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Price Waterhouse



AWASSA TEXTILE FACTORY

POST COMPLETION REPORT

JULY 1995

Price Waterhouse



12 July 1995

United Nations Industrial Development Organisation
Contract Section
PO Box 300
A-1400
Vienna, Austria

Attention: Mr D Gardellin

Dear Mr Gardellin

UNIDO PROJECT: DP/ETH/89/017 CONTRACT 93/157/VK

We are pleased to present you with ten copies of our post completion report on the above referenced contract. This report summarises our major findings during the final visit which was carried out in June 1995. During this visit we had the opportunity to discuss with management of Awassa Textile Factory progress made in implementing the proposed cost accounting system and changes which the senior cost accountant plans to introduce during the next financial year.

Since our last visit to Awassa, the senior cost accountant has completed a three month training programme in India which was organised by a management consultancy firm. During the training, the senior cost accountant had the opportunity to visit two textile factories, interacted with professional cost accountants and familiarised himself with standard cost accounting principles used in India.

Please find enclosed our fee note for the Post Completion Visit prepared in accordance with sub-paragraph 2.10 (d) of the above mentioned contract.

Finally, we wish to express our appreciation to the staff of Awassa Textile Factory for the cooperation and assistance given to Price Waterhouse during this assignment. Should you have any questions or require additional information, please do not hesitate to contact me or Anne Normandin at the above telephone number.

Yours sincerely

WA Hollas

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PRICE WATERHOUSE POST COMPLETION REPORT
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1 INTRODUCTION

The purpose of the post completion visit was to assess progress made by Awassa Textile Factory in implementing the full absorption cost system that was introduced at the beginning of last year. In May 1994, the first set of cost figures were prepared for the quarter ended 31 March 1994. These figures contained a number of anomalies arising from the need to estimate some production figures as recording of goods transferred between cost centres did not commence at the start of the quarter, and in some cases, the information recorded on the transfer vouchers was incomplete, particularly in cost centres 6 and 7. Unreconciled differences between the physical and book inventory quantities also contributed to the distortion of cost figures resulting in significant unaccounted for losses and gains. As a result, cost figures for the quarter ended 31 March 1994 were not realistic.

2 REVIEW OF COST FIGURES

Cost Figures for the Year Ended 30 June 1994

Cost figures for the year ended 30 June 1994 were prepared by the senior cost accountant. These figures are based on the entire year's production as opposed to the production for the quarter ended 30 June 1994. We have included the cost sheets for cost centres 1 to 3 as Appendix I.

Limited reliance can be placed on the cost figures for a number of reasons.

- 1 Since transfer vouchers were only introduced during the second half of the financial year, production figures for each of the cost centres had to be estimated. This has had a distorting effect on the year's results. The estimates were derived from the production records maintained by the heads of each department.
- 2 Negative book stocks for Ne 1.20 and Ne 24 in cost centres 1 and 2 respectively were reported. This is clearly impossible. The cause of this is not clear, but it is probably the result of over recording of output.
- 3 The value of work-in-process transferred from cost centre 1 to cost centre 2 does not agree (Birr 12,157,353.11 and Birr 12,250,413.66 respectively).
- 4 We suspect that recording of waste is still understated as the reported level in cost centre 1 is about 8.1% of total input. We were advised by the Production Head that the expected level should be about 11%.

Nonetheless, a review of the transfer vouchers for the last quarter of 1994 revealed that some improvement has been made with respect to the information gathering process. In addition, year end physical stock counts are reconciled to book stock figures which means that the opening and closing balances (at 30 June 1993 and 1994 respectively) used for raw materials, work-in-process and finished goods were more accurate. These two factors had a positive counter effect on the lack of

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accuracy associated with the need to use estimated production figures. For instance, the overall unaccountable losses reported in cost centres 1, 2 and 4 are more in line with the industry standards.

Observation

We noted that waste identified in cost centre 7, dyeing and printing, was only reported in the final cost centre which relates to packing. In our opinion this waste should be recognised in cost centre 7 as it is identified during the inspection stage, before it is transferred to the next cost centre for packing. This point was discussed and agreed with the senior cost accountant.

Cost Figures for Subsequent Quarters

No cost figures have been prepared for three consecutive quarters ended after 30 June 1994. We were informed that the senior cost accountant did not have the time to prepare the September 1994 cost figures because he was busy organising his travel plans for the training programme in India. Initially he was scheduled to travel in September, but for various reasons his departure was delayed until December, which led to the need to make additional trips back to Addis Ababa.

While he was away in India, there was no other staff member within the division who could prepare the December 1994 cost figures. The timing of the senior cost accountant's absence also coincided with the departure of the finance manager. We therefore recommend that a second person in the Cost and Budget division be trained in this area. The most appropriate person would be the junior cost accountant.

When the senior cost accountant returned in late March, we were told that he was tied up clearing the backlog and writing up a report on his training programme and as a result the cost figures for the quarter ended 31 March 1995 were not prepared.

Plans for Year End

When the financial statements for the year ended 30 June 1995 will be available in early August, the senior cost accountant intends to prepare cost figures for the entire year's production. All the necessary information to calculate these figures has been gathered.

3

TRAINING PROGRAMME

In addition to establishing an integrated process cost accounting system for Awassa Textile Factory, the UNIDO Project included a training component for a staff member of the Cost and Budget division. The objectives of the training programme were to :

- improve the trainee's knowledge in the field of cost accounting
- expose the trainee to various costing systems and methods followed in India

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- provide the trainee with additional experience to effectively implement the proposed costing system designed for Awassa Textile Factory and enable him upgrade the quality of the information that will be generated from the system.

The senior cost accountant, Mr Worku, was selected for the training programme. A management consultancy firm based in Bangalore, India, prepared the training programme. The three month course took place between 21 December 1994 and 24 March 1995. We understand that a copy of the report on his training programme was distributed to UNIDO in Ethiopia and Austria.

Our discussions with Mr Worku revealed that the training programme has helped him gain a better understanding of the proposed costing system for Awassa Textile Factory and as a result, he has acquired sufficient experience to enable him upgrade the existing system.

During his stay in India he also received some computer training which covered Lotus 1-2-3. He plans to computerise the preparation of the next set of cost figures.

4

PROPOSED CHANGES TO THE EXISTING SYSTEM

As described in his report, the senior cost accountant has put forward a number of recommendations to improve the existing cost accounting system at Awassa Textile Factory. His proposed changes are summarised in the following paragraphs.

Cost Centre #1 - Blowing/Carding/Combing/Roving

The proposed change is to split this cost centre into three centres :

- blowing/carding
- combing
- roving.

This change will make the distinction between the carded and combed yarn. As a result, the labour and overhead costs in combing will only be charged to the cotton that goes through this stage. Labour and overhead costs in carding will be apportioned in the ratio of the relative outputs. With respect to combing, since there is only one material input and one output, there is obviously no need for any apportionment. The basis of apportionment of labour and overhead costs in roving will remain the same, that is based on the time spent on the roving machines.

Cost Centre #4 - Warping and Sizing

For simplicity purposes, the output of this cost centre will be measured in kilogrammes since the input material which is added to it in the following centre is also measured in kilogrammes (yarn). Hence the conversion of kilogrammes to linear metres will be done in cost centre #5.

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Cost Centre #5 - Weaving

After the input material (yarn) has been added to the opening work-in-process, the output will be converted into linear metres. It is essential that the conversion be calculated prior to adding the cost of labour and overhead because the apportionment of these costs is based on the speed at which the weaving machines produce the grey fabrics, and these speeds are expressed in terms of minutes per linear metre. The new cost sheet for cost centre #5 should therefore be as follows :

		TOTAL	
		Kg	Birr
Opening W-I-P (Warp in Kg)	A		
Materials from C.C. #4	B		
Materials from yarn store (net weight yarn consumed)	C		
Sub-total	D	A+B+C	
Less closing W-I-P (Warp in Kg)	E		
Total production	F	D-E	
Conversion (Kg : Lm)	G		
Opening W-I-P (Lm)	H		
Direct and Indirect Labour	I		
Overhead	J		
Total Input	K	G+H+I+J	
Unit Cost			
Less: Process Transferred			
Waste (converted in metres)			
Closing W-I-P (Book)			
Unaccounted (loss)/gain			
Closing W-I-P (Physical)			

Cost Centre #6 - Fabric Preparation

In this cost centre fabric issued from the grey fabric store, including grey fabrics manufactured by Awassa Textile Factory and those bought from outside, go through the following processes :

- singeing and desizing
- scouring and bleaching.

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When we studied the cost implications of this cost centre we noted that all fabrics which are processed in this cost centre are treated at the same speed and for this reason we recommended that labour and overhead costs be apportioned in the ratio of actual production of each type of fabric. However, during our post completion visit, we realised that the speed of the singeing and desizing machines differs depending on the weight of the fabrics. Thus labour and overhead costs should be allocated on the basis of actual time spent on the machines rather than on actual ratio of production. These speeds are shown below :

Fabric	Speed metres/minute	Equivalency Ratio
Light	120	1.0
Heavy	80	1.5

To improve the accuracy of the cost figures, each process will be treated as a separate cost centre and from a cost accounting point of view, two cost sheets will be used to calculate the total cost related to fabric preparation. The principle for allocating the cost of chemicals and the apportionment of labour and overhead costs for the scouring and bleaching process will remain unchanged.

Cost Centre #7 - Dyeing and Printing

In this cost centre, several processes are combined although not all fabrics go through each process. For example, mercerizing only applies to dyed fabrics and as a result they must go through the drying process twice at this cost centre. Again the proposed changes will improve the accuracy of the cost figures. The new cost centres will be as follows :

- mercerizing
- drying
- dyeing/printing.

The allocation of labour and overhead costs will be based on the standard manning levels of each machine and the actual machine hours respectively.

Treatment of Waste

Another amendment is to include the value of waste calculated in each cost centre in the cost of materials transferred from that particular cost centre. Although we agree in principle with this treatment, it is not appropriate in the case of cost centres 1 to 3 because a significant amount of the waste recovered in these cost centres is returned to the cotton store for subsequent issue.

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Our cost system recommends that waste in the spinning department be measured and that proper transfer documentation be raised when it is returned to the store. However, this procedure raises the issue of what value should be given to the waste returned to the store. If the total cost of inputs (ie cotton, labour and overhead) is used for costing purposes, this treatment will distort the cost of outputs of future periods when the waste is reissued to the cost centre. We therefore recommend that the average cost of cotton purchased from outside be used to value the waste returning to the cotton store and that the difference, which represents labour and overhead costs, be treated as a general overhead expense in the financial statements.

Conclusion

We understand that the senior cost accountant is planning to implement the above changes beginning 1 July 1995. Prior to implementing these changes, we recommend that the concerned production heads be consulted to ensure that the changes are manageable and that it will be possible to collect the additional information required without rendering the system unduly burdensome.

5

OTHER MATTERS

Since our last visit to Awassa, the factory has experienced a high turnover among its senior and middle management personnel. The factory has had two different general managers since May 1994. There have also been changes with respect to the heads of quality control, marketing, payroll and finishing departments.

However, of even more immediate concern for the successful implementation of the integrated costing system is the departure of the finance manager. The factory has been without a finance manager since December 1994 and no action has yet been taken to replace him. In our opinion, priority should be given to recruiting a qualified finance manager to ensure appropriate coordination between the financial and cost accounting divisions because the proposed integrated cost accounting system is highly dependent on reliable financial information.

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CONCLUSION

There is still a need to improve the information gathering process, particularly with respect to measuring output and waste arising in each cost centre, to enhance the level of accuracy of the product costs and thus increase the level of confidence in the cost figures.

The financial statements for the nine month period ending 31 March 1995 show a negative gross margin. This loss could either be due to an inadequate pricing policy or production costs that are not in line with those of the competitors and as a result the factory has to sell at a loss. The long term viability of Awassa Textile Factory is therefore dependent on reliable cost figures so that management can take timely appropriate action.

AWASSA TEXTILE FACTORY
COST CENTRE #1
YEAR ENDED 30 JUNE 1994

	TOTAL		No 0.82		No 1.20	
	Kg	Barr:Kg	Barr:Kg	Barr:Kg	Barr	Barr
Opening W-I-P	44 786 00	314 004 00	44 786 00	314 004 00	0	0 00
Cotton	1 206 184 00	8 517 671 16	1 151 906 00	8 125 808 00	54 278 00	391 863 16
Direct Labour		111 051 06		102 500 13		8 550 93
Indirect Labour		358 309 35		330 719 53		27 589 32
Overhead		4 199 078 64		3 375 747 74		323 328 90
Total Input	1 250 970 00	13 500 112 21	1 196 692 00	12 746 779 41	54 278 00	751 332 80
Unit Cost					10 65	13 84
Less: Process Transferred	1 126 009 00	12 157 353 11	1 075 339 00	11 456 963 36	50 670 00	701 389 75
Waste	102 527 00	1 106 969 92	97 913 00	1 043 101 52	4 614 00	63 868 41
Closing W-I-P (Book)	22 434 00	235 789 18	23 440 00	249 714 54	(1 006 00)	(13 925 36)
Unaccounted (loss)/gain	(16 597 00)	(166 519 18)	(19 198 00)	(204 523 02)	2 601 00	36 003 84
Closing W-I-P (Physical)	5 837 00	67 269 99	4 242 00	45 191 51	1 595 00	22 078 48

AWASSA TEXTILE FACTORY
COST CENTRE #3
YEAR ENDED 30 JUNE 1994

	TOTAL		Total No 14/2		Total No 16/2		No 16/4		No 32/2	
	Kg	Barr:Kg	Barr:Kg	Barr:Kg	Barr:Kg	Barr:Kg	Barr:Kg	Barr:Kg	Barr	Barr
Opening W-I-P	462 50	6 140 00	0 00	0 00	0 00	0 00	0 00	0 00	462 50	6 140 00
Materials - from C.C. 2	9 625 80	148 166 81	449 30	5 971 20	3 640 70	49 695 56	489 05	6 675 53	5 046 75	83 826 52
Direct Labour		68 322 93		2 719 25		22 040 97		1 386 95		42 175 73
Indirect Labour		188 813 21		7 514 77		60 911 14		3 832 91		116 554 36
Overhead		1 194 337 76		47 534 64		385 293 37		24 245 06		737 264 69
Total Input	10 088 30	1 603 782 68	449 30	63 739 86	3 640 70	517 941 04	489 05	36 140 45	5 509 25	935 961 33
Unit Cost				141 86		142 26		73 90		178 96
Less: Process Transferred	9 625 80	1 521 011 50	449 30	63 739 86	3 640 70	517 941 04	489 05	36 140 45	5 046 75	903 190 15
Waste	0 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00
Closing W-I-P (Book)	462 50	62 771 18	0 00	0 00	0 00	0 00	0 00	0 00	462 50	62 771 18
Unaccounted (loss)/gain	(285 35)	(51 067 58)	0 00	0 00	0 00	0 00	0 00	0 00	(285 35)	(51 067 58)
Closing W-I-P (Physical)	177 15	31 703 60	0 00	0 00	0 00	0 00	0 00	0 00	177 15	31 703 60

	TOTAL		Total No 0.82		No 12		No 14		No 16	
	Kg	Birr	Kg	Birr	Kg	Birr	Kg	Birr	Kg	Birr
Opening W-I-P	25,711.00	248,559.00	16,199.00	144,828.00	0.00	0.00	857.00	7,450.00	3,789.00	34,855.00
Materials - from C.C. 1	1,126,009.00	12,250,413.66	1,075,339.00	11,549,140.86	215.00	2,309.10	98,394.00	1,056,751.56	163,452.00	1,755,474.48
Direct Labour		290,284.37		278,031.41		29.03		17,649.29		34,108.42
Indirect Labour		971,284.83		923,594.75		97.13		59,054.12		114,125.97
Overhead		2,932,309.40		2,788,333.01		293.23		178,284.41		344,546.35
Total Input	1,151,720.00	16,692,651.26	1,091,538.00	15,681,928.03	215.00	2,728.49	99,251.00	1,319,189.38	167,241.00	2,282,510.22
Input Cost						12.69		13.29		13.65
Less: Process Transferred	1,073,932.66	15,540,918.53	1,028,724.11	14,180,068.97	195.00	2,474.68	94,103.65	1,250,773.65	158,329.13	2,133,858.59
Waste	4,862.03	70,358.39	4,657.34	66,913.45	0.97	12.31	425.94	5,661.38	707.92	9,663.41
Closing W-I-P (book)	72,925.31	1,081,574.34	58,158.55	834,945.81	19.03	241.50	4,721.41	62,754.37	10,203.95	139,288.22
Unaccounted (loss)/ gain	(40,165.81)	(603,325.40)	(27,211.05)	(387,553.38)	(9.03)	(114.60)	(3,371.41)	(44,810.92)	(8,316.95)	(86,229.03)
Closing W-I-P (physical)	32,759.50	478,048.94	30,945.50	447,392.25	10.00	128.91	1,350.00	17,943.45	3,887.00	53,059.19

	No 20		No 24		Total No 1.20		No 30		No 32	
	Kg	Birr	Kg	Birr	Kg	Birr	Kg	Birr	Kg	Birr
Opening W-I-P	11,553.00	102,723.00	0.00	0.00	9,512.00	103,531.00	0.00	0.00	9,512.00	103,531.00
Materials - from C.C. 1	812,848.00	8,729,985.24	430.00	4,618.20	50,670.00	701,272.80	10,458.00	144,738.72	40,212.00	556,534.08
Direct Labour		224,099.53		145.14		14,252.96		2,780.73		11,466.23
Indirect Labour		749,831.89		485.84		47,690.08		9,324.33		38,385.75
Overhead		2,263,742.87		1,468.15		143,976.39		28,150.17		115,826.22
Total Input	824,401.00	12,070,384.81	430.00	6,715.13	60,182.00	1,010,723.23	12,458.00	184,999.95	49,724.00	825,723.28
Input Cost		14.64		15.82		17.69		17.69		16.81
Less: Process Transferred	777,642.83	11,385,778.81	453.70	7,085.24	45,208.55	760,849.55	9,328.80	165,042.32	35,678.75	595,807.24
Waste	3,520.57	51,546.07	1.94	30.30	204.69	3,444.95	42.30	748.28	162.39	2,696.67
Closing W-I-P (book)	43,237.80	633,061.93	(25.64)	(400.41)	14,768.76	248,428.73	1,085.90	19,209.38	13,682.86	227,219.37
Unaccounted (loss)/ gain	(17,540.00)	(256,810.16)	28.34	411.34	(12,954.76)	(215,772.04)	(593.90)	(10,505.97)	(12,360.86)	(205,266.07)
Closing W-I-P (physical)	23,697.80	376,251.77	0.70	10.93	1,814.00	30,656.69	492.00	8,703.38	1,322.00	21,953.31