Business One in Action – Why is the parent price in the BOM different from the parent cost produced by the production order?

Applies to:

SAP Business One, Logistics, Production

Summary

This article examines how the price of parent item is calculated in a Bill of Materials (BOM) and how the cost of a parent item is determined in a completed production Order. It will then show you the difference between them.

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Author Bio

Noreen Armstrong joined SAP in 2004 and is currently active as Senior Support Consultant for SAP Business One. She has worked as both technical and business consultant. She authored this article as a direct response to a partner enquiry during the Expert-on-Phone project, where she consulted on mainly logistics and administrative related topics.

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Why is the parent price in the BOM different from the parent cost produced by the production order?

Please note that unless otherwise stated, all items, excluding the labour item, are managed by the Moving Average valuation method.

In the Bill of Material (BOM,) the 'Product Price' entered/calculated in the 'Product Price' field is only relevant for sales documents in a continuous stock database.

The value entered in the 'Product Price' (by double-clicking the orange arrow) is calculated based on the price of child items in the BOM. For example, a BOM is created for the parent item 'Bicycle'.

At this stage, the price of the parent item 'Bicycle' is not defined in the price list, 'Base Price'. Consequently, this field is blank for the BOM.

The 'Product Price' for the item 'Bicycle' will not be updated until the orange arrow, directly above the 'Product Price' field, is clicked.

#	Item No.	Item Description	Quantity	Warehouse	Issue Method	Price List	Unit Price
1	Frame	Frame	1	01	Backflush	Base Price	GBP 35.00
2	Wheel - 26	Wheel	2	01	Backflush	Base Price	GBP 10.00
3	H_Bar	Handle Bars	1	01	Backflush	Base Price	GBP 20.00
4	B_seat	Bicycle Seat	1	01	Backflush	Base Price	GBP 5.00
5	L10001	Labour	1	01	Backflush	Base Price	GBP 20.00
6						Base Price	

The 'Product Price' is calculated as the sum of all the component items. Hence:

Component 1 (Quantity * Unit Price) + Component 2 (Quantity * Unit Price) + ...

In this example, the 'Product Price' of the parent item 'Bicycle' is updated to 'GBP 100.00'. This is calculated as follows:

= (Frame (1*35)) + (Wheel -26 (2*10)) + (H_Bar (1*20)) + (B_seat (1*5)) + (Labour (1*20))

= 35.00 + 20.00 + 20.00 + 5.00 + 20.00

= 100.00

When the BOM is updated with this new price, it is also automatically updated in the price list, for the parent item.

#	Item No.	Item Description	Base Price	Unit Price
18	Bicycle	Bicycle	GBP 100.00	GBP 100.00
19	Bonded	Bonded		
20	Bounded	Bounded		
21	Brownies	Brownies		
22	C_Apples	Cooking Apples	GBP 15.00	GBP 15.00
23	C00001	Motherboard P4 Turbo	GBP 200.00	GBP 200.00
24	C00002	Motherboard P4 Turbo - Asus Chipset	GBP 150.00	GBP 150.00

However, when creating a production order, the price that matters is actually the item costs of the components, as seen in the Item Master Data.

As previously stated the 'Product Price' visible for the parent in the BOM is the selling price list that will be used in sales documents. It will never be used in the calculation of the item cost when producing the Parent item.

The cost of the parent item received into stock from a production order is based on the quantities of component items issued in the Production Order and their item costs.

Component	Item Price	BOM: Base Quantity	BOM: Price * quantity	Parent Price
Frame	50.00	1	35.00	
Wheel - 26	10.00	2	20.00	
H_Bar	20.00	1	20.00	
B_Seat	5.00	1	5.00	
L10001	20.00	1	20.00	
Parent Price				100.00

Taking the following production order as an example, it shows that there was a 'Planned Quantity' of 10 units for the item 'Bicycle'.

Production Order								

Type	Standard				No.	Primary	72	
Status	Released				Order Date		19.12.2008	
Product No.	Bicycle				Due Date		10.01.2009	
Product Description	Bicycle				User		manager	
Planned Quantity	10		UoM		Origin		Manual	
Warehouse	01				Sales Order			
					Customer			
					Distribution Rule			

Components | Summary

#	Item No.	Item Description	Base Qty	Planned Qty	Issued	Avail...	UoM	Wareho...	Issue Method
1	Frame	Frame	1	10	10	170		01	Backflush
2	Wheel - 26	Wheel	2	20	20	190		01	Backflush
3	H_Bar	Handle Bars	1	10	10	170		01	Backflush
4	B_seat	Bicycle Seat	1	10	10	170		01	Backflush
5	L10001	Labour	1	10	10			01	Backflush
6									

Remarks

OK   Cancel

The total cost of producing these 10 units was GBP 1003.32. This GBP 10003.32 is composed of 'Actual Component Cost' (GBP 953.32) + Actual Additional Cost (GBP 50.00).

Production Order								

Type	Standard				No.	Primary	72	
Status	Released				Order Date		19.12.2008	
Product No.	Bicycle				Due Date		10.01.2009	
Product Description	Bicycle				User		manager	
Planned Quantity	10		UoM		Origin		Manual	
Warehouse	01				Sales Order			
					Customer			
					Distribution Rule			

Components | Summary

Costs   Quantities

Actual Component Cost	GBP 953.32	Planned Quantity	10
Actual Additional Cost	GBP 50.00	Completed Quantity	10
Actual Product Cost	GBP 1,003.32	Rejected Quantity	

Total Variance		Dates	
Variance Per Product		Due Date	10.01.2009
Variance %		Actual Closing Date	
		Overdue	
Journal Remark	Production Order - Bicycle		

Remarks

OK   Cancel

To get more information on the Production Cost, please refer to this EoP Wiki Article:

How are Actual Component and Actual Product Costs computed during a production process?

Related Contents

- SAP Business One in Action Catalog Page
- Link to DRC documentation
- For more information, visit the Business One homepage.

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