

ACCESS <<<<<<<

By Patricia Cox

Master Budget Project: Direct Materials Budget, Part 1

This month we will begin the process of creating the Direct Materials Budget table. The report shows the Required Production totals for each budget item as well as the Direct Materials Needed broken down by Basic Bike, Deluxe Bike, and Totals. It also details Desired Ending Inventory by part and Total Needs for production. The report then subtracts Beginning Inventory of parts in order to calculate Direct Materials to be purchased, cost per unit, and cost of purchases. This leads to a Schedule of Cash Payments for accounts payable. (For the original Excel version of the Direct Materials Budget, see Teresa Stephenson and Jason Porter's "Excel-Based Budgeting for Production" in the March 2010 *Strategic Finance*.)

In order to create this report in Access, we'll build a table for the data one section at a time, involving numerous queries. This month we'll build the data

for the Required Production and Direct Materials Needed (up through row 36 of the spreadsheet) using four queries.

First, create a query that uses the previously created Total Production Units query as a data source. Save this query as "Production Units for Direct Materials Report." Change the query to a crosstab query. Include the Budget Item field as a Row Heading, Production Units as a Row Heading, and concatenate Budget Year and Budget Quarter (using the expression [Budget Year] & "-" & [Budget Quarter]) as a Column Heading. Set SumOfCount as the Value, and use Sum on the Total line.

The second query creates the table that will be used to store all of the data. Create a query using the Production Units for Direct Materials Report query as a data source. Change the query to a make table query, and enter "Direct Materials Budget" as the table name.

Add all the fields from our data source to the query. A quick way to do this is to double-click the name of the data source on the design grid, which highlights all the fields. Then click and drag the highlighted fields to the Field line in the Query by Example (QBE) grid. Save the query as "Make Table Direct Materials Budget," then run the query. We've now created the Direct Materials Budget table.

The third query appends Basic Bike and Deluxe Bike part details to the Direct Materials Budget table. Create a query and add the following tables: Direct Materials Budget, Product, Material, and Part. Save the query as "Append Product Materials to Direct Materials Budget."

Next, link the tables. The Budget Item field in the Direct Materials Budget table should be linked to the Product Name field in the Product table. The Product and Material tables should already be

Figure 1. Append Product Materials to Direct Materials Budget

Field:	Category: 'Direct Materials Needed'	Product Name	Part Description	Expr1: ([2012-1]*[Units Needed])	Expr2: ([2012-2]*[Units Needed])
Table:		Product	Part		
Total:	Group By	Group By	Group By	Avg	Avg
Sort:					
Append To:	Category	Budget Item	Production Units	2012-1	2012-2
Criteria:					
or:					

Figure 2. Append Totals to Direct Materials Budget

Field:	Category	Budget Item: Total	Production Units	2012-1	2012-2
Table:	Direct Materials Budget		Direct Materials Budget	Direct Materials Budget	Direct Mater
Total:	Group By	Group By	Group By	Sum	Sum
Sort:					
Append To:	Category	Budget Item	Production Units	2012-1	2012-2
Criteria:	Direct Materials Needed				
or:					

linked by the Product Number field, and the Material and Part tables should already be linked by the Part Number field.

In the Query Tools Design ribbon, click on the Totals button to add the Total line to the QBE grid. Change the query to an append query. In the first column, set the category to “Direct Materials Needed” and append it to Category. Use the second column to append Product Name to Budget Item and the third to append Part Description to Production Units. Then multiply the values for Budget Quarters 2012-1 to 2013-4 by Units Needed to create the data to append to 2012-1 to 2013-4. The calculation for 2012-1 is $\text{Expr1:}[2012-1]*[\text{Units Needed}]$. Change the Total line to Avg. The rest of the quarters use the same approach. Just vary the quarter name and Append To field as appropriate. See Figure 1 for the first five columns of the

QBE grid.

The fourth query adds the Basic and Deluxe Bike detail together and appends the Total to the Direct Materials Budget table. Create an append query with the Direct Materials Budget table as the record source. Drag all the fields to the QBE grid in the order they appear. Enter “Direct Materials Needed” as the criteria for the Category field. Click the Totals tool to add the Total line. For the Category, Budget Item, and Production Units fields, set the Total line to Group By. For the budget quarters 2012-1 to 2013-4, set it to Sum. See Figure 2 for the first four columns of the QBE grid. Save the query as “Append Totals to Direct Materials Budget” and run it.

Best Practice

Whenever possible, reuse queries to assure consistency throughout a com-

plex process. This month we reused the Total Production Units query because we needed the exact same data set again.

Next month we’ll continue to append to the Direct Materials Budget table. Once we have all the data in the table, we’ll create the Direct Materials Report. During this holiday season, I hope you are able to enjoy some relaxation and refreshment with your family and friends. **SF**

Patricia Cox has taught Excel and Access to management accounting students and other college majors and has consulted with local area businesses to create database reporting systems since 1998. She is also a member of IMA’s Greater Milwaukee Chapter. To send Patricia a question to address in the Access column, e-mail her at kathrynmann@tds.net.