



Fair Wear Labour Minute and Product Costing Calculator

Guidance / Reference document

Table of Contents

Introduction	3
Different labour cost elements	5
Pay for time worked	5
Directly paid benefits	5
Employer related on costs	5
Product costing formula	6
How to use	7
Calculating the cost for a product style	9
Terminology	11
Number of workers in the factory	11
Total number of sewing operators	11
Capacity minutes (total number of sewing minutes in a factory)	11
Direct labour	11
Indirect labour	12
Overhead cost (operational expenses in the factory or factory running cost)	12
Efficiency	12
SMV (Standard minute value)	12
SAM (Standard allowed minutes)	13
Labour minute value	13
Factory labour minute value	14
Working minute cost (value)	14
Buying house commission	15
Predetermined motion time system (PMTS)	15
The difference between margin & mark-up	15

Introduction

The Fair Wear Labour Minute and Product Costing calculator (LMPC) helps factories to carefully calculate the labour costs for a product style based on current or projected wage levels such as increased legal minimum wage, a CBA or living wage. The calculator is aimed to determine product prices that would enable the factory to ensure the payment of agreed wage levels to workers and not to exploit the supplier in the cost price negotiations. It is entirely up to the factory to determine what it is willing to share and with which customer. However, the calculator's true value lies in the fact that it supports suppliers and buyers in their price negotiations by determining and isolating the cost of labour in their product costing and making these transparent. Use of the calculator during negotiations requires a certain degree of openness and transparency, especially on the part of the supplier. It is therefore advisable to build an open and transparent exchange regarding the objectives and background for the use of the calculator and to clarify the expectations on both sides.

The calculator enables suppliers and buyers to determine the cost of one minute of labour in a factory, considering factory-specific variables such as workforce composition, bonuses and insurance, and actual overtime hours. Next, the price of one minute needs to be multiplied by the number of sewing minutes required to make a garment, based on Standard Allowed Minutes (SAM) and efficiency, or alternatively, the actual number of sewing minutes required to make the product in question. As a result, the actual labour costs for a certain product is calculated. When wages go up due to a minimum wage rise, application of a CBA wage level or a living wage estimate, the calculator allows a factory to calculate the effect such increase will have on the manufacturing (CMT or FOB) price of garments.



In a similar manner, it also allows a factory to quantify the additional costs a factory has to meet in order to adapt to the Covid-19 crisis. Changes in terms of the workforce, overtime, additional overhead costs (such as transportation, disinfectants, facemask, or plastic dividers) and loss in productivity can be entered into the calculator to allow for a new product calculation. Subsequently, a change in product price that takes the new reality into account can be calculated as a basis for discussion with the buyer.

Isolating the cost of labour in the product price and making it transparent to the buyer, enables suppliers to argue on the basis of facts and to act towards changes in labour costs, be it changes in minimum wages or in the strive towards living wages. Until now, changes in labour costs were relatively difficult for the supplier to argue and especially to quantify the impact on the product price, which is now possible on a fact-based and product level basis.

For buyers it becomes possible to know if the price they pay suffice for a supplier to pay at least the legal minimum wage or CBA-agreed wage level or a living wage estimate, which supports them to fulfil their due diligence requirements. Furthermore, this way of costing enables buyers to pay for their share of any wage increase based on the total capacity minutes used for the goods they purchase.

For trade unionists engaged in collective bargaining at sectorial or factory level the calculator will support in negotiations to clarify the magnitude of the impact of a wage increase or how much extra would need to be charged to brands per product in order to implement a newly agreed-upon wage level.

It is important to emphasise that, whenever there is an effort to increase wages, it is important to involve workers and their representatives adequately in wage negotiations and to ensure that negotiated wage increases are received by workers.

Different labour cost elements

The various labour cost elements in the calculators are based on mandatory wage elements according to national law, directly paid benefits and employer related on-cost, which are grouped in three main categories. All of these combined add up to the total labour costs for the factory.

Pay for time worked | Directly paid benefits | Employer Related on-cost

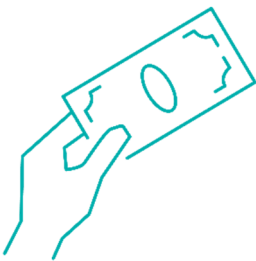
PAY FOR TIME WORKED

The wage for the time worked is essentially the wage that a worker earns on the basis of the applicable legislation for both regular working time and overtime, such as basic contracted wage, cost of living adjustment (if applicable).

DIRECTLY PAID BENEFITS

Directly paid benefits include all the incentives a factory provides to workers to reward certain desired behaviour or capabilities. This could include things like attendance bonus, seniority bonus or skills bonus. It also includes paid leave, such as annual leave, casual leave, or medical leave, which workers are entitled to, based on national law. Also included could be certain allowances paid to workers, e.g. for transportation, housing, or meals.

EMPLOYER RELATED ON COSTS

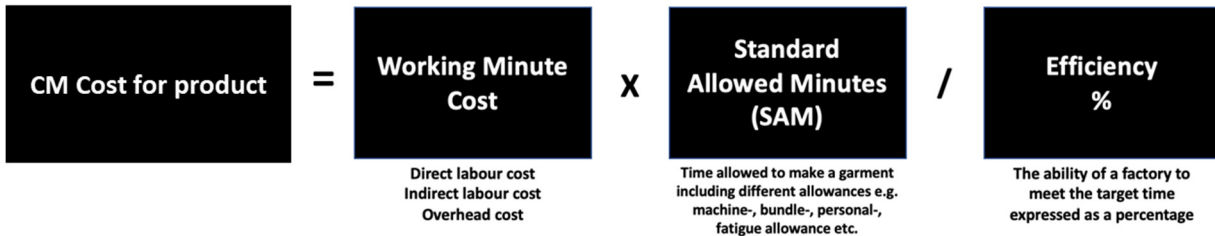


Employer-related on-costs refers to social security premiums (paid by the employer), costs for paid maternity benefits, retirement and disability pension, health insurance, unemployment insurance, severance pay, pay roll tax etc.

The above-mentioned wage components are country-specific and differ in number, type, and amount according to the specific statutory legislation. This is also the main reason for the individual national or regional design of the calculators.

Product costing formula

The product costing formula calculates the manufacturing cost (also known as CM costs) of a product considering the cost per working minute times the **Standard Allowed Minutes** needed for the manufacturing (stitching) process divided by the efficiency percentage of the factories sewing.



Graph 1: Product costing formula

It should be noted that the SAM divided by the efficiency percentage equals the actual number of sewing minutes that the production line needs for the product. If a factory is not working with a SAM and does not calculate an efficiency percentage, one could also calculate the actual sewing minutes. This is calculated as follows:



Graph 2: Calculating the actual sewing minute for a product style

How to use

The Labour Minute and Product Costing calculator is primarily to be completed by the factory management, as the data to be gathered can only be obtained within the factory. Although at the beginning it might seem that the use of the LMPC Calculator appears to be very complex, experience shows that this is not the case and that the factory management or the persons responsible for the product calculations understand very well and precisely which data are necessary and where they can be found in their company.

The LMPC calculators have been developed for all countries in which Fair Wear is active and are filled with the country-specific wage elements, the respective legal requirements such as overtime regulations, payroll costs etc. and the corresponding calculation formulas are collected within the calculators. Therefore, each calculator considers the respective national requirements and can be customised based on the factories individual setup, workforce, directly paid benefits and incentive systems to deliver the correct values.

Make sure you have the [latest version of the LMPC calculator](#) which you can find on Fair Wear's website. Once you have selected and downloaded the calculator for your country or region you should open the tab "Input Fields" within the file which contains all the needed input fields for you to fill, marked in yellow. You will find one or more tabs (depending on the country) in the file which are linked to the input field tab, where the detailed calculations for the different wage levels are processed. These tabs are additionally showing the detailed calculations for those who want to do a deep dive into the numbers and how the data are computed.

Now fill out all information step by step into the yellow marked input fields in column "C" starting with the foreign exchange rate. Next to the yellow input fields you will find an explanation of the required information which you should fill out according to the situation in your factory. Most of the information such as the number of national holidays, amount paid sick leave, bonus payments, skills bonus, maternity leave etc. is known and it is important to consider whether to enter it annually or monthly. This is clearly indicated according to the explanations at the relevant fields.

However, there is some information, which need a clear explanation which we explain here in more detail to avoid misunderstandings and to receive the correct data.

Weekly overtime hours: Please fill out the average weekly overtime hours. Fair Wear recommends planning production without excessive overtime (above 60 hours weekly). As a matter of fact, overtime is used in the industry to cope with fluctuations in demand and seasonal peaks. Therefore, overtime is considered in the

calculator and when filling the calculator, the average weekly overtime should be inserted so they can be taken into the calculation as they influence the operational cost and especially the labour cost in a factory.

Since every factory has a different bonus and incentive program for their workers, there are input fields in each calculator for **“all other bonuses”** average casual/medical leave taken by workers, and **“any additional employer labour-related on-cost”** where you can insert bonuses or employer on cost which are not mentioned in the calculator.

If the calculator is used to calculate the impact of a **“target wage”**, please fill out the respective target wage, e.g. a projected future minimum wage, CBA wage or living wage estimate into this field. Once you have inserted this base data the calculator will deliver the **Labour Minute Value** for your factory based on the different wage levels: **prevailing wage / new minimum wage / target wage**.

For the following step of determining the **cost for direct labour, indirect labour and overhead cost** we recommend to visit your profit and loss statement or expense sheet where you should find your total wage cost including all pay roll taxes and employer-related on-cost as well as all other factory running/overhead cost including depreciation. Simply put, all wage cost of your factory you should separate in direct and indirect labour cost based on above terminology and all other cost than wages are overhead cost.

Once you have entered the direct labour, indirect labour and overhead cost of your factory into the calculator it will deliver all the necessary data for your product costing and enables to isolate the labour cost in the product based on the different wage levels. Up until this point of the process, the data needs to be provided by the factory.

Calculating the cost for a product style

The Labour Minute and Product Costing calculator can be used by both the factory as well as the buyer if all information needed to fill the yellow input fields is known, starting with “Style Name”. Thus, it is recommended that the factory takes the lead in this process due to the nature of the business and the fact that the processes and transactions are ongoing within its direct sphere of control.

The Standard Allowed Minutes (SAM) should be agreed between the factory and the brand and if possible based on an engineering standard, a predetermined motion time system such as SewEasy-GSD or similar standardised time studies, which makes it possible to verify and make it plausible.

The efficiency percentage will depend on different factors such as the line efficiency where the product will be manufactured, the order quantity, the number of colours, sizes etc.

Items provided by the factory		Details / Calculations			
Style Name		Polo shirt			
Standard Allowed Minutes		18.0			
Efficiency Percentage		60%			
<i>Actual number of sewing minutes for style</i>		30.00			
Fabric		\$1.200			
Accessories		\$0.100			
Polybag, packaging, labelling		\$0.050			
<i>Total Material Costs</i>		\$1.350			
Total CM Costs	Labour Cost		<i>at 2013 LMW</i>	<i>at 2018 LMW</i>	<i>at Target Wage</i>
	Direct	0.0%	\$0.199	\$0.291	\$0.542
	Indirect	0.0%	\$0.000	\$0.000	\$0.000
	<i>Total Labour cost</i>		\$0.199	\$0.291	\$0.542
	Overhead Cost (electricity, fuel ..)		\$0.000		
Outsourced processes		\$0.200			
Logistic costs (inbound-outbound)					
Import tax and duties					
<i>Total</i>		\$1.749	\$1.841	\$2.092	
Profit Margin	10.0%	\$0.175	\$0.184	\$0.209	
Buying House Commission	3.0%	\$0.052	\$0.055	\$0.063	
FOB PRICE		\$1.976	\$2.081	\$2.364	
<i>% increase</i>			5.3%	19.6%	

Example Product Costing, yellow field are inputs field

The efficiency percentage has a major impact on the calculation and should therefore be discussed and agreed between the actors. If the efficiency percentage is not known the value in the input field can be set at 100% efficiency and therefore the actual sewing time for the garment can be inserted in the column for the SAM.

The following input fields such as fabric, accessories, polybag, packaging, labelling can be filled out according to the Bill of Material (BOM) which should be known when calculating a garment style.

The LMPC calculator isolates the cost of labour in the product calculation in the section “**CM Costs**” where direct labour, indirect labour and total labour cost are shown separately for each wage level in question such as prevailing wage, new minimum wage and target wage.

After filling out the calculator with the relevant data for outsourced processes, logistic costs (inbound-outbound), the incurred import tax and duties, the desired percentage mark-up of the factory and if applicable the percentage for an intermediate, agent or buying house, the calculator will deliver the needed FOB Price to the buyer.

If a factory works in CMT terms with a buyer, the calculator can still be used for calculating the CMT price for the garment by filling out all the factory relevant data same as if a factory works in FOB terms. The input fields in the product calculator where the buyer organises the materials can be left empty, but the occurring labour cost can be calculated accurately according to the SAM and efficiency of the products in question.

If a factory works with subcontractors and outsources parts of the work, it is recommended that these also use the LMPC calculator to make their costs transparent and to ensure that their workers can be paid accordingly with the prices paid for the products.

Terminology

Due to the different types and variations in product costing and the resulting different interpretations of the terminology, it is useful to apply a consistent and as precise as possible terminology. In this section the terms are explained individually and some of them are illustrated with graphics. When using the Labour Minute Costing and Product Costing calculator it is essential that this terminology is applied appropriately.

NUMBER OF WORKERS IN THE FACTORY

All employees of a factory who appear on the payroll and whose salaries are recorded for a regular settlement of the payroll costs, the employer and employee contributions and thus also appear in the profit and loss statement under labour costs.



TOTAL NUMBER OF SEWING OPERATORS

Total number of sewing operators in a factory based on available sewing line setup in a factory. This includes special operations or lines if these are included in the SAM calculation.

CAPACITY MINUTES (TOTAL NUMBER OF SEWING MINUTES IN A FACTORY)

The total number of minutes available in a factory. This is calculated by multiplying the total number of sewing operators, working actively in the sewing line, by the total number of minutes those sewing operators are working. The total number of minutes is calculated based on working hours in a month, which includes both regular and overtime hours. This is then adjusted for annual public leave when the factory is closed.

DIRECT LABOUR

Direct labour refers to the employees and temporary staff who work directly on a manufacturer's product. In our work we consider sewing operators as direct labour, all others are considered indirect labour. Of course, one could consider other operations, e.g. cutting and packing, also as direct labour. However, a factory usually only takes sewing minutes into account for product costing and therefore only the labour costs for the sewing operators are counted as direct labour costs. If however, the working time for other operations, such as cutting and packing is also measured in the product costing and covered by the SAM (Standard Allowed Minutes), then also the labour costs for these operations must be considered as direct

labour costs. Similarly, if a factory has other processes such as knitting, washing etc. these labour costs can be considered as direct labour also, when the process minutes are considered in the SAM in product costing.

INDIRECT LABOUR

Indirect labour refers to as all functions not covered in the SAM calculation of a product but necessary to support the production process. This therefore could cover all employees and temporary staff who are not working directly on a manufacturer's product and are supporting the direct labour with their functions. This therefore could include quality control, mechanics, line leader, merchandiser etc, but also cutting and packing if these are not included in the SAM.

OVERHEAD COST (OPERATIONAL EXPENSES IN THE FACTORY OR FACTORY RUNNING COST)

The cost required to run a business is also related to factory running cost. The overhead cost includes all other cost than wage cost such as for example energy, gas, water, rent, maintenance, insurance, travel, interest, bank charges and depreciation etc. It is also possible to include investment in terms of safety, or training costs here.

EFFICIENCY

Efficiency is the ideal way to do things in a factory. Efficiency relates to how well a goal is accomplished, generally by measuring the quantity of resources used, and waste generated, in comparison to the goods manufactured. This is often measured in a percentage. In the context of this work we are considering line efficiency which is required to factor the needed time necessary to manufacture a garment into the cost price. Efficiency is normally measured against the SAM of a product. For example, when a factory calculated a pair of trousers has a SAM of 35 minutes, but the factory's actual SAM needed is 56.5 minutes the sewing line has an efficiency of 61.9%

SMV (STANDARD MINUTE VALUE)

Standard Minute Value is the time allocated to an operation based on the motion study of the operation. It is the time it takes a qualified operator to complete the operation when following standard performance or best practice.

SAM (STANDARD ALLOWED MINUTES)

Standard Allowed Minutes tells us how much time is allowed for a certain work to get done. SAM is adding in allowances like bundle allowance, machine allowance and personal allowance to the SMV.

$$\text{SAM} = \text{SMV} + \text{Allowance \%}$$

This SAM is at 100% efficiency and it needs to be further corrected with expected efficiency for target setting.

LABOUR MINUTE VALUE

The cost for one minute of labour in a factory based on the average costs of labour for the employer for one worker per month, taking grading, overtime and bonuses into account, which is divided by the average total capacity minutes of a worker per month, again taking overtime into account. This is expressed as the cost of labour for every minute of factory operation.



Graph 3: Calculating the labour minute value

Example: a factory in Bangladesh pays an average of BDT 17,200 in total labour costs for a sewing operator who works 60 hours per week:



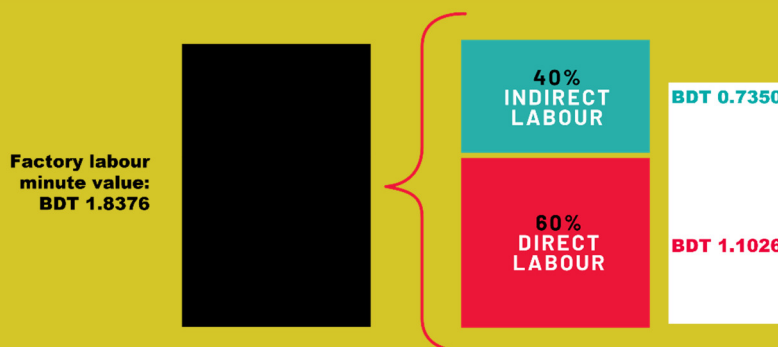
Graph 4: Example calculating the labour minute value

FACTORY LABOUR MINUTE VALUE

The cost of one minute of labour used in garment costing which takes the ratio of direct- and indirect labour into consideration. When a sewing operator works one minute, she/he will need support functions such as warehouse, quality control, maintenance, cleaning etc. which are necessary and are supporting the direct labour process. These supporting processes are captured in the product costing by dividing the ratio between direct- and indirect labour with the labour minute value.

$$\text{Labour minute value} / \text{direct labour \%} = \text{factory labour minute value}$$

Example: if direct labour makes up 60% of the total wage bill of the factory and the labour minute value is BDT 1.1026, the factory labour minute value is BDT 1.8376 ($1.1.026 / 0.6 = 1.8376$).



Graph 5: Example for calculating the factory labour minute value

WORKING MINUTE COST (VALUE)

The working minute cost is the sum of factory labour minute value and overhead cost per minute. It constitutes the cost for one minute of sewing in a factory and is used in the product costing formula.



Graph 6: Labour minute value, factory labour minute value, working minute value (cost)

BUYING HOUSE COMMISSION

The percentage of an intermediary (agent, buying house or similar) put on the garment selling price of the factory.

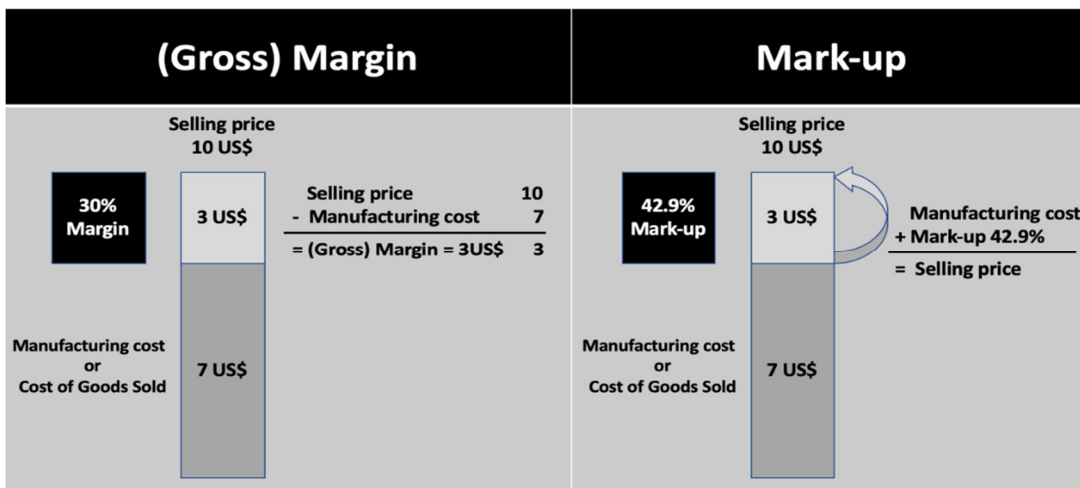
PREDETERMINED MOTION TIME SYSTEM (PMTS)

This is frequently used to perform Labour Minute Costing by quantifying the amount of time required to perform specific tasks under defined conditions.

THE DIFFERENCE BETWEEN MARGIN & MARK-UP

The difference between margin and mark-up is that **margin is sales minus the cost of goods sold**, while **mark-up is the amount by which the cost of a product is increased in order to arrive at the selling price**.

Margin, also known as gross margin, is sales minus the cost of goods sold (manufacturing cost). **Mark-up** is the amount by which the cost of a product is increased in order to derive the selling price.



Graph 7: Margin vs. Mark-up