International Trade Centre

TRADE IMPACT FOR GOOD

The fundamentals of garment costings

Part III: A guide to Basic Costings for the Garment Industry

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Three Types of Cost Analyses

1. Costing: This is the sum-total of all cost factors for a specific style. This may include hundreds even thousands of separate items. We might never know all the items. We certainly will never replicate the complete costing. In as sense this is a limit.
2. Cost Sheet: This is the list of items that we create. It may include only 7-8 cost factors, but it reflects a reasonable estimate of the per unit cost for that particular style.
3. Job Costing: This is the sum-total of all the costs for a particular order divided by the number pieces shipped for to give us the cost per unit. As a tool, the job costing provides the greatest value

Basic Costsheet		
	PCT of FOB	Cost
Material Fabric	60.0%	$6.00
Material Trim	10.0%	$1.00
CM Labour	6.4%	$0.64
CM Overhead	18.6%	$1.86
CM Total Cost	25.0%	$2.50
Total Cost	95.0%	$9.50
Factory Profit	5.0%	$0.50
Total FOB Cost		$10.00

Traditionally, costsheets serve two purposes:

1. Externally: To negotiate FOB prices with the customers. However, customers no longer negotiate price on the basis of factory cost, but rather on the value the factory can provide.
2. Internally: To provide information for factory management to make the best decisions. It is in this area that the basic costsheet provides its greatest value. The good news is that every factory already has the information required.

Calculating Cost Factors: Fabric

Fabric = Consumption in Meters X Price per meter

We begin with the pattern. The garment divided into its constituent parts and paper pieces are cut out by the patternmaker. For example, trousers have the following patterns:

4 Trouser leg pieces

Plus a number of small pieces: waistband, pockets, belt loops, zipper placket

The grader then replicates the original paper pattern with different proportions to create a range of sizes. For example, in the case of our trouser patterns, each of the four leg patterns may be increased (or decreased) by ¼ inch with the result that the difference in waist and hips measurements equals 1 inch for each size

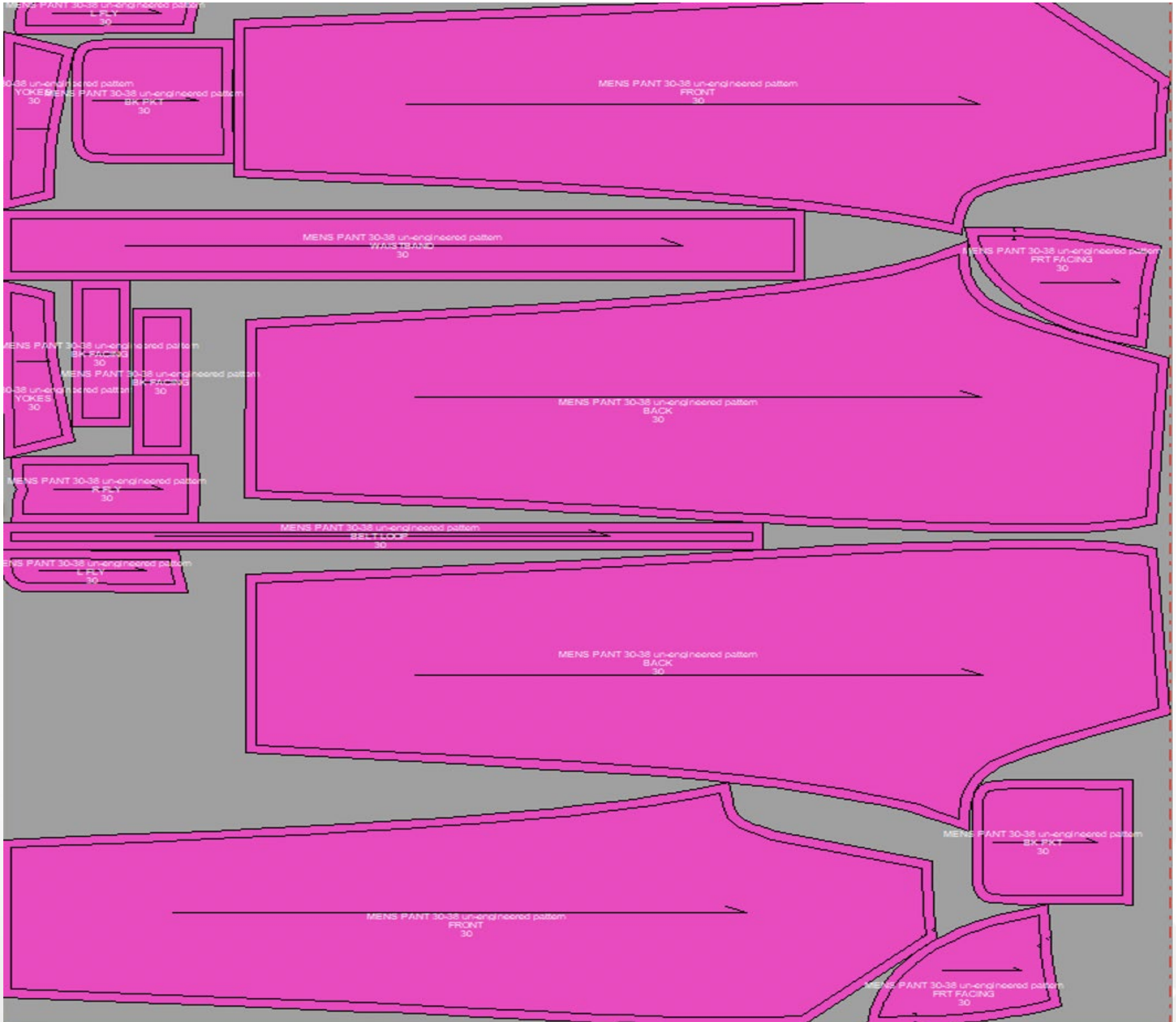
The pattern pieces are laid on the factory cutting table much as a jig-saw puzzle to minimize consumption. This layout is called the marker.

In the single size marker shown below, the marker is as follows:

4 Trouser leg pieces = 1.2 meters

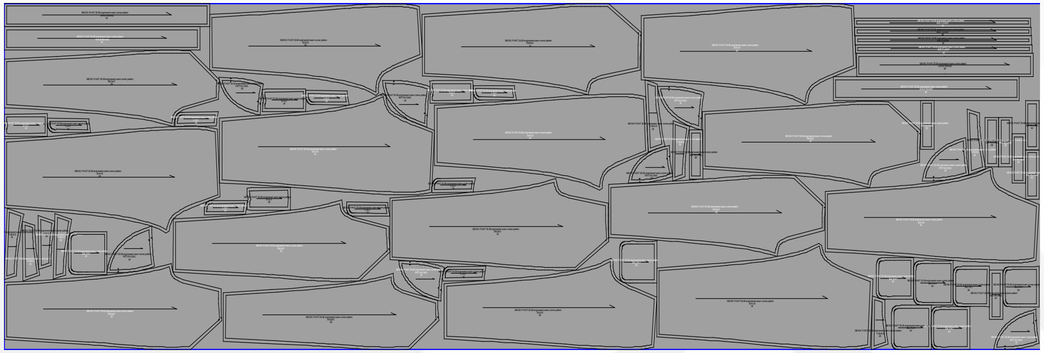
Small pieces: waistband, pockets, belt loops, zipper placket = .2 meters

Total 1.4 meters


MENS PANT 30-38 un-engineered pattern
FRONT
30
MENS PANT 30-38 un-engineered pattern
WAISTBAND
30
MENS PANT 30-38 un-engineered pattern
FRT FACING
30
MENS PANT 30-38 un-engineered pattern
BACK
30
MENS PANT 30-38 un-engineered pattern
BK FACING
30
MENS PANT 30-38 un-engineered pattern
R FLY
30
MENS PANT 30-38 un-engineered pattern
BELT LOOP
30
MENS PANT 30-38 un-engineered pattern
L FLY
30
MENS PANT 30-38 un-engineered pattern
BK PKT
30
YOKES
30

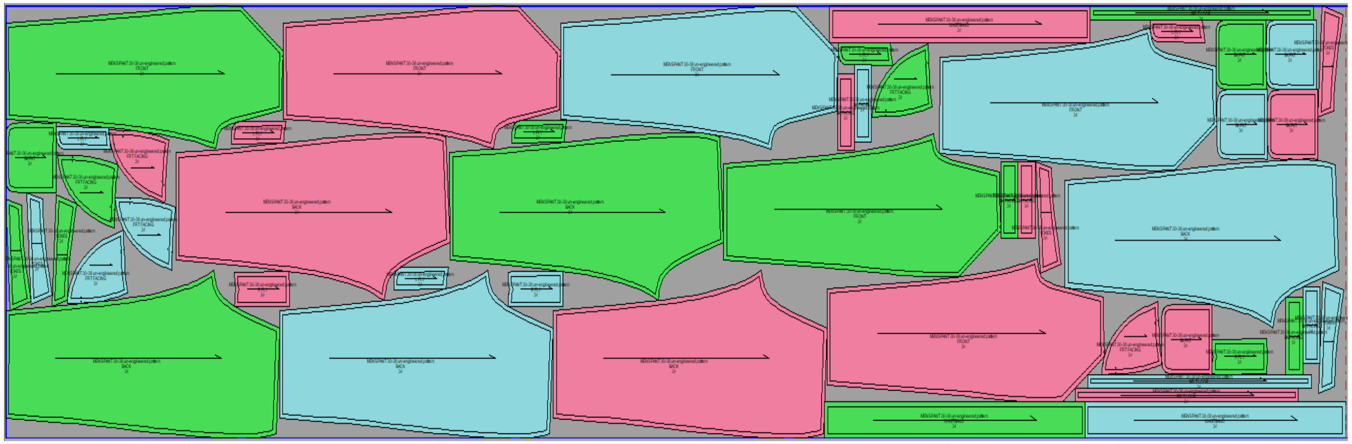
Few garment factories employ single piece markers. Factory markers may include as many as 12 pieces, with the result that a factory cutting table may measure 2m wide and 15-30m long.

- The process involves laying multiple pieces of fabric, one on top of another, where the lengths are equal to the marker.
- Depending on the nature of the fabric and the size of the order, the lay may have anywhere between 10-80 plies
- After the fabric has been “spread” on the table, the marker is placed over the fabric and is used as the guide to cut the
- Fabric into the garment parts.



Besides consumption and cost per meter, fabric width is a primary factor determining fabric cost. While today most fabric is woven with 150cm width, some is still woven with 120cm and even 90cm widths. While consumption is reduced as width increases, cost per meter is reduced as width decreases. As a result, the factory may determine that in some cases, the added consumption is more than off-set by the reduced cost.

120 CM



Example: If fabric width = 150 CM, it might be possible to fit a complete garment into 1 width = 1.4m.

If this is not possible, we might have to move to a second width, with the result that three garments would require four widths. Three garments require 12 legs

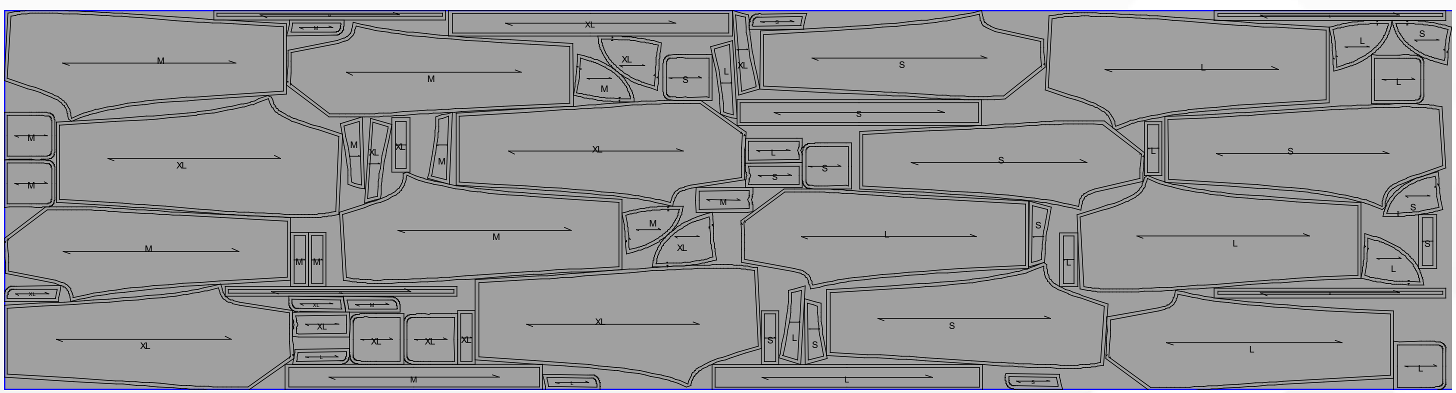
Three legs = 1 width requires 4 widths @ 1.2m = 4.8m

Three smal piece sets @ 0.2m = 0.6m

Total 5.4m Divided by 3 = 1.8

Marker Types 2- irection marker:

2-direction marker: considerable savings can be derived by placing pattern pieces in different direction. For example, since the trouser leg pattern is wider at the top (the hip measurement) than at the bottom (the ankle measurement) many markers place the 4 leg patterns up-down-up-down. There are exceptions that require 1-direction only



Additional Marker Types

1. Step marker: Because size assortments are not uniform, the marker cannot consist of equal numbers for each size. One solution is a special marker. For example, if the size assortment is S= 100, M=200, L=50, the order of sizes on the marker should M-S-L. You lay out 50 ply of S-M-L, 50 ply of S-, and 100 ply of S only

2. Multiple Style Markers: Customers often order a number of styles in the same fabric, particularly when a style is part of a set, such as jacket/skirt. Putting these styles together in a single marker can provide remarkable savings. Provided the factory does not exceed the permitted excess of garment quantities shipped compared with garment quantities ordered, multiple-style-markers is found money.

3.Skimping: In some instances, even very small changes in the pattern width may result in remarkable savings. For example, The pattern seam allowance may be 1.5cm. A small reduction of even 2mm may bring real gain particularly when you multiply 2mm times 8 (the number of seam allowances on 4 pant leg patterns). While technically is not allowed the customers QC will never discover the change particular when the seam has been overlocked.

Material Consumption Factors - Damage Wastage Shrinkage: 1 Damage

All fabric has damages: Those damages add to the marker yardage. Each damage requires additional fabric:

a) Based on the size of the damage: A damage of 1cm requires 1cm additional fabric. A damage of 3m requires 3m additional fabric;

b) Based on the overlap, normally calculated at 0.5m per damage: Once the damage has been cut away, it is necessary to ensure that the fabric when cut includes complete pattern pieces.

There comes a point when the number of damages renders the fabric piece unacceptable. For example, 10 damages equals a 5m loss equals 10% of 50m piece. For some fibers, the mill will mark the damages and provide replacement. This is particularly true to for better quality wool fabric where a white thread at the selvage marks each damage, while hangtag attached to each piece lists gross and net meters; e.g., 52/49

Where that is not available, it becomes the responsibility of the garment factory to inspect the fabric. Typically, the factory will inspect 10% of the fabric. If damage rate exceeds acceptable limits, the factory will examine 100% of the fabric

NB: Do not rely on inspection on the cutting table. Yes, laying out the fabric 10m-20m at a time where the lighting is very good saves time. However, remember the first rule of cutting:

IF YOU CUT IT, YOU OWN IT.

Material Consumption Factors - Damage Wastage Shrinkage: 2 Wastage & Shrinkage

1. Wastage: As you layout the fabric on the cutting table, you invariably come to the end of the piece where the fabric quantity remaining is less than the fabric quantity required for a single garment. Utilizing fabric from two pieces for a single garment risks shading. Here you must bear in mind that even to the professional, shading on the fabric is less noticeable than shading on the garment. As a result, wastage is calculated as 50% of the marker yardage for a single garment. In the case of our trousers we calculate

50% of 1.4m = 0.7m

0.7m of 50m = 1.4%

Shading is a second factor related to wastage. Different fabric pieces may have slightly different shades. These shades may not be noticed on the fabric but will appear when the trouser leg has two different shades. The most common cause is dye-lots. Fabric dyeing normally takes place in closed vats or other containers. The size of each vat is specific to weight or number of meters of fabric. Therefore, if you are ordering 750m of color blue, the dyer may use three vats: 500m – 200m -50m.

Each will yield a different shade. Fabric pieces are marked by dye lot. The factory cannot mix dye lots. Sometimes, as in the case of denim, each piece may have a different shade. Here you must ensure that all the pattern pieces for each garment are cut from the same fabric piece, this increasing wastage.

2. Shrinkage: All fabric shrinks. Greige goods shrinks more than finished fabric, but indeed fabric finishers must ensure some shrinkage, usually about 2%, which translates as 2.8cm for our trousers. This is built into the pattern.

Material Cost: Price per meter

We generally think of fabric cost in very simple terms:

a) The factory orders the fabric

b) The mill delivers the fabric

c) The factory pays for the fabric

This is very often the case

Consider three common instances:

- Customer designates fabric supplier: Traditionally customers bought garment whereby the factory supplied all materials. However, well over thirty years ago customer moved from garment buying to garment sourcing whereby the customer negotiated directly with the fabric supplier; agreed on the price; leaving the factory to pay for the fabric at the previously agreed price. In this situation any additional fabric costs, such as local transportation, taxes, etc. are recoverable from the customer

- Factory purchases local dyed and finished fabric. The only additional cost arises when the fabric is bought ex-factory and the factory pays the cost of local transportation

- Factory purchases fabric produced in another country. As a rule, most factories will order through the mills local agent, who arranges DDP terms. The only exceptions are in the cases of major factory groups that have their own overseas buying offices (usually located in Hong Kong) staffed with fabric specialist

Material Cost: Price per meter: 2

However, the process can be far more complicated, depending on:

a) The nature of the Fiber
b) The nature of the fabric
c) The nature of the textile industry
d) Where the factory is located
e) Where the customer is located.

Material Cost: 3: The Captive Customer Syndrome

There are countries where the local textile industry because of political influence has been able to severely restrict fabric imports. Garment manufacturers must buy local fabrics. The result is that the textile industry provides less for which it charges more.

In these countries, many mills in produce only greige goods, leaving the factory to supervise and pay the costs of all successive process

a) Cost of greige goods
b) Cost of transportation from the fabric mill to the dyer/printer/finisher
c) Cost of dyeing/printing/finishing
d) Cost of transportation from the finisher to the garment factory

This is but the opening acts of the drama

The Captive Customer Syndrome II

Having paid the mill for the greige goods, the factory must duffer the loss for any fabric damages. Regrettably, many of these damages, such as width-to-width shading, pilling, barre shading and irregular shrinkage to not become apparent until the fabric has been dyed and finished

Furthermore, many dyeing/finishing plants are SME operations with old, poorly maintained machinery. As a result, they too add to the risk.

When the finished goods are delivered late, damaged, or both late and damaged, the factory is faced with a number of no-win alternatives.

Should the factory produce the goods and risk cancellation for late delivery?

Should the factory produce and ship damaged goods?

In some cases, garment factories in these countries are known everywhere as home to some of the world's best product development, but where production is a risk.

Material Cost 4: The Most Difficult Sourcing Scenario - Cashmere Suiting

Cashmere is a very important fiber for all segments of the industry, from designer labels down to mass-market retailers.

Regrettably, it is subject to many special problems.

- Much of the quality depends on which part of the animal is used to provide the fiber
- It is a source of considerable fraud due to adulteration, which can be avoided only by the presence of a specialist at the auction
- Major quality differences based on who and where carries out the later processes such as spinning, weaving, dyeing and garment making.

Cashmere Suiting: The supply chain

a) Fiber: Bayantsagaan Mongolia Auction. The only way to ensure quality is to have a presence at the auction
b) Transportation + duty/tax
c) Yarn Spinning + Dyeing: Italy: The finest cashmere yarn is produced in Italy
d) Transportation + duty/tax
e) Weaving: China. High quality cashmere mills rely on Italian yarn
f) Transportation + duty/tax
g) Garment Making: Final location

Material Cost: Trim

For costing purposes, trim is defined as any processes or materials (other than top-fabric, which is listed separately) where payment is buy the unit; e.g., pieces, meters, kilograms.

For example, embroidery can be trim, direct labor or both.

a) Embroidery thread is always listed as trim
b) When embroidery is given out and payment is by the piece, the process is also listed as trim
c) When embroidery is given and each worker is paid by the day, the process is included under direct labor.

The Trim Sheet

The Trim sheet is a tool. As with any tool its value is in what it does and how well it does it. As we will see below the trim sheet serves multiple services providing value for each

Material Cost: Trim 2 - The Trim Sheet

The Cost Sheet is a tool. A with any tool its value is in what it does and how well it does it. As we will see below, the trim sheet serves multiple purposes providing value for each.

All the data is available but not at the outset of the process.

1. Available at the outset
   a) The Item: Lining
   b) Supplier's name (or code name): L101
   c) The quality number of the item from the supplier: B601
   d) Description of the item: 100% Rayon 150CM: Color: Ecru 105
   e) Unit: Meter
   f) Price $2.70
2. Available on receipt of the Size/Color
   g) Purchase Order #: L101-100
   h) Order Quantity Required: 500 X 5 = 2500
   i) Order Quantity in-house: 700
   j) Order Quantity Total 2500 – 700 = 1800
   k) Estimated days: 21 days from issue of PO
3. Available on receipt of item
   l) Quantity received: Ordered 1800 – Received 1926
   m) Actual Days: Estimated 21 days Received 30 days

Material Sourcing: Trim 3 - The Trim Sheet

	Trim sheet												
1	Date			Sketch or Photo									
2	Style #												
3	MO Number												
4	Description												
5	Customer												
	A	B	C	D	E	F	G	H	I	J	K	L	M
6	Item	Supplier	Qual #	Description	Unit	Price	PO	Order Quant			Est Days	Quant Rec	Actual Days
7								Require	In House	Total			
8	Lining												
9	Interlining												
10	Interlining												

11	Thread												
12	Thread												
13	Button												
14	Button												
15	Snap												
16	Hook & Eye												
17	Zipper												
18	Elastic												
19	Shoulder Pad												
20	Tape												
21	Main Label												
22	Content Label												
23	Care Label												
24	Hangtag												

25	**Hanger**												
26	Tissue												
27	Polybag												
28	Carton												
29	Other												
30	Other												
31	Other												

Material Sourcing: Trim 4 - The Trim Sheet

The trim sheet is an excellent tool that provides a wide range of valuable services.

1. Trim can be ordered by computer
2. Saving time. Large factories that produce 500+ styles per month require substantial staff to place and follow up trim orders
3. Avoiding previously unrecognized error. In the old days, when the person ordered 6" zippers instead of the required 7" zippers, he/she was able to stick the incorrect zipper in their desk drawer and reorder the correct zipper, without anyone being the wiser. This is no longer possible
4. Providing important information on a timely basis. If the product is late, or the quantity incorrect, management is alerted on a timely basis.

CM

The basic cost sheet can be divided into two parts

1. Material
   - Fabric
   - Trim
2. CM
   - Labor
   - Overhead
   - Profit

CM: Literally Cut & Make is manufacruing costs

CM II

We start with the undersatanding that we know the totals:

1. Total labor by department
2. Total overhead
3. Total net profit

The data is readily available in the company's account department.

The problem is to take the totals and break each of them down first by order and then by piece

Labor Definition

For costing purposes, we define labor as wages and benefits paid to workers who are directly involved in the production process

- Cutters
- Bundlers
- Sewers
- Inspectors
- Pressers
- Packers

NB: This does not include supervisors who are classified as staff and are therefore included in overhead.

Labor calculation

Sewing labor cost for each style is calculated by the number of minutes required to produce one garment of that style times the worker's wage per minute

Calculating minutes per piece is relatively easy. We require only the following information

a) Number of machines in the line.
b) Number of working days factoring in overtime
c) Number of pieces in the order

Style XYZ requires 38.4 sewing minutes per piece. This is an important piece of information

From the factory side:

- Necessary to determine garment cost:
- Necessary to determine changes in productivity
- Necessary to determine factory schedule and capacity

Labor Calculating Minutes Per Unit

Days	Hours	Minutes	Line	Units
20	8	60	40	10,000
	160	9,600	384,000	38.4

To produce 10,000 pieces of Style XYZ, a 40-machine line requires 20 days at average 8 working hours per-day = 38.4 minutes

Labor: Calculating Sewing Cost per unit

Labor cost for each style is calculated by the number of minutes required to produce one garment of that style times the worker's wage per minute.

A worker paid $150 per month
= $0.011 per minute
= $0.41 for a garment requiring 38.4 minutes

Direct Labor Sewing				
Per Month	Per Day	Per Hour	Per Minute	No. Minutes
	26 days	9 Hours	60 per hour	38.4 Sewing Time
$150	$5.77	$0.64	$0.011	$0.41

Labor: Calculating other factors

However, there is one more factor: Down-time due to line balancing.
An assembly-line reduces the production into a series of discrete steps.
The goal is to have a steady flow without bottlenecks and/or stoppages.
Because the number of minutes required differ from one step to another,
we cannot simply allocate one worker to each step. For example,
Step A requiring 2 minutes requires 4-times the work as step B requiring ½ minute.
To keep a steady flow the line manager must stop work to balance the line
while machines are changed and workers assignments.
Typically, a factory will plan to start producing the new style at a point coinciding with normal operation stoppages
— after lunch or another break, or most often at the beginning of the work day.
A well run factory will require half a day for line balancing.
As we can see from the chart below the time lost for a 10,000-piece order is slightly less than 1 minute per unit or 2.5%

Days	Hours	Minutes	Line	Units
20.5	8	60	40	10,000
	164	9840	393600	39.36

Labor: Down Time

Let us consider the down-time loss for a smaller order,
bearing in mind that line balancing remains unaffected by order size.
From the chart below, we can see
the same style XYZ will require 3 days to produce 1500 at the rate of 38.4 minutes per piece.

Days	Hours	Minutes	Line	Units
3	8	60	40	1,500
	24	1440	57600	38.4

Labor Down Time

When we add, the down time the results are far different.

Where the 10,000-piece order loses than 1 minute or 2.5%. The 1500-piece order 6.4 minute or 16.7%

Days	Hours	Minutes	Line	Units
3.5	8	60	40	1,500
	28	1680	67200	44.8

Labor Other Hidden Factors

There are other hidden factors:

a) Introducing a new style in a line does not mean that 40 machines start work at once. Work begins at step 1 and over a period of time moves through the line to the point where all forty machines are operating.

b) The learning curve: Sewers need time to adapt to the new style during which productivity is reduced.

Once again, the actual time lost is unrelated to the size of the order.

One point is clear, we cannot effectively produce 1500 garments in a 40-machine line. Not only are the cost prohibitive, but as we will see below line balancing my no longer be possible.

Labor: Line Balancing

How do we balance the line?

100 years ago, line balancing simply meant adding greater number of sewers to the difficult operations. In the example above, Step A would require 4 sewers while step B would require but a single sewer. This required the ability to determine the time required for each operation. Not only was this inefficient but failed to take into consideration the hidden factors listed above.

Today, successful factories no longer think of their sewers as automatons but rather as people. Line supervisors categorize their sewers into A-B-C classifications. Rather then throwing 4 bodies at step A, the supervisor would allocate 2 class A sewers. Furthermore, the best line supervisors will provide on-the-job training to raise the standards of his line.

Management will bring in qualified engineers to introduce new production techniques to not only to train workers but also supervisors for the entire factory Almost all contemporary production techniques are based on worker empowerment.

Labor: Line Balancing Continued

All of this brings us to the point where line balancing becomes impossible. As a factory trades up from commodities to fashion goods and lower value-added to higher value-added products. The size of the order diminishes and with it the size of the line. At some point, usually about 20 machines the line can no longer be balanced because we cannot assign 1½ sewers to an operation. Or can we?

The short answer is we can assign a half worker. This is called multi-tasking, where each sewer carries out several steps. At this point the single tasked line is replaced

By a multi-tasked team, where 25+ operations are carried out by 8-12 sewers. The team can operate effectively only when they are totally empowered. In successful operations the team itself decides the operations to carried out by each worker, because they recognize that people are individuals with different skill sets and the team wants to place each worker the operations they are most qualified to carry out. In a sense, the team becomes an independent contractor that makes use of the factory space and equipment. No more line supervisors because there are no more lines. The factory cares only about quality.

From Sewing Cost Per Unit to Total Labor Cost Per Unit

As shown above, we also have other direct labor:

- Cutters
- Bundlers
- Sewers
- Inspectors
- Pressers
- Packers

The factory's account department has records of total wages for the designated period. To find the cost per unit for ancillary labor, we need only determine what percent of total wages is sewing. If, for example, wages for the period totaled $1000 of which sewers received $667, then we know that sewing equals 2/3 of total wages. Therefore is the sewing cost per unit for a particular order equals $1.00 then cost per unit for ancillary labor would equal $0.50 and total wages for that order would equal $1.50.

Labor calculations: From the customer side

This is one important factor determining the price the customer is willing to pay.

Open Sourcing: In today's world where the customer knows

a) Fabric price per meter
b) Fabric consumption per garment
c) Cost of trim
d) Trim consumption
e) Number of minutes per unit

It would appear that the customer can negotiate price based on cost per minute.

"I will pay you 6¢ per minute for every order I give you."

The reality is different. We can see this because customers will pay anywhere from 6¢ or less to 18¢ or more for the same product depending on the factory. We can see this when we look at FOB prices for the largest import products.

From the Customer Side: II

- The reality is different. We can see this because customers will pay anywhere from 6¢ or less to 18¢ or more for the same product depending on the factory. We can see this when we look at FOB prices for the largest import products.
- Clearly there are many other factors that determine what the customer is willing to pay.

From the customer side III: Rana Plaza

In 2012, the Rana Plaza catastrophe caught many importers unaware,
when it was determined that their garments were being produced in unsafe factories.
Questions were asked. "How could you give out your production to substandard factories?"

There reply was, "We did not know because, the order was 500,000 pieces.
How could we know that part was being subcontracted? The number of pieces were too great to count?"

They were right.
If allowed 5 seconds for each garment,
allowing 8 hours a day,
you would need 87 days to reach 500,000. However, the customer did not have to count to 500,000.
They would need only to count to 20.
As we can see from the chart below,
20 lines, each of 80 machines would require 25 days to complete 500,000 pieces.
The minute the QC entered the factory, he need only count the number of lines.
If only 10 lines were engaged in sewing the style, he would know that half the order was being subcontracted

Days	Hours	Minutes	Line	Units
25	8	60	1,600	500,000
	200	12000	19200000	38.4

ITC

Overhead

We define overhead as all CM costs, less labour and factory profit.

The following is a partial list of overhead costs that frequently occur in garment factories.

Allocating Overhead

1	ACCOUNTANT
2	ADVERTISING
3	CONSUMABLE STORES
4	CONTINGENT LIABILITIES
5	COURIER LOCAL
6	**DEPRECIATION – BUILDING**
7	**DEPRECIATION – FURNITURE AND FIXTURES**
8	**DEPRECIATION – MACHINERY AND EQUIPMENT**
9	DONATION
10	ELECTRICITY AND WATER
11	ENTERTAINMENT
12	FINANCE COSTS

Allocating Overhead (Cont)

13	FINANCE COSTS - INTERESTS
14	FOOD & DRINK
15	GASOLINE
16	INSURANCE
17	LEGAL FEES
18	LOCAL TRAVEL
19	LOOSE TOOLS
20	MAGAZINES & PERIODICALS
21	MEMBERSHIPS (TRADE ORGS)
22	MOTOR CAR EXPENSES
23	PACKING MATERIALS
24	PENALTIES

Allocating Overhead (Cont)

25	PEST CONTROL
26	PRINTING & STATIONARY
27	PROFESSIONAL FEES
28	REPAIRS - BUILDING
29	REPAIRS - FURNITURE & FIXTURES
30	REPAIRS - MACHINERY
31	REPAIRS - OFFICE EQUIPMENT
32	REPAIRS - PRODUCTION AREA PLANT
33	SALARIES (INCLUDES ALL FRINGE)
34	STATIONARY OFFICE
35	STATIONARY PRODUCTION
36	TELEPHONE - E-MAIL

Allocating Overhead (Cont)

37	TRASH COLLECTION
38	TRAVELING - OVERSEAS
39	PROVISION FOR STAFF BONUS
40	PROVISION FOR TAXES
41	PROVISION **OTHER**

Overhead Calculation

We know the total overhead for any period of time

The problem is to move from total overhead to overhead per unit per order

The solution is relatively easy:

a) The accounting department has a complete record of total overhead cost for any time period
b) The accounting department also has a complete record of total labor cost for the same period
c) Both amounts are based on time
d) There is a ratio of overhead-to-labor. Since we know the labor cost per unit, we can determine a reasonably accurate overhead cost per unit

For example if total direct labor equals $100 and total total overhead equals $200 then the ratio between overhead and labor = 2:1.

Therefore if direct labor equals $0.75 per piece, overhead per piece must equal $1.50

This ratio is one of the single most important factors not only determining product cost but more importantly analysing value of a number of specific methods to reduce garment costs.

Overhead 2

It is very difficult to generalize about the ratio overhead: labor. Clearly the higher the wage rate the lower the ratio. As a result, we can generalize when we compare ratios in cheap labor developing and LDC, with factories located in the developed countries

a) In developed countries, productivity increases are usually between 1%-3% simply because developed countries have developed education and technology over a period of generation, while less developed countries now have almost immediate access to these technological and educational assists. The result is that productivity increases of 25%-60% in garment producing countries are not uncommon.
b) In developed countries overhead may typically be 50%-70% of labour while garment exporting countries overhead may be 250$-600% of labour.
    i. Low Wages: The worker in a garment exporting country that may be paid $150 per month may be paid twenty times that amount in an industrialized country.
    ii. High Overhead: Operating costs in in garment exporting countries are not necessarily relatively lower than those in industrialized countries. For example, it costs more to turn on the lights in Mumbai than in Manhattan. In fact, in some garment exporting countries electricity may equal 5% of garment FOB price.

As a result, while the benefit of increased productivity in industrialized countries is reduced labour cost, the benefit in garment exporting countries is reduced overhead. As we will see in Part III, with the proper tools and commitment by management, productivity increase of 25% in a garment exporting country can be achieved within a year, with result that net profit will increase from 5.0% to 9.5%. Even if management increased wages by 25%, profit would still increase from 5% to 7.5%.

Profit

Profit is what remains after all costs have been covered. While these figures are only estimates and not to be taken as real, it is fair to say that 5% net is a good profit rate, provided it is net — money in the bank.

Many in the industry will disagree, claiming that their minimum net rate to be 10+%

Cost sheets and data the make-up these cost sheets are important tools. To be of value the data must be complete and 100% accurate.

For example, how does the factory value inventory? How do they value their machinery and equipment? How do they value the factory plant itself

Profit: Case Study Oil

You are in the oil business.

Your inventory is oil, a fungible product with a world market price. As a result, You know the value of your inventory every minute of the day: both above ground in your tanks and below ground reserves

Your machinery and equipment such as pipelines and distillation facoilities have real marketable value

Your factory plant, such as off-shore platfoms have real value.

These investments can be quantified by professionals for third party investors and lenders

Profit: Case Study Garments

You are in the garment business.

Your inventory is either for current orders or leftover from previous orders. Your leftover inventory has 0 value

Your machinery and equipment such as used sewing machines and pressing equipment and tables has very little value

Your factory plant, with the exception of the ground on which it is built has little or no value whatsoever

Third parties canno place a value on your operation because all too often, you value your inventory at cost and fail to include depreciation in your overhead.

Profit: Case Study Garments II

Provided you have made a detailed and accurate calculaion, 5% net profit is very good indeed.

For example: You have a 200 machine factory producing quality men's woven cotton shirts with the same quality as provided by you Malaysia based competitor. As of 2019, the average FOB price for a made-in-Malaysia shirt was $11.29. You 5% net profit would be $0.56

You factory is 75% of China

China = 22 minutes per piece

You = 29.33 minutes per piece

Profit Case Study Garments Total Annual Units

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Production					
Minutes	units per day	units per month	Alow for downtime	Annual Units	Total Machines
per piece	8 hours	26 days	80%	12	200
29.3	16.4	425.5	340	4084	816882

Profit Case Study Garments: Value

Even allowing for down time (considering seasonal nature of the industry, your 200 machines will produce 816,882 shirts per year.
At FOB price $11.29 per piece total sales will equal $9,223672.88.
Based on 5% your net profit wojuld be $461,183,62

Sales & Profit	
Total Sales	Net Profit
$ 9,223,672.48	$ 461,183.62

5% return on sales may not seem like much.
However, when we consider the return on investment the results may seem to be better.
Assiming your investment to be $1,000,000, your return would slightly more than 46% per annum

Basic Costings Conclusions

The basic costing is at best an estimate of the garment cost.

It is valuable because:

a) It enables the factory to quantify fabric and trim requirmements;
b) It enables the factory to order fabric and trin by compueter.

At the same time is has serious disadvantages

a) It is created at the very beginning of the process
b) Factory tend to underorder fabric because they do not want to be stuck with uncut fabric and overorder trim because to use up all fabric they need the necessary trim

The factory cannot calculate the actual cost and profit for the order until production has been completed and the order shipped.

Job Costing vs Basic Cost Sheet

Case Study: Basic Costsheet vs Job Costing					
The factory has an order for 10,000 pieces.					
Basic Costing: 10,000 piece					
Fabric	60%	$60,000			
Trim	10%	$10,000			
CM	30%	$30,000	CM Breakdown		
FOB	100%	$100,000	Labor	$6,410.26	
			Overhead	$18,589.74	2.9
Total Cost		$95,000			
Total Revenue		$100,000			
Net Profit	5.00%	$5,000			
However, the job costing tells a different story					
JOB Costing: 10,000 pieces					
Material	60%	$61,000			
Trim	10%	$9,300			
			Labor	$6,169.88	
			Overhead	$22,307.69	
Total Cost		$98,778			
Total Revenue		$99,300			
Net Profit	0.53%	$522			

Job Costing : Benefit
Which Customer Provides the Greatest Profit

Net Profit by Customer by Period			
Customer Name	Total Sales	Gross Profit	Net Profit
Able	$1,000	12.5%	4.0%
Baker	$800	30.0%	12.0%
Charley	$700	20.0%	6.0%
Delta	$550	5.0%	-3.0%
Echo	$400	16.0%	1.0%
Frank	$320	16.0%	2.0%

Job Costing: Benefit (cont) Which Product Provides the Greatest Profit

Product: Circular Knit (cut & sew)			
Product	Total sales	Gross Profit	Net Profit
T-shirt	$1,000	10.0%	2.5%
Polo shirt	$700	15.0%	4.5%
Fashion Blouse	$500	30.0%	8.0%
Dress	$550	40.0%	15%