,000 U</td>
<td>75,000</td>
<td>-</td>
<td>75,000</td>
</tr>
<tr>
<td>Sales</td>
<td>$</td>
<td>$</td>
<td>$</td>
<td>$</td>
<td>$</td>
</tr>
<tr>
<td>Less: VARIABLE COSTS</td>
<td>518,000</td>
<td>32,375 F</td>
<td>485,625</td>
<td>9,625 F</td>
<td>476,000</td>
</tr>
<tr>
<td>Contribution margin</td>
<td>182,000</td>
<td>11,375 U</td>
<td>170,625</td>
<td>16,625 U</td>
<td>154,000</td>
</tr>
<tr>
<td>Less: FIXED COSTS</td>
<td>105,000</td>
<td>-</td>
<td>105,000</td>
<td>4,270 U</td>
<td>109,270</td>
</tr>
<tr>
<td>Net profit</td>
<td>77,000</td>
<td>11,375 U</td>
<td>65,625</td>
<td>20,895 U</td>
<td>44,730</td>
</tr>
</tbody>
</table>

Static budget variance of $32,270 = Total volume variance of $11,375 + Total flexible budget variance of $20,895
Variances : manufacturing costs

**Product costs** are costs of converting raw materials into a finished product e.g. packaging boxes.

**MANUFACTURING** or **PRODUCT COSTS** include:
1. Direct materials e.g. cardboard
2. Direct labour
3. Factory overhead
# SUMMARY

variances for manufacturing costs

<table>
<thead>
<tr>
<th>Variance</th>
<th>Direct Material</th>
<th>Direct Labour</th>
<th>Factory Overhead</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Actual usage x (Budgeted price – Actual price)</td>
<td>Actual hours x (Budgeted rate – Actual rate)</td>
<td>Actual units x (Budgeted cost – Actual cost)</td>
</tr>
<tr>
<td>Spending</td>
<td></td>
<td></td>
<td>Static budget fixed overhead cost = flexible budget fixed overhead cost VS Actual fixed overhead cost</td>
</tr>
<tr>
<td>Volume or Capacity</td>
<td>Budgeted price x (Budgeted usage – Actual usage)</td>
<td>Budgeted rate x (Budgeted hours – Actual hours)</td>
<td>Budgeted cost x (Budgeted units – Actual units)</td>
</tr>
</tbody>
</table>
Direct material variances

- **Price or cost variance (P)** – when the actual cost of direct material used in production is different from the cost budgeted for

  **Formula:**
  
  Actual usage $\times$ (Budgeted price – Actual price)

- **Usage variance (Q)** – when the actual quantity of direct material used in production is different from the quantity budgeted for

  **Formula:**
  
  Budgeted price $\times$ (Budgeted usage – Actual usage)
**Example**

- **Tiny Tedz Ltd** makes biscuits for kids.
- To make 100 pallets of biscuits, 200kg of flour costing $5 per kg is budgeted for.
- Tiny Tedz makes exactly 100 pallets in a month.
- Actual results for February indicate that 180kg of flour costing $5.10 was used.

**Required:**
Calculate the direct materials price and direct materials usage variance for this direct input.
Solution

Budget: 200kg (Q) x $5.00 per kg (P) = $1,000
Actual: 180kg (Q) x $5.10 per kg (P) = $918
Variance = $82 favourable (combination of price and quantity differences)

**DM price variance → hold quantity constant**
180kg should have cost $5.00 per kg, but instead it cost $5.10 per kg. Therefore, the variance is 180kg x $0.10 per kg = $18 unfavourable.

**DM usage variance → hold price constant**
200kg should have been used, but 180kg was used instead at a budgeted cost of $5.00 per kg. Therefore, the variance is 20kg x $5.00 per kg = $100 favourable.

- The net result of the two variances is $82 favourable.
Direct labour variances

- **Rate or cost variance (P)** – when the actual rate of pay is different from the rate budgeted for

  Formula:

  \[ \text{Actual hours} \times (\text{Budgeted rate} - \text{Actual rate}) \]

- **Efficiency variance (Q)** – when the actual number of hours worked is different from the quantity budgeted for

  Formula:

  \[ \text{Budgeted rate} \times (\text{Budgeted hours} - \text{Actual hours}) \]
Example

- **Tiny Tedz** makes biscuits for kids.
- To make 100 pallets of biscuits, 1,000 hours of direct labour paid at a rate of $20.00 per hour have been budgeted for.
- Tiny Tedz makes exactly 100 pallets in a month.
- Actual results for February indicate that 1,100 direct labour hours were worked and, on average, employees were paid $18.50 per hour.
- **Required:**
  Calculate the direct labour cost and direct labour efficiency variance.
Solution

Budget: 1,000 hours (Q) x $20.00 per hour (P) = $20,000
Actual: 1,100 hours (Q) x $18.50 per hour (P) = $20,350
Variance = $350 unfavourable (combination of rate and quantity differences)

**DL rate variance** → hold quantity constant
1,100 hours should have been paid at a rate of $20.00 per hour, but instead they were paid at a rate of $18.50 per hour. Therefore, the variance is 1,100 hours x $1.50 per hour = $1,650 favourable.

**DL efficiency variance** → hold rate constant
1,000 hours should have been worked, but 1,100 hours were worked at a rate of $20.00 per hour. Therefore, the variance is 100 hours x $20.00 per hour = $2,000 unfavourable.

- The net result of the two variances is $350 unfavourable.
Factory overhead variances

- **Spending variance (P)** – when the actual cost is different from the cost budgeted for
  
  **Formula:**
  
  Actual units \( \times (\text{Budgeted cost} - \text{Actual cost}) \)

- **Volume variance (Q)** – when the actual number of units produced is different from the quantity budgeted for
  
  **Formula:**
  
  \( \text{Budgeted cost} \times (\text{Budgeted units} - \text{Actual units}) \)
Example

- **Games R Us Ltd** makes computer games for kids.
- For the year it was estimated that 10,000 games would be made. Fixed overhead costs of $50,000 and variable overhead costs of $8 per game were budgeted for.
- Actual results for the year indicate that 9,550 games were made, that fixed overhead costs totalled $52,000 and that variable overhead costs totalled $77,928.
- **Required:**
  Calculate the volume variance and the spending variance each of these overhead costs.
Solution – variable overhead

Budget: 10,000 games (Q) x $8.00 per game (P) = $80,000
Actual: 9,550 games (Q) x $8.16 per game (P) = $77,928
Variance = $2,072 favourable
(combination of price and quantity differences)

Variable overhead spending variance → hold quantity constant
9,550 games should have been made costing $8.00 per game, but
they cost $8.16 per game instead. Therefore, the variance is 9,550
games x $0.16 per game = $1,528 unfavourable.

Variable overhead volume variance → hold price constant
10,000 games should have been made, but 9,550 games were
made instead at a cost of $8.00 per game. Therefore, the variance is
450 games x $8.00 per game = $3,600 favourable.

- The net result of the two variances is $2,072 favourable.
Solution – fixed overhead

Static budget = Flexible budget = $50,000
Actual fixed overhead cost = $52,000
Variance = $2,000 unfavourable
What do we do now…?

1. Identify
2. Analyse / investigate further
3. Take action
What do we do now…?

- The figures provided only identify the source of the variance.
- Further investigations will need to be made in all material cases (*management by exception*).
- This may involve consultation with staff at all levels - some of whom may feel under threat as a result of the investigation.
- The person conducting the review needs to have some idea as to the likely cause so that the right direction can be taken from the start.
- The investigation also needs to be carried out sensitively.
What do we do now…?

- Sometimes the situation can be fixed and sometimes it can’t i.e. the reason for the variance may be one for which corrective action can be taken, but sometimes it may be related to conditions beyond management’s control.

- Options for action may include:
  - revising the budget
  - investigating alternatives and developing strategies to overcome what has caused the variance in the first place

**NOTE:** If a change is made, the effect that it would have on the organisation as a *whole* needs to be taken into account i.e. quick fixes for a particular area of the business should be avoided.
This week’s homework

- Read Chapter 8 – Flexible Budgets and Performance Reports
- Complete homework questions (chapter 8) (ref. STUDENT ONLINE STUDY GUIDE)
This is the end of the last lesson. Thank you for participating in this online unit of study.