## Activity Based Costing - Worked example

(from Hopper et al. 2007, Issues in Management Accounting, Chapter 8, p.162-164)

**Example:** Comparison of traditional and activity-based costing systems

XYZ Ltd is a UK based firm established in 1995 to manufacture products X and Y. Details of the two products and relevant information for one period are given in Table 8.1.

Product X is produced in runs of 1,000 units and product Y in runs of 10 units. The total manufacturing overhead for the period is £135,450. Traditionally the firm has used a direct labour rate to allocate manufacturing overhead. Table 8.2 presents the resultant full costs of products X and Y.

Recently, XYZ Ltd decided to adopt an activity-based costing system to refine product costing. After conducting interviews with relevant personnel the steering committee, aided by consultants, identified five activity cost pools and corresponding cost drivers. This information and the associated activity costs are shown in Table 8.3.

Activity cost driver volumes are presented in Table 8.4, and Table 8.5 shows how cost driver rates were calculated.

Table 8.1 **Production, sales and costs**

| | Product X | Product Y |
|---|---|---|
| Production and sales | 15,000 units | 500 units |
| Selling price (per unit) | £70 | £100 |
| Direct material cost (per unit) | £10 | £20 |
| Direct labour cost (per unit) | £20 | £30 |

Table 8.3 **Activities and cost drivers**

| Activities | Activity costs | Activity cost drivers |
|---|---|---|
| Materials handling | £15,050 | Component parts |
| Setting-up | £21,000 | Set-up time |
| Machining | £49,600 | Machine hours |
| Assembly | £30,000 | Assembly-line hours |
| Inspection | £19,800 | Inspection hours |

Table 8.4 **Activity cost driver volumes**

| Activity cost driver | Product X | Product Y | Total |
|---|---|---|---|
| Materials handling | 1800 parts | 200 parts | 2000 parts |
| Set-up | 5 hours per production run | 6.5 hours per production run | |
| Machining | 1000 hours | 550 hours | 1550 hours |
| Assembly | 1200 hours | 300 hours | 1500 hours |
| Inspection | 4500 hours | 1500 hours | 6000 hours |