

# UNFINISHED PRODUCTION EVALUATION AND BOOKKEEPING IN THE ENTITIES IN THE FURNITURE INDUSTRY

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*Abstract: I believe that **stocks** represent one of the “key” elements of the operation process, especially in the case of the industrial entities (and implicitly those in the furniture industry) which intervene during the whole purchase – production – selling cycle. For this reason one can state that the superficial or inadequate treatment of the stock management and accounting may represent a hindrance in obtaining the industrial company performance or may be a factor calling into question the continuity of the activity.*

*I have analysed, in the article, the method used for the evaluation and bookkeeping of unfinished production in the entities the furniture industry and I rendered my own view concerning this topic and I also made proposals for the contribution to the increase in accuracy of the evaluation of unfinished production.*

*Key words: unfinished production, stocks, the furniture industry, finished products*

The furniture industry is one of the “victorious” sectors of the Romanian economy, and also one of the few manufacturing areas that have a positive contribution to the commercial balance. The dynamics of this economic sector is eloquently emphasized by the increases, from year to year, of the volume of the manufactured furniture and of its sale.

**The production in course of being manufactured** is that production that has not undergone all the phases or stages of processing provided in the operating process, as well as the products that have not yet undergone the tests and the technical acceptance or that have not been completed with all the necessary accessories, and constitute unfinished production.

In the studied specialized materials related to production management, some suggestions are made for the **evaluation of the production in course of being manufactured**, function of the production organization (on orders, on unique pieces or on continuous). The production in course of being manufactured can be analyzed:

- a) **In point of its physical aspect**, including all raw materials and other included tangible assets active, present in the various stages of the manufacturing process, for the manufacture of the finished products from the list of goods of the company;
- b) **In point of value**, including all the working costs incurred in order to obtain it up to the currently undergoing processing stage. Consequently, the costs of consumable, energy, depreciation, wages and their related contributions, etc., corresponding to the stages of the manufacturing process performed up to that particular moment are added to the value of the raw materials in course of being processed.

The assessment of the actual stocks of production in course of being manufactured, **expressed physically**, is made by stocktaking of all the orders or products being processed, by a commission especially established for this purpose.

**The assessment of the value** of stocks the size of which is decided on the basis of stocktaking is made on each and every order or product, by using three calculation methods:

1. based on the degree of technical finishing;
2. on units or on operations;
3. based on the average cost of a manhour.

\* **The calculation method based on the degree of technical** is used in the production organized on **orders** and on **unique pieces**. It implies two working stages:

**Stage 1** → **the degree of technical finishing** of the order or product in course of being manufactured is determined. This degree is expressed by a **technical finishing coefficient - kft**, calculated function of the

tariff wage costs afferent to the order or product to which it is related. For this purpose, the tariff wage costs incurred up to the moment of the stocktaking are compared to the tariff wage costs provided for the completion of the order or product.

**Stage 2** → it has as an object **the assessment of the value of the production in course of being manufactured that is in stock – Spce**. For this purpose the production cost of the order or product is multiplied by the previously calculated technical finishing coefficient.

**Example:** Assuming that until the end of March the tariff wage costs incurred up to the stocktaking moment amounted to 30,000 lei for the manufacturing of order 102 (400 units of “Rebecca” two-door wardrobe), while for the completion of the whole order, the wages should amount to 80,000 lei.

The technical finishing coefficient:  $Kft = 30\ 000 / 80\ 000 = 0.375$

The calculation of the value of the production in course of being (Spce) is made by multiplying the production cost of the order (number of products included into the order x pre-calculated production cost for that particular product) by the previously calculated technical finishing coefficient.

In my opinion, it is recommendable that the actual production cost obtained following a calculation for the same product included into the order, in a previous accounting period should be taken into account rather than the pre-calculated production cost (especially in the case of the modification of the value of the calculation items included into the pre-calculated production cost, due to the fact that revisions and adjustments cannot keep up with the changes occurred from the moment of the pre-calculation onward).

Assuming that, for the completion of order 102 that includes 400 units of wardrobe, the production cost of all the products included into the order would have been 280 000 lei (400 units x 700 lei / unit). As a result, **Spce = 280,000 lei x Kft = 280,000 lei x 0.375 = 105,000 lei;**

This value will be attributed to the production in course of being manufactured, in the case of order 102, at the end of March.

\* **The calculation method on units or operations** is used for complex products, when the production cost for each unit or technological operation of the product in course of being manufactured can be assessed (it is applied in the machine industry).

\* **The calculation method based on the average cost of a manhour** is used in the case of complex products, when all the components of the product in course of being manufactured have approximately the same pattern of production costs.

I believe that the last two methods of assessing the production in course of being manufactured cannot be applied to the products obtained by the entities in the furniture industry, which is why I am not going to describe them in detail.

Following the research performed in entities in the furniture industry, concerning the evaluation of the production in course of being manufactured, I can assert that the **accounting or indirect method** is used. This method is conventional in nature, because the calculation of the costs related to the production in course of being manufactured is made on the basis of accounting data and data of operational accounting, and no stocktaking of this production is performed.

According to this method also presented in the specialized literature, the cost of the production in course of being manufactured is assessed on each calculation item, on the basis of the data in cost accounts that have collected costs on calculation items reflecting in the debts the total actual costs, and in the credits the cost of the finished production, the balance of debts representing the actual cost on the unfinished production:

The calculation formula is as follows:

$$\begin{array}{l} \text{The cost of} \\ \text{the} \\ \text{production in} \\ \text{course of} \\ \text{being} \\ \text{manufactured} \end{array} = \begin{array}{l} \text{Total costs} \\ \text{collected} \\ \text{on cost} \\ \text{bearers} \end{array} - \begin{array}{l} \text{(Quantity of} \\ \text{finished} \\ \text{products} \\ \text{delivered at} \\ \text{the} \\ \text{warehouse} \end{array} \times \begin{array}{l} \text{Appraisal} \\ \text{unit cost)} \end{array}$$

The evaluation of the finished production delivered to the warehouse is made function of **the standard cost** or **the actual cost of the previous accounting period**. A disadvantage of using this method is that

the differences between recording price and the actual cost calculated at the completion of the whole manufacturing order are reflected in the cost of the last batch of products delivered to the warehouse.

In what the assessment and bookkeeping of the unfinished production in the **management accounting** are concerned, I am underlining that the correct assessment of the production in course of being manufactured is attached special importance for the accurate calculation of the cost of the finished production, as well as of other company activity performance indicators, such as profit, rate of return, etc. For example, the overestimation of the production in course of being manufactured leads to the unjustified reduction of the cost of the finished production, thus artificially increasing profit and respectively the rate of return. On the other hand, the underestimation of the production in course of being manufactured has opposite effects, influencing in an unfavourable manner the activity of the company.

Due to the strong competition that manifests itself in the field of furniture manufacturing/commercialization, the managers at various hierarchic levels need information related to the predetermination of expenditures and of the cost development, to the operational monitoring of the actual amount of costs and of their pattern, of the deviations from the planned level, of the causes that have produced these deviations.

**The method on orders**, used in cost calculation, by a significant number of entities in the furniture industry, is one of the classic, traditional methods of calculation. Due to their application methodology, the traditional methods have been widely criticized, as they do not meet the requirements of modern management, thus requiring adaptation and improvement. A disadvantage of this method consists in the fact that, in the case of the entities in the furniture industry, due to the period needed for the completion of orders, (an average of two months), at the end of the accounting period there are many orders in course of being manufactured, and the assessment and evaluation of the unfinished production are labour intensive and may influence the accuracy, quality and efficiency of the calculation indicators.

If, out of an order, only a certain quantity of products has been completed and delivered to the warehouse, these finished products are usually evaluated at the actual production cost of the previous accounting period. This type of evaluation leads to the alteration of the costs related to the production in course of being manufactured and implicitly of the costs of the finished products when the order is completed, especially if the actual production costs vary from one accounting period to another.

My proposal concerning the assessment / evaluation of the unfinished production also implies an additional effort from the employees involved into cost calculation with the purpose of calculating the degree of technical finishing and of the elements included into the unfinished products. For example, in the case of an order that will include 50 units of LUFA night tables model 4520 (order xxxx), if, 45 units were completed until the end of the accounting period, I will assess the value of the unfinished and finished production as follows:

For the 45 units of finished products, the degree of inclusion of the elements constituting the production cost is 100%.

$$\begin{array}{l} \text{Actual cost} \\ \text{of 45} \\ \text{units} \\ \text{(for the} \\ \text{finished} \\ \text{production)} \end{array} = \begin{array}{l} (100\% \\ \times \\ \text{Raw} \\ \text{material} \\ \text{and} \\ \text{direct} \\ \text{material} \\ \text{costs} \end{array} +100\% \times \begin{array}{l} \text{Direct} \\ \text{wages} \\ \text{and} \\ \text{accessory} \\ \text{costs} \end{array} +100\% \times \begin{array}{l} \text{CIFU} \\ \text{ratio} \end{array} +100\% \times \begin{array}{l} \text{CGS} \\ \text{Ratio)} \end{array}$$

where CIGU= equipment maintenance and operating costs

CGS=workshop general expenses

For the 5 units of unfinished products, I will analyze, for each of them: the value of the raw materials and direct materials provided for expenditures and included in the unfinished products, as well as the finishing percentage in point of directly productive workers' labour. I assume that:

	Raw materials and direct materials	Direct labour (Y % from the total required for completion)
For the first unfinished unit	100%	60%
For the second unfinished unit	40%	20%
For the third unfinished unit	70%	42%
For the fourth unfinished unit	100%	80%
For the fifth unfinished unit	20%	10%

If the raw materials and direct materials are taken from the warehouse for the whole order and are made available for expenditure, the percentage taken into account will be 100%.

I propose that CIFU and CGS ratios for the unfinished production should also be taken into account in the same percentage corresponding to the direct labour. Consequently:

<b>The actual cost of the unfinished production for the 5 units</b>	=	<b>Raw material and direct material costs (100%+40%+70%+100%+20%)</b>
	+	<b>Direct wages and accessory costs (60%+20%+42%+80%+10%)</b>
	+	<b>CIFU ratio (60%+20%+42%+80%+10%)</b>
	+	<b>CGS ratio (60%+20%+42%+80%+10%)</b>
	=	$\frac{330}{100} \text{ Raw material and direct material costs} + \frac{212}{100} \text{ Direct wages and accessory costs} + \frac{212}{100} \text{ CIFU} + \frac{212}{100} \text{ CGS}$

We assume that, for order xxxx, the amount accumulated on the debit of account **921 “Core business costs. Analytic order xxxx”** is composed of:

Raw materials and direct materials			
$\underbrace{921}_{\text{cheltuielile activitatii debaza}}$ . $\underbrace{01}_{\text{cheltuieli directe}}$ . $\underbrace{01}_{\text{componente lemni}}$ . $\underbrace{xxxx}_{\text{comanda}}$	Core business costs. Analytic Direct raw materials (wooden components)/order xxxx	$921.01.01.xxxx$ $921.01.02.xxxx$	} → 40,000 lei
<i>core business costs</i> <i>direct costs</i> <i>wooden components</i> <i>order xxx</i>			

921.01. <u>01</u> . <u>02</u> .xxxx <i>cheltuieli directe materiale directe</i>	Core business costs. Analytic Direct materials/order xxxx	
<i>direct costs</i>	<i>direct materials</i>	

**Direct labour and accessories**

921.01. <u>03</u> . <u>01</u> .xxxx <i>manopera directa valoare manopera directa</i>	Core business costs. Analytic Direct labour /order xxxx	$\left. \begin{array}{l} 921.01.03.01.xxxx \\ 921.01.03.02.xxxx \end{array} \right\} \rightarrow 21,000$
<i>direct labour</i>	<i>direct labour value</i>	
921.01.03. <u>02</u> .xxxx <i>contributi i aleunitati i cuprivire la manopera directa</i>	Core business costs. Analytic Contributions paid by the company in relation to the directly productive labour /order xxxx	lei

*Contributions paid by the company in relation to the directly productive labour*

**CIFU Ratio**

<u>921</u> . <u>02</u> . <u>xxxx</u> <i>cheltuielile CIFU comanda de baza activitatii</i>	Core business costs. Analytic equipment maintenance and operation costs ratio / order xxxx	921.02.xxxx → 6,000 lei
<i>core business costs CIFU order xxxx</i>		

**CGS Ratio**

<u>921</u> . <u>03</u> . <u>xxxx</u> <i>cheltuielile CGS comanda de baza activitatii</i>	Core business costs. Analytic workshop general costs / order xxxx	921.03.xxxx → 4,200 lei
<i>core business costs CGS order xxxx</i>		

<b>Total production costs (finished and unfinished production) /order xxxx</b>	<b>= 71,200 lei</b>
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*By taking into account the actual finished and unfinished production costs we will have:*

<b>→ for the finished production</b>	: 45× raw material and direct material costs	+45× direct wages and accessory costs	+45 ×CIFU	+45 ×CGS
<b>→ for the unfinished production</b>	: 3.30× × raw material and direct material costs	+2.12 × direct wages and accessory costs	+2.12 CIFU	+2.12×CGS
<b>Total finished and unfinished production costs</b>	=48.30× × raw material and direct material costs	+47.12× direct wages and accessory costs	+47.12CIFU	+47.12×CGS
48,30× raw material and direct material costs	= 40.000 lei	<b>⇒ × raw material and direct material costs / unit</b>	<b>= <math>\frac{40000}{48,30}</math> lei</b>	<b>=828.157 lei /unit</b>

47,12× direct wages and accessory costs = 21.000 lei	⇒ <b>direct wages and accessory costs / unit</b>	$= \frac{21000}{47,12}$ lei	<b>=445.671 lei / unit</b>
47.12× CIFU = 6,000 lei	⇒ <b>CIFU / unit</b>	$= \frac{6000}{47,12}$ lei	<b>=127.334 lei / unit</b>
47.12 ×CGS = 4,200 lei	⇒ <b>CGS / unit</b>	$= \frac{4200}{47,12}$ lei	<b>=89.134 lei / unit</b>

*Consequently, we will have:*

<b>Total costs for the finished and the unfinished production</b>	<b>Finished production costs</b>	<b>Unfinished production costs</b>
<b>Raw materials and direct materials = 40,000 lei</b>	45 x 828.157 = 37,267 lei	3.30x 828.157 = 2,733 lei
<b>Direct labour and accessories = 21,000 lei</b>	45 x 445.671 = 20,055 lei	2.12x 445.671 = 945 lei
<b>CIFU = 6,000 lei</b>	45 x 127.334 = 5,730 lei	2.12x 127.334 = 270 lei
<b>CGS = 4,200 lei</b>	45 x 89.134 = 4,011 lei	2.12x 89.134 = 189 lei

We will perform the bookkeeping of the unfinished production on elements of cost as follows:

**933. xxxx** = **921. xxxx** 4.137 lei

The cost of the unfinished production. Core business costs. Analytic order xxxx  
Analytic order xxxx

**In the financial accounting, the bookkeeping of the unfinished production (in course of being manufactured) is performed as follows:**

At the end of the month, the unfinished production is highlighted on the basis of the data in the operating accounting, at the level of the actual production costs:

331 "Products in course of being manufactured" = 711 "Stock variation" 4.137 lei

At the beginning of the next month, the resumption of the unfinished production entries are made by the opposite accounting formula

### **Bibliography:**

1. Constantin Bărbulescu, Constantin Băgu "Production Management", vol. 2, Economic Tribune Publishing House, Bucharest, 2002
2. Corina Graziella Dumitru, Corina Ioanăș "Management Accounting and Performance Evaluation", Academic Publishing House, 2005
3. Oprea Călin, Gheorghe Cârstea "Management Accounting and Cost Calculation", Genicod Publishing House, Bucharest, 2002
4. Order no. 1752 from 17 November 2005 for the approval of the Accounting Rules in compliance with the European Directives, published in Official Monitor no. 1080 A/30 November 2005, amended and completed