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STRUCTURE OF PRODUCTION COSTS IN FOOTWEAR MANUFACTURE

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*This document has been prepared without formal editing.

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INTRODUCTION

Representatives of the leather-based industry – especially those involved in the leather products (footwear, leather goods, gloves, leather garment and sports goods) sub-sectors – have been quoting production (especially labour) costs as the main or the only reason for shifting these manufacturing capacities from industrialized to developing countries (or in other words: from North and West to South and East) during the past three decades. However only unreliable statistics on (industrial) wages paid to direct (manual) workers in various countries or regions of the world or statements made by businessmen and managers of multinational companies were available to support this reasoning. At the same time the world-wide development of the leather and its derived products manufacturing industry shows several instances contradicting this assumption: it is sufficient to mention Italy, South Korea and Portugal as counter examples.

The main *objective* of this survey is two fold: to clarify actual differences in direct manufacturing costs of footwear production in selected countries and to review the proportion of different cost components/structures in the case of comparable labour intensive products such as footwear and/or its upper. As styles vary considerably (mainly due to fashion and market demands) and systems of costing used in different parts of the world are far from being uniform, a common scheme of costing had to be established. This was based on more or less standard types of shoe styles and on a suggested, simple cost computation algorithm.

In 1999 UNIDO – relying on its contacts established through previous technical assistance projects, the Leather-based Industry Panel and personal contact – approached organizations (companies, associations and institutes) in 42 countries to seek their assistance in collecting information on cost components and/or actual costing sheets characteristic for or representing the local shoe industry. Finally data were received from the following 12 countries: Costa Rica, Czech Republic, Egypt, France, Hungary, India, Italy, Kenya, Mexico, the Philippines, Turkey, Ukraine and Zimbabwe. (According to UN classifications this corresponds to 2 industrialized, 3 transitional and 7 developing countries. The geographical distribution: Africa – 3, Asia – 2, Europe – 5, Latin America – 2.) Although in a strict statistical sense the limited number of data voluntarily submitted cannot serve as representative for the entire world, it is suitable for making some indicative conclusions regarding general trends governing the international trade of footwear.

All known (internationally active) footwear CAD suppliers were approached and offered the opportunity to demonstrate costing-related modules of their systems through real examples. Surprisingly only three companies responded – they deserve to be mentioned here: CLASSICAD SPOL. S R.O. (Czech Republic), DNT S.R.L. (Italy), SHOEMASTER/TORIELLI RAG. PIETRO & C.S.P.A. (Italy).

PRINCIPLES OF COSTING

All (industrial) activities are associated with costs – nothing comes free in a market economy environment. Production results (products) are the result of using inputs (plants, materials, labour, knowledge and information – frequently referred to as resources) and adding ideas and special features (e.g. design, brand, quality) of the manufacturer.

Terminology

According to general understanding **costs** are prices paid or required for acquiring, producing, or maintaining something, usually measured in money, time, or energy; expense or expenditure; outlay.[1] In industrial and economic contexts cost is a measurement, in financial terms it is the amount of scarce resources used for some purpose;[2] the amount of expenditure (actual or notional) incurred on, or attributed to, a specific thing or activity.[3] Like everyday perception, these definitions mention or imply that costs have a *monetary equivalence*, i.e. costs are normally expressed in financial terms.

Costs may be classified by their ***behavior*** as

- *fixed costs* do not change with the level of production (e.g. rents, insurances, salaries of certain executives);
- *variable costs* are in direct proportion to the volume of production (e.g. materials, wages, packaging);
- *semi-variable costs* increase or decrease as volume of production changes but not in direct proportion (e.g. sales ledger).[4]

In relation to products or services provided by a manufacturing company, costs may be

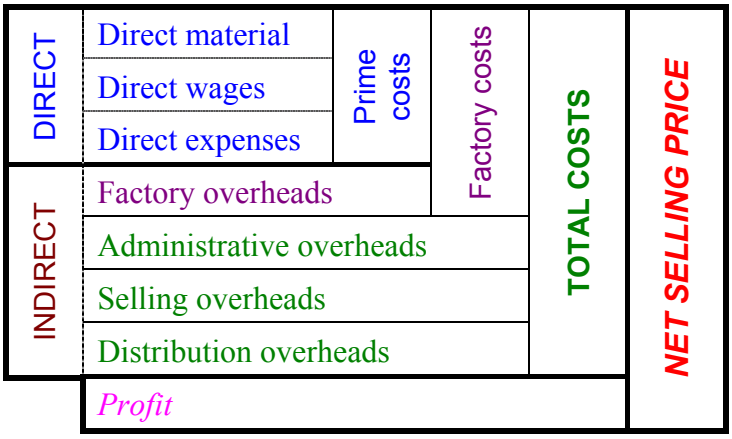
- *direct costs* can be identified with and allocated to products/units (e.g. materials, labour charges including related social costs, expenses such as lease of special equipment required for manufacturing certain products);
- *indirect costs* – often referred to as *overheads* or *burdens* – cover materials, labour and expenses which it is either impossible or inconvenient to charge direct to the product/unit (e.g. supervision, administration, maintenance, utilities).[2]

The **price** is the amount of money paid for products or services according to the set/agreed terms and as such is a marketing tool.[6] The selling price of a manufactured product consists of two items: its cost to the manufacturer and the manufacturer's profit.[4] *Net prices* do not include any taxes (e.g. Value Added Tax – VAT, sales tax) paid to governments or their agencies; *gross prices* include such taxes and/or handling or forwarding costs. In the case of commodities produced by the industry and supplied to customers – usually through various sale channels – prices are relative to partners participating in the actual transaction. The most frequently used variants are production or ex-factory, wholesaler, retailer, import and export (FOB, C&F, CIF, DDU etc.) prices. Prices may also include services provided to the buyer or ultimate user for a given period of time (e.g. installation, guarantee, repair and/or maintenance). Final prices and payment procedures along with delivery terms are usually agreed in negotiations with the buyer.

Subsidy is a financial aid supplied by a government to an industry for reasons of public welfare, the balance of payments, etc.; any monetary aid, grant, or contribution.[1] Such financial support may be provided to manufacturers or traders (wholesales, distributors or retailers), but in any case it distorts free competition and, therefore, it is not compatible with market economy.

If the result of an economic – including manufacturing – venture is positive, i.e. the revenues/income surpasses expenditures (costs), then ***profit*** is produced, otherwise the business produces *losses*. Both entrepreneurs and governments are interested in generating profit: the former to gain returns on their investments, the latter to collect (corporate) taxes. In market economy conditions, theoretically and indirectly, customers are also interested in profitability of all participants of the supply chain – manufacturers and traders – otherwise the given commodity would not be produced, supplied and available.

The *price and cost structure* has the following components:



Costing methods

Costing is the function – normally undertaken by administration and/or the management of manufacturing companies – to identify and compute occurring costs associated with production and related activities.[5] It is part of a much wider subject called cost accountancy.[4] The *cost accounting* system of any organization is the foundation of the internal financial information system[3] providing reports/statements on profit and loss accounts (incomes and expenditures), the balance sheet (the financial position of the organization or firm), sources and application of funds (cash-flow).[2]

Pricing is the act or decision when the offered price of a given product or service is determined by the supplier (manufacturer or trader = seller). In market economy conditions prices are set according to the assumed competitive market value of the product, i.e. in comparison with similar – in terms of their function and quality – products supplied by other manufacturers and/or traders. The competitive price is usually established at the retail level and deducting the estimated margins added by all parties involved in the factory–customer chain, derives the suggested ex-factory price.

Profit is the prime objective of manufacturing and trading. In order to ensure positive financial results, costing and pricing should be based on a thorough analysis of the cost components. Analytical cost computations may be related to

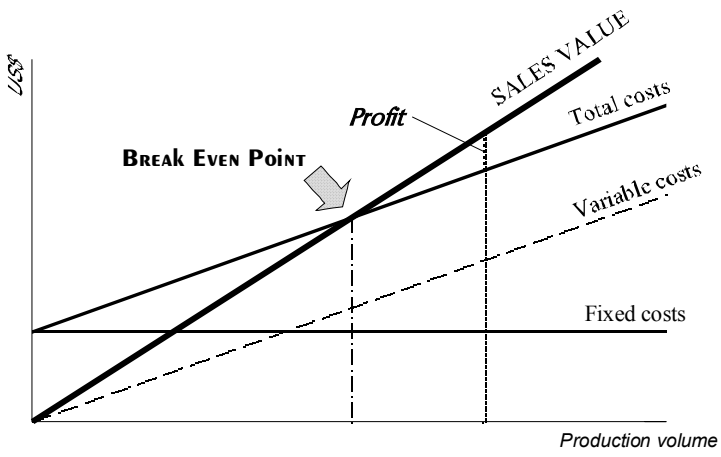
- the entire production: it is primarily used in opportunity and (pre)feasibility studies,[7] as well as by company management to find ways to reduce/eliminate expenses and increase the profitability of the operation [8];
- individual products (units): the objective is to compare their competitiveness, resources (material and labour/capacity) requirements, contribution to the overall profit or loss made.

An example of *production costing* for 400,000 pairs/year = 1,600 pairs/day men shoe manufacturing is shown in the following table:

Component	*US$*
Materials	4,057,500
Labour	90,000
Electricity	60,000
Fuel	15,000
Repair and maintenance	50,000
Factory overheads	108,000
FACTORY COSTS	*4,380,500*
Administrative overheads	310,000
Sales costs	25,000
Distribution costs	324,000
OPERATING COSTS	*5,039,500*
Interests	192,000
Depreciation	128,000
PRODUCTION COSTS	**5,349,500**

Production costs and their relation to sales revenue may also be presented in graphic form. Such an approach provides an opportunity to analyze the impact of production volume on profits produced by the company (sensitivity analysis).

Profit = **S**ale - (**F**ixed + **V**ariable)



Product costing is usually made at two stages in manufacturing companies: before production or sale (pre-production costing) and at the end of the fiscal year or plan period (post-production costing). The typical structure of a costing sheet is presented below:

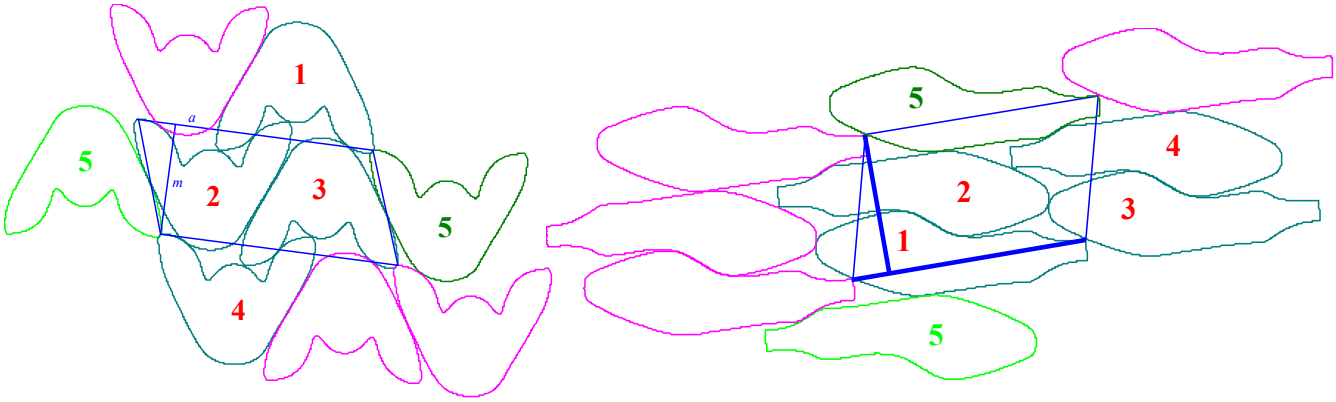
Component	Value	Unit	US$
Direct material			7.16
Direct labour	83.0	min	1.58
Wage allowances	24.6	%	0.39
Social costs	43.1	%	0.85
Leasing costs			0.00
Manufacturing overheads	37.6	%	0.74
Factory costs			*10.72*
Administrative overheads	176.0	%	3.47
Depreciation			0.17
Allowances for reject	1.7		0.18
Sales costs			0.33
Production costs			*14.87*
Profit	8.5	%	1.26
Ex-works price			***16.13***
Freight/Insurance			0.87
Financial costs	1.2	%	0.20
CIF (Export) PRICE			**17.20**

Material costing

Materials are direct inputs mainly procured for the product(ion), so the cost of each component or their groups (e.g. upper, lining) is computed as a product of the requirements and the corresponding unit prices. Cost of components cut from sheet materials such as genuine or simulated leather, textile/canvas, rubber, card or leather-board should also include waste occurring due to the configuration of patterns (first waste), the differences in edges of components and materials (side or second waste) and imperfections in the genuine leather (fault or third waste).

Assessing the required genuine leather for a specific style is normally done by determining the so-called parallelogram area (see examples below) comprising the net pattern area and the unavoidable waste among the patterns which is called *first waste*. Special algorithms (e.g. SLM – Scientific Leather Measurement, Shusterovich's method) exist for computing *side waste* for genuine leather, while standard percentages are used for estimating side waste in the case of man-made materials. *Fault wasts* depends on the quality (grade) of the genuine leather.

Some components (e.g. buckles, eyelets, heels, unit soles) are built into footwear construction without any (substantial) modification. Nevertheless, the rate of rejects in supply should be taken into consideration when their costs are added to direct materials.



Labour costing

Direct labour costs are proportional to the time used to perform all operations of the entire technological process. Usually standard times (norms) are allocated for each operation on the basis of time studies (industrial engineering).[8] The total time needed to produce a given style multiplied by average wages paid to operators in the company (plant) gives direct labour costs.

SURVEY OF PRODUCTION COSTS

Basic assumptions

Shapes (aesthetics features, form) and constructions (material composition, physical properties) of products (styles) manufactured in various countries reflect the characteristic trading pattern influencing the shoe industry sub-sector (e.g. export orientation, protection of the local market). In addition the structure of production and subsequently the product range also depends on some special conditions such as climate, availability of basic materials from local sources, purchasing power of the local population, government interventions (e.g. orders for military footwear, regulations on children shoes). Nevertheless certain types of shoes – in spite of minor formal differences – become standard products manufactured almost everywhere in the world: they offer themselves as suitable objects for comparing production costs.

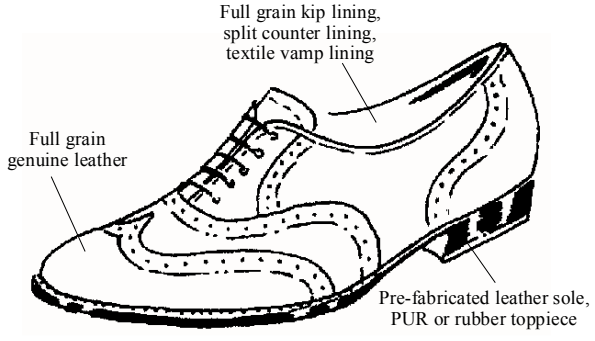
Based on such reasoning two products - Oxford men shoes and ladies athletic (sports) shoes - were chosen for the survey. They feature relatively high labour content, offering good opportunities for producing them in developing countries where wages and related costs are considerably lower than in the industrialized world. International statistics available on shoe production and trade prove the validity of this assumption [9].

In order to secure the cooperation of the companies ready to supply such sensitive and in fact to a great extent confidential data as production costs, no information was requested regarding prices and profits. This approach also promised an opportunity to collect real (reliable, free of "cosmetics") data.

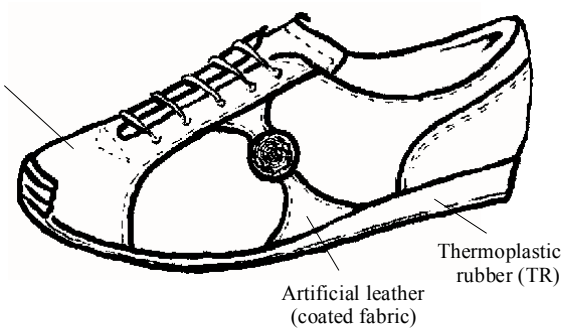
Shoe specification

The specification below was prepared to orient those from whom data were requested on actual cost components, whereby they could use similar products manufactured earlier as the source of information.

OXFORD - Size 42 French point = English size 8 = 280 mm



ATHLETIC - Size 37 French point = English size 4 = 235 mm



A letter (*Annex 1*) was drafted and sent to 36 institutions and companies to request their assistance in supplying information needed for the international comparison. In addition the 16 regular and 6 honorary members of the UNIDO LEATHER AND LEATHER PRODUCTS INDUSTRY PANEL were approached for assistance in data collection. Finally several persons and/or organizations were contacted using personal relationships for the same purpose.

Costing guidelines

Beside the written request simple guidelines in the form of the following table were offered to clarify terminology and to help in collecting data.

Parameter	*Unit*	*Value*	*Explanation*
Average wage	$/hour		Average wage of direct labour
Wage allowances	%		Bonus, premium etc. paid to direct labour: % of wages
Social costs	%		Insurance, taxes: % of wages + allowances
Leasing costs	$/pair		Leasing and royalty costs
Other (special) costs	$/pair		Special costs not included in other components
Manufacturing overheads	$/pair		Electricity, lighting, supervision, maintenance at floor shop
FACTORY COSTS	$/pair		Costs occurring at floor shop level (proportional to production)
Administrative overheads	%		Administration/management: % of direct labour + allowances
Depreciation	$/pair		Plant (building, equipment) amortization
Allowances for rejects	%		Production losses, wastes, rejects: % of factory costs
Sales costs	$/pair		Costs of local/domestic sales/distribution

ANALYSIS OF PRODUCTION COSTS IN SELECTED COUNTRIES

Database

Although the majority of costing sheets were collected or made in operational shoe manufacturing companies, as promised their names will not be revealed either in this survey, or at any later stage. Some countries (e.g. India, Mexico) supplied several costing examples from different firms: in such cases the most complete ones were used.

In spite of the simple yet fairly exact specifications and instructions on cost structure, the costing sheets received from twelve countries are far from being uniform. However, after grouping cost components it was possible to establish a more or less uniform cost structure which is compatible to most of the costing sheets received.

In case of Oxford men shoes only two specifications could not be used at all and one appeared to be useful only for analyzing direct costs. Styles for which costing data were supplied are similar: all uppers are made of full grain genuine leather, but soles vary from genuine leather to PUR and PVC units.

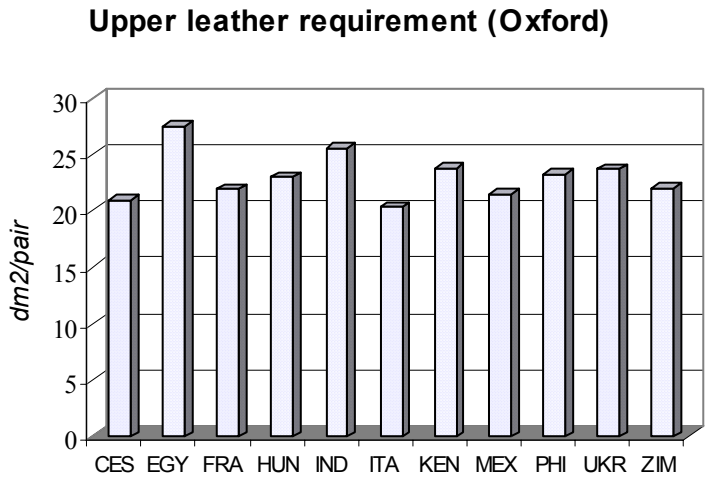
Contrary to expectations only six costing sheets made for sports (athletic) footwear appeared to be complete enough for the present survey. Here styles, constructions, upper and sole materials vary considerably; therefore, the comparison of these six examples should be assessed with special care.

Numeric data serving as the basis for creating the following graphs are given in table form in *Annex 2*.

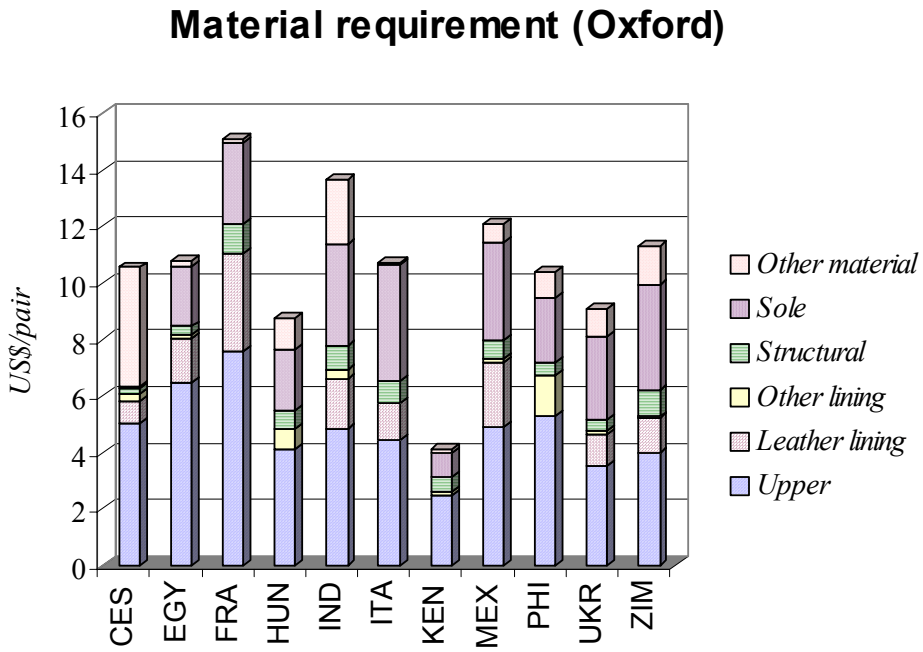
Material requirement

In the case of Oxford shoes the requirement of genuine upper leather for uppers is fairly similar in different countries (see figure next page): the lowest is 21.5 dm^2/pair (Italy), the highest is 25.6 dm^2/pair (India). Though the range of absolute values might seem somewhat wide (54.1 dm^2/pair), but the low relative value (16%) indicates that the variance is probably due to differences of leather grades and usable surfaces applied by suppliers of data.

A comparison of basic materials used for uppers of athletic footwear was not possible as styles were so different and no detailed information was available on the types of materials.

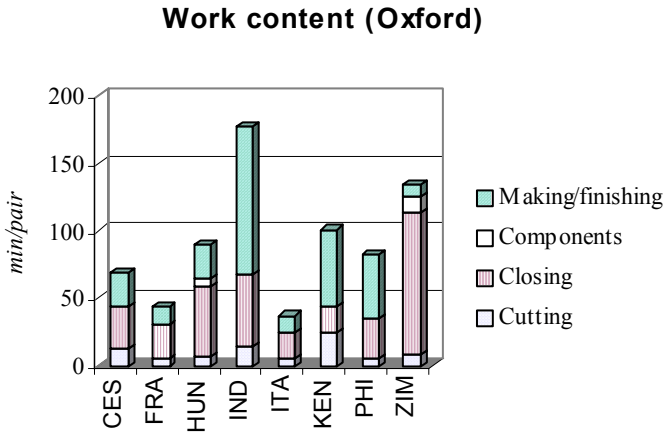


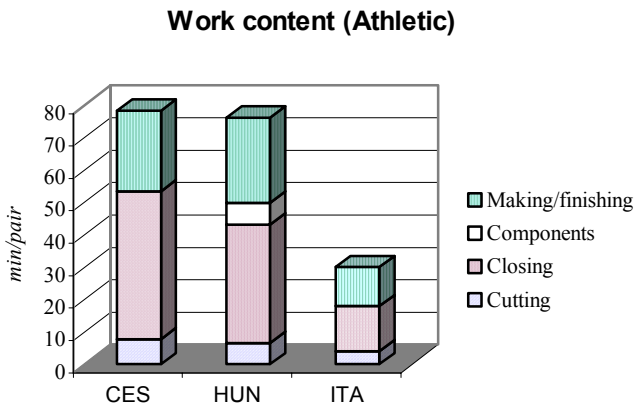
Regarding costs of materials used for various parts of shoes and total (direct) material costs, the differences are more visible. One of the reasons is that shoes produced in developing countries are made with unit soles (PUR or even PVC), while products with genuine leather soles – as specified in the request (like the costing received from Italy) – show a higher share of this bottom component. The material costs are very low in Kenya: interestingly enough other African and Asian countries reported minimum double material costs. (*Remark:* structural components include insole and shank, stiffener and toe-puff.)



Labour costs

Labour costs are proportional to *work content*, i.e. to the amount of human work needed to accomplish all operations of the technological process (this is the natural consequence of applying the piece-work system almost everywhere in the world). The complexity of the shoe construction is measured in standard time (in minutes – STM) allocated for the entire set of operations.





Both men's dress (Oxford) and athletic shoes feature a high share of closing (upper making) operations – it is a well-known phenomena. Apparently – and quite surprisingly – in developing countries the amount of direct labour (time) used for assembling (lasting, making/soling and finishing) is higher than that for upper manufacturing (Zimbabwe is an exception). The overall work content is extremely high (in the case of India it may even be considered as unjustified) in developing countries: it is probably because of the lower level of mechanization and the large number of checking and cleaning (i.e. none-productive but manual) operations. Industrialized countries use far less time to produce both types of footwear due to high wages and extensive use of (prefabricated and purchased) components. Countries in transitional economies (formerly they were referred to as "centrally planned economy countries") occupy an intermediate position in this respect.

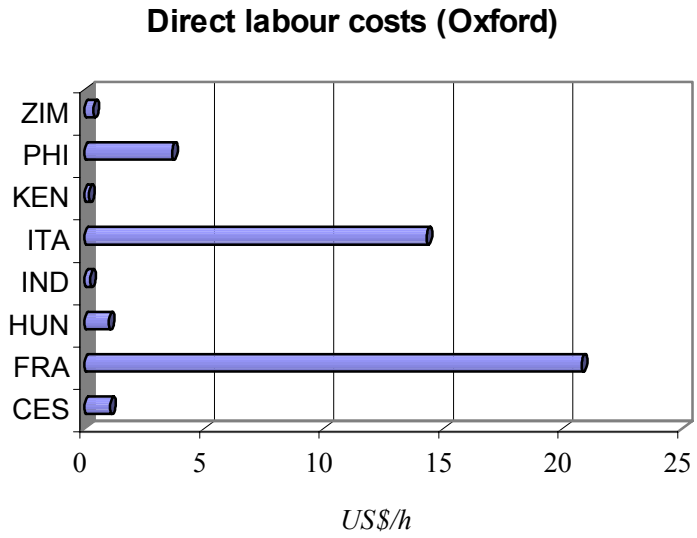
Labour costs are normally composed of three major components:

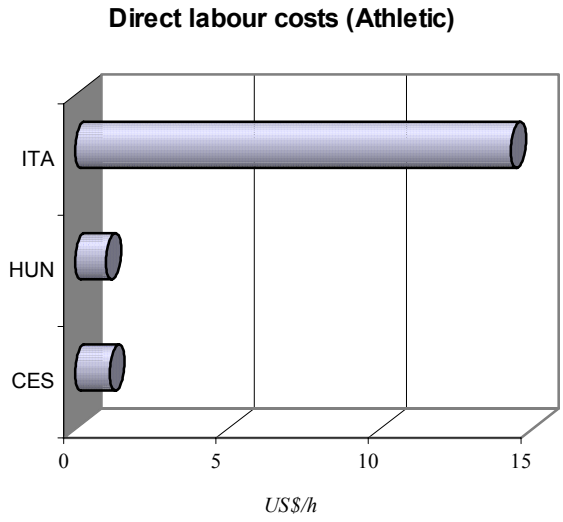
- *direct labour costs:* the financial value of operators' (workers') time used for producing one pair of the given style within the given plant conditions which is computed by multiplying the allotted or used time [min/pair] by wages [$/min];
- *wage allowances:* bonuses (e.g. for quality, overtime), additional salaries (e.g. 13th and 14th month), transportation and/or housing contribution;
- *labour charges* or *social costs:* paid by employers to governments and/or various funds in proportion to the payroll (e.g. health insurance, pension fund).

It is worth quoting wage allowances and especially social costs to be paid in selected countries. The following list is based on information supplied by respondents within this particular survey (percentages [%] are of gross salary/wage paid to employees):

Egypt:	26% – contribution to health insurance and pension fund of employees.
Hungary:	33% – social/health security, 3% – unemployment fund, 1.5% – professional education levy, 3,600 HUF/employee/month = US$ 15.05/employee/month – health insurance.
India:	4.75% – health insurance.
Italy:	45.2% – health+pension+unemployment insurance, 8.33% – additional (13th month) salary.
Philippines:	8.33% – additional (13th month) salary.
Ukraine:	37.5% – social security.
Zimbabwe:	15% – wage allowances, 7% – pension/own scheme, 2.9% – pension/national scheme, 3% – medical aid, 2.14% – manpower training levy.

Taking into consideration all these components (wherever they were available from data received) and the actual wages paid, workers' time costs generally referred as *unit direct labour costs* can be computed. The longer time used for manufacturing a pair of shoes is not only compensated by the very high wages (and their surcharges) paid in industrialized countries, but the unit labour costs remain far above those in developing countries. The following figures clearly demonstrate these differences: while one operator-working hour costs (still without overheads) US$20.70 in France and US$14.30 in Italy, the same comes to around US$ 0.20 – 0.40 in developing countries (the Philippines are an exemption which is difficult to explain), while one worker's hour costs about US$1.00 in transitional countries. (*Remark:* reported actual exchange rates applicable at the time of submission of costing information were used for computing equivalents in US$.)

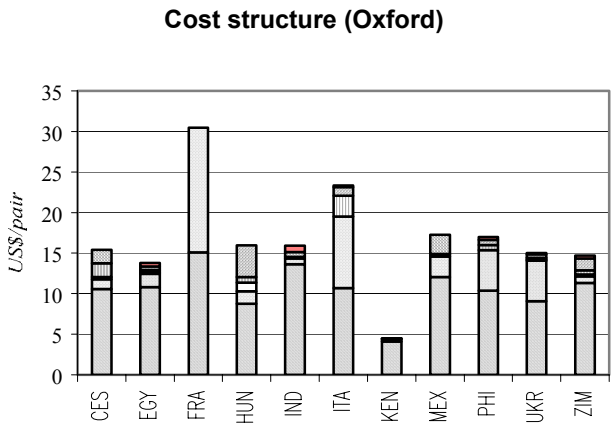


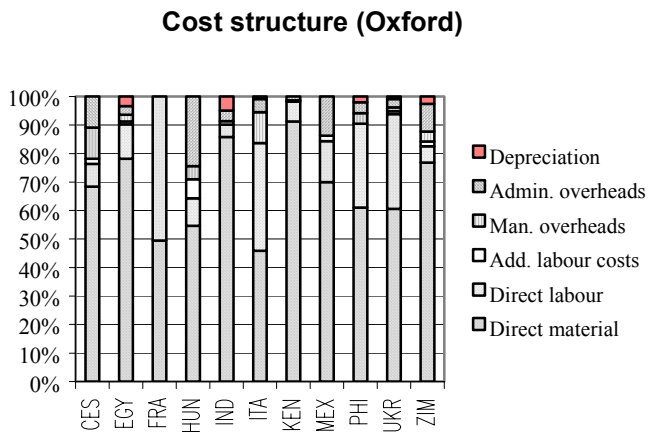


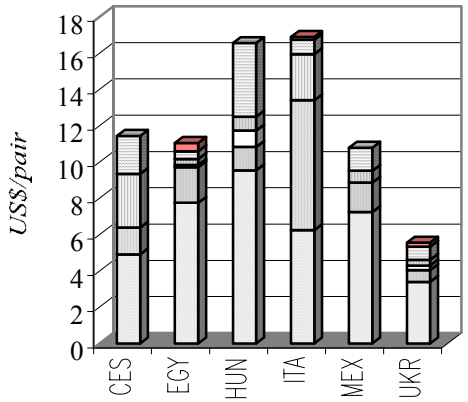
It interesting to note that – at least in case of the three countries for which costing information are available for both types of footwear – there are hardly any differences between unit direct labour costs paid when manufacturing higher quality (Oxford) or cheaper (athletic) shoes.

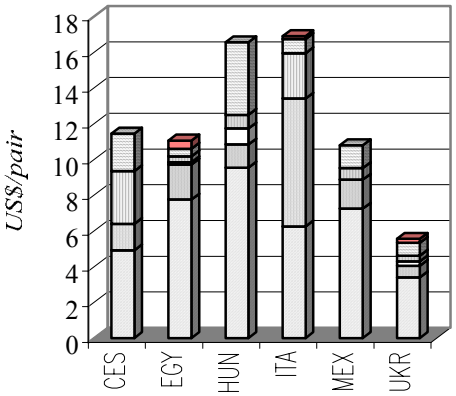
Production cost structure

Total production costs were computed as the sum of direct (material and labour) and indirect (overhead) costs: the results are presented by the following graphs.



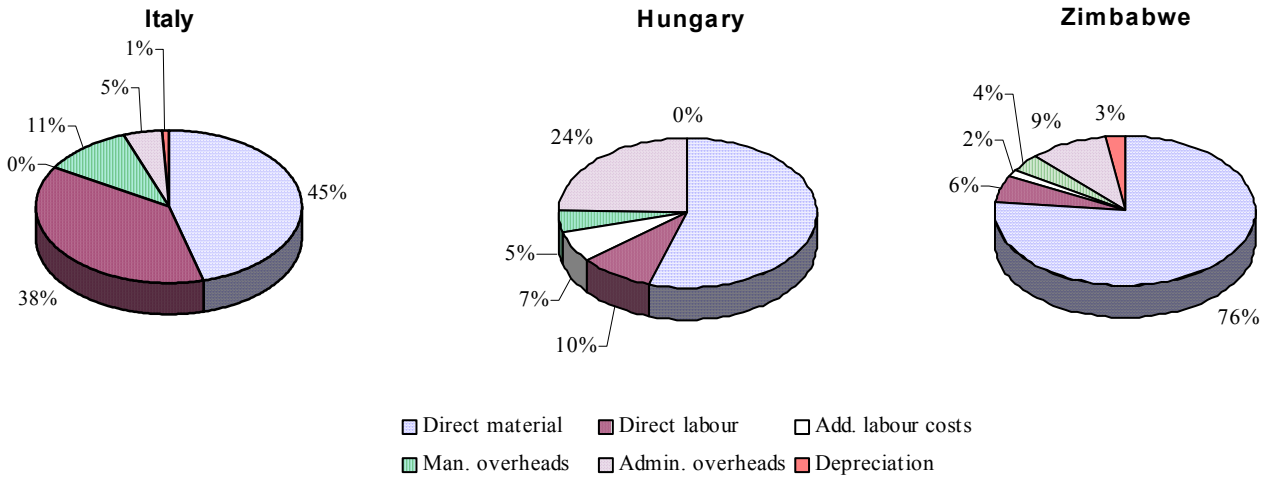






In spite of the enormous discrepancy between direct labour costs computed for different countries total production costs (in fact ex-factory prices less profit) show much less variation. Obviously production of quality (Oxford) shoes is most costly in France: only direct material and labour comes to US$30.45/pair – more than total costs in Italy (US$23.33/pair). Total production costs of men dress shoes manufactured in Czech Republic, Egypt (!), Hungary, India (!), Mexico, Philippines (!!), Ukraine (!!) and Zimbabwe (!!) are fairly close to each other: they range between US$12.81/pair and US$17.27. (Data received from Kenya – US$4.51/pair – seems unrealistic.)

It is interesting to compare the cost structures of three different countries such as Italy (industrialized), Hungary (in transition) and Zimbabwe (developing). In Italy labour costs make up 38%, in Hungary 10% and in Zimbabwe only 6% of the total production costs. Materials make up more than half the total costs in Hungary and Zimbabwe: that is why companies in transitional and developing countries prefer job work. The high share of administrative overheads in Hungary shows that countries in transitional economies retain management practice adopted when they had centrally planned economy systems.



Actual total costs depend on material costs. Living conditions have improve everywhere in the world (compared to the past), wages and salaries show an increasing trend. The history of the shoe industry observed in emerging countries during the last 20-30 years proves that labour costs are also increasing. Production of footwear – especially due to slow technical development in upper making – remains one of the labour intensive operations. Therefore entrepreneurs will look for cheaper opportunities, i.e. countries and/or regions where wages are lower.

Prices

Although it was not the objective of this survey to deal with price structures (and thus with profits), nevertheless some information could be collected in this respect.

Prices and costs are no doubt related, but the margin between them may vary according to specific economic conditions and objectives of business. Certain styles or products may not produce any profit (some of them may even cause losses) in financial terms, but they are manufactured to absorb overheads, to keep contacts with important clients, to sell other styles bringing good profits and/or to serve other business objectives (e.g. market promotion).

Profit is the real secret of business, so it is almost impossible to get reliable data in this respect. (Of course several consultants and institutions – including UNIDO – have been involved in projects dealing with feasibility studies and/or marketing production management whereby such information was used, but they are property of the assisted ventures and cannot be disclosed.) It is estimated that within normal circumstances and in a competitive market environment free of distortion (e.g. protection, subsidy) footwear manufacturing companies are making a profit on common types of shoes about 7-10% relative to sales (ex-factory) prices.

COSTING PRACTICES

Data acquisition for costing

Consistency of any kind of calculations depends basically on the reliability of input data. The following key elements interpreted or used improperly may result disappointing results:

a) Direct material costs

- There is no optimum parallelogram, i.e. first waste determined manually depends on the skills and experience of the technologist or on the algorithm used by the CAD system.
- Third waste is directly related to grading of leather, which is based on subjective judgment of the quality checker, so it is a good practice to grade incoming genuine leather in the shoe factory according to internal standards.
- Unit prices of materials and components kept in stock relatively long should be adjusted regularly to actual purchase prices and to inflation.

b) Direct labour costs

- Work content should be based – to the extent possible – on time studies (STMs).
- Bonuses (e.g. for quality, material savings) and additional payments made to direct labour should be taken into consideration.
- Only payments proportional to wages and paid by the employer/company (e.g. social security) should be added as labour surcharges.

c) Overheads

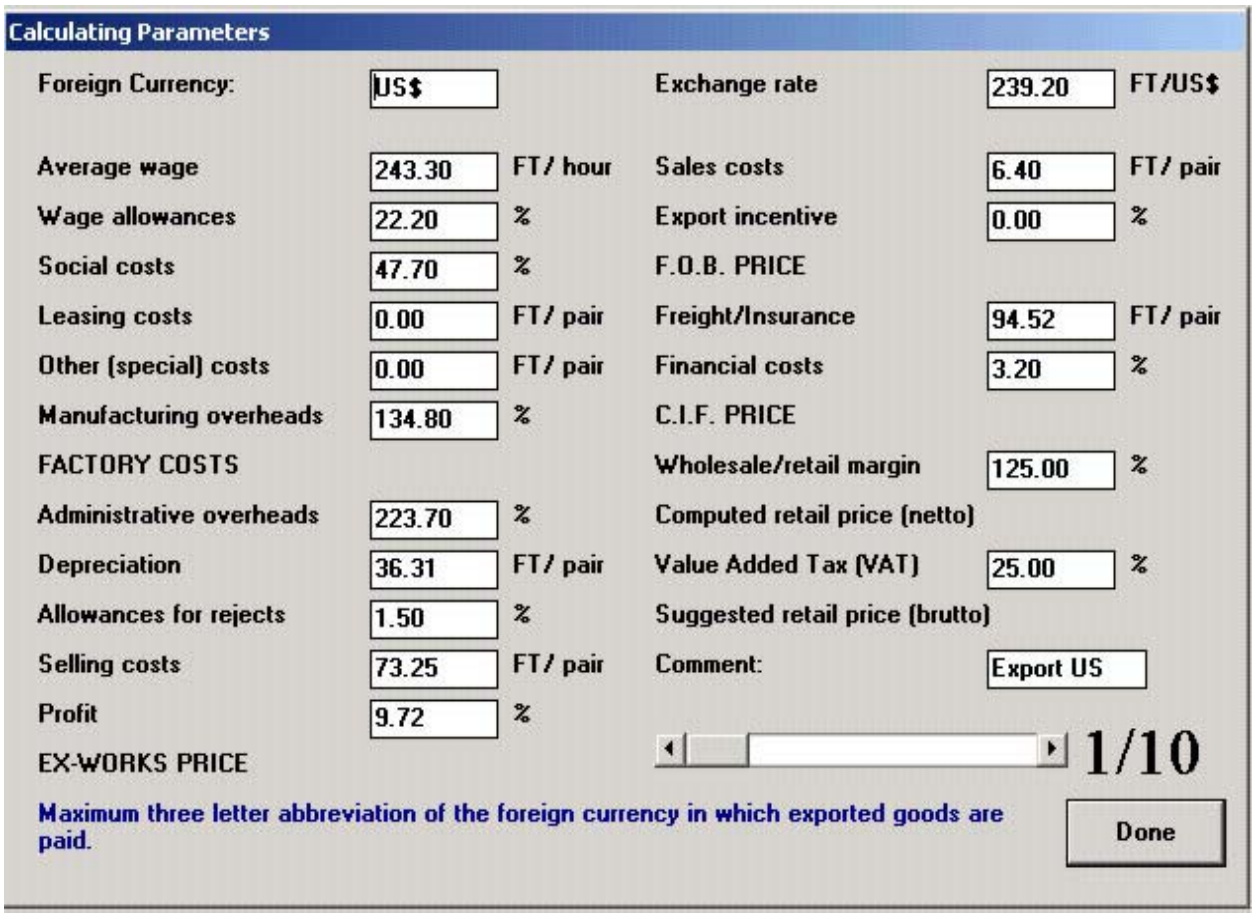
- Factory costs (including salaries and surcharges paid to supervisors/foremen, quality controllers, technicians etc. attached to production units/lines) should be separated from general or administrative overheads.
- It is worth separating depreciation from other types of overheads.

Costing computation

Costing involves fairly simple arithmetic calculation: computing overhead shares and adding cost components. Fairly good schemes can be implemented using simple spreadsheet programs (e.g. ©MS-Excel, ©Lotus-123). All footwear CAD systems available on the market today have integrated functions or related program packages dealing with costing (e.g. ©ShoeMaster Costing+, ©Gestor). There are special programs made for doing nothing but costing and price setting. The majority of them were tailor-made to specific companies or (small) businesses – in many cases as part of the production control, accounting or financial systems – and are not marketed.

The following figures demonstrate the main functions of a stand-alone program (©ShoeCost) made by TECHNORG CONSULTING primarily (but not exclusively) for small-scale shoe manufacturing units. It needs standard personal computers (PC) and runs under ©Windows operating system.

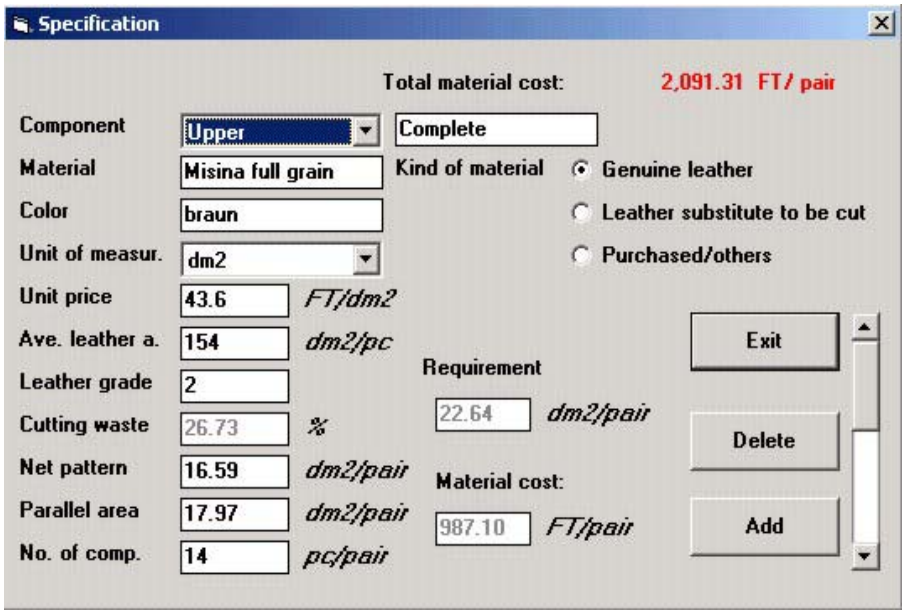
The program stores (on disk) some standard data, named *costing parameters,* which is used for costing individual styles (products) during a certain period of time. Altogether ten (10) sets can be stored and selected freely for actual costing.



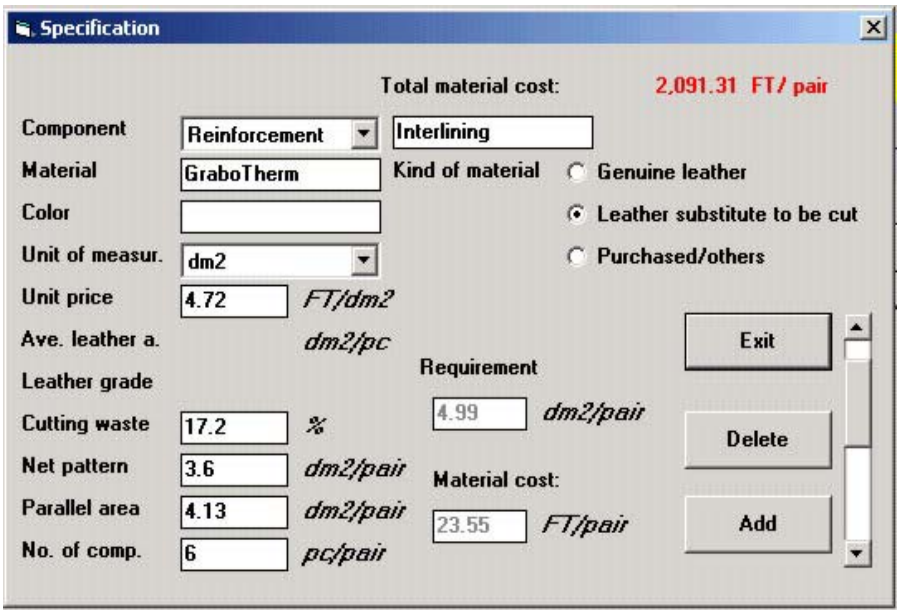
Similarly *cutting value* (= 100% – fault waste) of different grades of genuine leather are also stored and used as standard inputs:

Materials are entered by components (or their homogenous groups such as upper, lining etc.) together with their parameters (e.g. measurement unit, size, grade, unit price). The program distinguishes three kinds of materials:

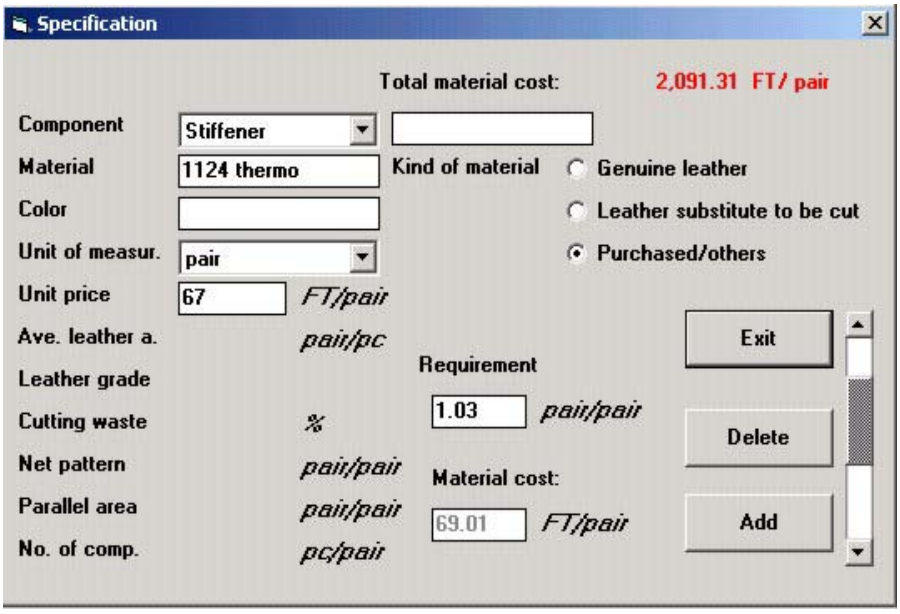
a) genuine leather;



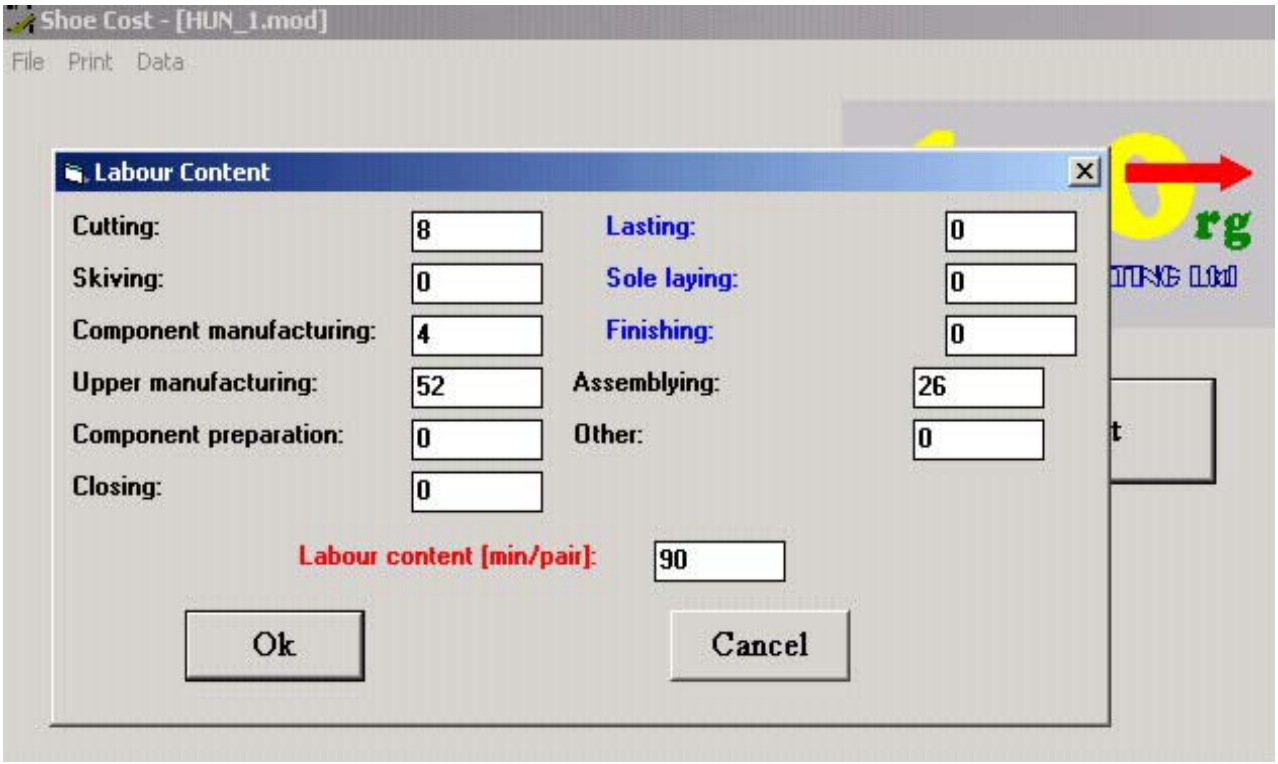
b) leather substitute to be cut in the shoe manufacturing plant (e.g. textile, rubber, leather board);



c) purchased (e.g. unit soles, laces, thread).



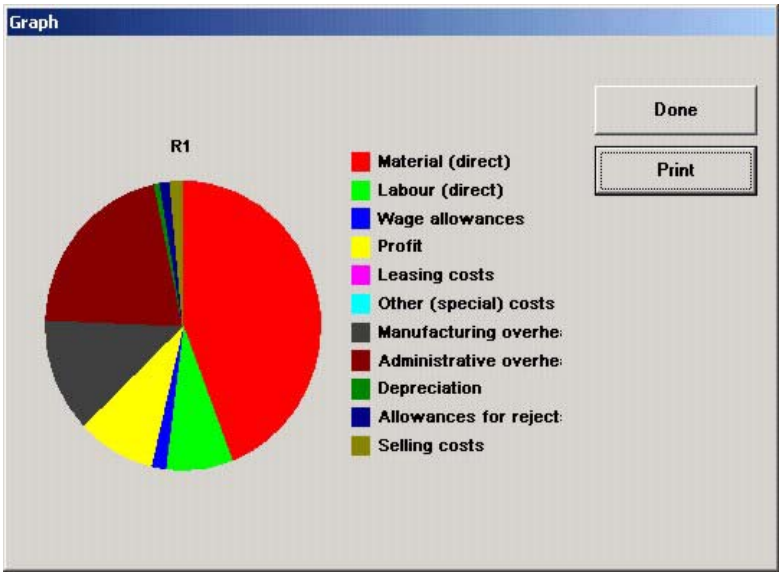
Work content can be entered by major phases of production (e.g. cutting, upper making, lasting, finishing) or as a global capacity requirement in STM. (The following picture shows the program interface behind the actual data entry window.)



Actual costing computation starts with using standard costing parameters, recently entered direct material and work content data. The program produces the initial costing sheet and shows its main components together with eight possible ways to intervene.

By pressing any of the eight buttons on the left margin of the screen the respective cost component can be changed. If direct material or labour costs are changed, the program returns to the component specification or the work content window whereby any of the actual data (e.g. material unit price, net/parallelogram area) can be modified. Any changes made will initiate automatic recalculation of the costing sheet. The new variant is produced and shown on the screen. Each change is numbered and can hold a one-line comment to remind the operator of the reason or action taken. The screen always shows three variants: the result of the most recent calculation (left) or browsed selection, the one resulting in the lowest price and the one resulting in the highest profit (in absolute monetary terms). Thus the program is not only generating costing information; it computes prices of different natures and its interactive engine can also be used in price negotiations.

One of the useful features of the program is to illustrate cost and price components in a graphical (pie-chart) form.



Sample printed costing reports produced by the TECHNORG ShoeCost program are enclosed in *Annex 3*.

CONCLUSIONS

Costing is an inevitable function when building product ranges, analyzing competitiveness, establishing a pricing policy, evaluating products (styles) manufactured and marketed in the past (e.g. during the last season, year). This activity may look like part of the financial control of the business, in reality it is very closely related to technical aspects of the manufacturing process. No producer entering into (free) markets can afford to base his decisions with regard to product development and sale on guesses or rough estimates. Success of shoe (and other leather-based products) manufacturers in developing countries depends on how careful they are in reducing their production costs and in selecting feasible styles for sales.

The survey, in spite of its obvious limitations, proved that manufacturing costs are important reasons for shifting footwear manufacturing capacities toward countries where wages – as a substantial cost component – are lower. At the same time it also became apparent, that low direct labour costs alone do *not* attract the interest of brand owners and distributors. Similarly (if not even more) significant factors govern decisions of investors and especially large multinational companies which turned from producers into traders on sourcing their shoes from developing or transitional countries.[10] Such aspects include:

d) physical and financial infrastructure;
e) conditions of the local labor force (discipline);
f) industrial climate and supporting administration;
g) actual fashion and market trends;
h) international logistics.

Although data collection on footwear costing from a wide range of countries and operations is an extremely difficult task, nevertheless further surveys dealing with overhead calculation, use of various computer programs and integration of costing into technical and marketing activities – especially in developing countries and in small-scale businesses – promises additional interesting information. UNIDO is probably the only (international) organization featuring independence (thus impartiality and reliability) and widespread contacts in a large number of countries, which qualifies it to undertake such research.

References

[1] Collins English Dictionary and Thesaurus (version 1.5). ©WORDPERFECT CORPORATION 1992-1994. (Based on Collins Dictionary – Third Edition, ©HARPERCOLLINS PUBLISHERS 1979, 1986, 1991 and Collins Thesaurus in A-Z Form, ©HARPERCOLLINS PUBLISHERS 1984.)

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[3] *T. Lucey:* Costing (Fourth Edition). DP PUBLICATIONS LTD., London, 1993.

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[10] *F. Schmél:* UNIDO-Bricht zur Zukunft der Leder- und Schuhindustrie: Money Makes the World Go Round. SCHUH-TECHNIK, 1998, No. 11-12, p. 38-43. (UNIDO Report: The Changing Orientation. SHOES AND MORE [SAM], 1999, No. 1, p. 6-13.)

Annex 1

TEXT OF THE REQUEST FOR COSTING INFORMATION

SUBJECT: Shoe Production Cost Analysis

Dear ….

We are in the process of preparing the 14th Session of the UNIDO LEATHER AND LEATHER PRODUCTS INDUSTRY PANEL to be held in Istanbul, Turkey, 6-11 September 1999. (The LEATHER PANEL is an advisory body to the UNIDO Secretariat. Its 20 regular and 6 honorary members represent government offices, private entrepreneurs, institutes, manufacturers, professional associations, UN specialized agencies, and international organizations active in leather processing, footwear and other leather products manufacturing in 22 countries of the world.) One of the agenda items of the forthcoming meeting is to compare actual production costs of shoe manufacturing in various regions of the world and review economic factors promoting or hindering the production of footwear in different countries. UNIDO is now collecting information to prepare the respective survey.

Men's casual and sports shoes constitute the majority of footwear (or their uppers) produced in and exported by developing countries. In order to make the cost evaluation consistent, two basic styles have been selected (see attached sketches). The two styles are relatively standard so it is hoped that very similar products can easily be found in a wide range of countries/companies. Our intention is to request selected companies/plants to provide us either with the cost of the two attached styles or with the costing of a similar style from their own range.

I would appreciate it if you could obtain the following data for the two types:

a) style drawing/sketch or photo (if existing styles are used and they are different from those shown on the enclosed specifications);
b) list of components and materials used to manufacture that particular style;
c) material requirement of one pair by components;
d) unit price of materials/components used;
e) labour content (in seconds or minutes) required for producing these particular shoes (if possible/available by main phases such as cutting, closing, bottom-stock preparation, lasting + making, finishing) and or the cost of direct (physical) work.

With regard to costing, we would like to receive information in the following structure:

- direct labour (wages paid to workers),
- wage allowances (bonus, premium etc. paid to workers on top of wages - e.g. for quality),
- manufacturing overheads (electricity/utilities, lighting, supervision, maintenance, cleaning etc. occurring on the shop-flow level),
- administrative overheads (administration, management, communications, promotion, marketing etc.),
- depreciation (plant - including building, equipment),
- other costs (not indicated above, e.g. royalties, rent).

All the above costs (components) are related to the two sample products. In addition, we would like to have an indicative list of tax (i.e. payments made to the government, local authorities), which are paid:

a) by the employees out of the (gross) wage/salary received from the employer (company) for the job done (e.g. health/unemployment insurance, pension fund);
b) by the employer (company) besides wages/salaries (e.g. health/unemployment insurance, legal).

Finally, we would like to know the size of the company from which this information was collected (e.g. daily production or number of employees) as well as the actual exchange rate of the local currency to the US dollar.

We are ***not***, repeat ***not***, interested in the name of the company where the above data is coming from - even if we know we will never make any reference to it. As you can see, we are not interested in any company secrets and whatever data we receive will be handled confidentially regarding the source.

I appreciate the problems and workload associated with getting the requested information. In order to assist you in collecting the relevant information and clarifying practical questions, I could come for 1-2 days sometime in June or July and visit the actual source of the information (perhaps together with you). For this I need an indication from you as soon as possible so I can make the necessary travel arrangements.

In return for your efforts and those of the immediate source of information (i.e. selected company), I would give you a copy of the survey made on the basis of the data collected and the information on the outcome of the discussions held during the LEATHER PANEL meeting.

I am fully aware that my request is unusual and requires a great deal of effort from you. I would, therefore, be very grateful if you could assist us in collecting this data and compiling a comprehensive survey which may be of assistance to the world footwear trade in assessing the recent developments in global trade and make decisions regarding future trends. An early e-mail message or fax reply to this request would be greatly appreciated - whether you contribute to this issue or not.

Thanking you in advance for your kind assistance and cooperation in this matter, I remain

Sincerely yours,

Ferenc Schmél
Industrial Development Officer
Agro-Industries and Sectoral Support Branch, Leather Unit
Sectoral Support and Environmental Sustainability Division

Annex 2

NUMERIC INFORMATION COLLECTED ON FOOTWEAR COSTING

Genuine leather used for Oxford-type shoe upper

Country	*Abbreviation*	*dm2/pair*
Czech Republic	CES	20.86
Egypt	EGY	27.41
France	FRA	21.88
Hungary	HUN	22.93
India	IND	25.55
Italy	ITA	20.30
Kenya	KEN	23.78
Mexico	MEX	21.50
Philippines	PHI	23.23
Ukraine	UKR	23.64
Zimbabwe	ZIM	22.00

Cost of shoe components

Oxford
US$/pair

Material	CES	EGY	FRA	HUN	IND	ITA	KEN	MEX	PHI	UKR	ZIM
Upper	5.00	6.47	7.58	4.12	4.81	4.46	2.45	4.88	5.31	3.55	4.00
Leather lining	0.78	1.56	3.44		1.78	1.26		2.30		1.11	1.20
Other lining	0.30	0.13		0.71	0.32		0.14	0.13	1.39	0.11	0.05
Structural*	0.18	0.30	1.09	0.65	0.86	0.79	0.53	0.66	0.50	0.40	0.95
Sole	0.05	2.12	2.83	2.17	3.57	4.13	0.83	3.46	2.25	2.91	3.73
Other material	4.24	0.22	0.14	1.09	2.31	0.06	0.16	0.65	0.92	1.00	1.37

** Remark:* Structural includes insole, shank, stiffener and toe-puff.

Work content

Oxford *min/pair*

	CES	FRA	HUN	IND	ITA	KEN	PHI	ZIM
Cutting	12.21	5.70	7.20	14.00	5.00	24.00	5.00	8.75
Closing	31.72	25.10	51.84	53.00	20.00	19.20	30.00	105.17
Components			5.34					10.92
Making/finishing	24.56	13.55	25.52	110.00	12.00	57.60	47.00	8.83
Total	**68.49**	**44.35**	**89.90**	**177.00**	**37.00**	**100.80**	**82.00**	**133.67**

Athletic *min/pair*

	CES	HUN	ITA

Cutting	7.81	6.57	4.00
Closing	45.68	36.63	14.00
Components		6.74	
Making/finishing	24.80	26.23	12.00
Total	**78.29**	**76.17**	**30.00**

Production costs

Oxford

US$/pair

	CES	EGY	FRA	HUN	IND	ITA	KEN	MEX	PHI	UKR	ZIM
Direct material	10.55	10.80	15.08	8.74	13.65	10.70	4.11	12.08	10.37	9.08	11.30
Direct labour	1.22	1.67	15.37	1.53	0.71	8.82	0.31	2.49	5.00	5.00	0.84
Add. labour costs	0.28	0.13		1.07				0.32		0.15	0.24
Man. overheads	1.69	0.33		0.74	0.18	2.54	0.02		0.63	0.20	0.52
Admin. overheads	1.67	0.42		3.90	0.60	1.06	0.06	2.38	0.63	0.44	1.44
Depreciation		0.46			0.78	0.21			0.35	0.13	0.37
Production costs	**15.41**	**13.81**		**15.98**	**15.92**	**23.33**	**4.51**	**17.27**	**16.98**	**15.00**	**14.70**

Athletic

US$/pair

	CES	EGY	HUN	ITA	MEX	UKR
Direct material	4.91	7.75	9.54	6.25	7.24	3.39
Direct labour	1.48	1.96	1.29	7.15	1.62	0.65
Add. labour charges		0.13	0.90			0.25
Man. overheads	2.95	0.33	0.77	2.54	0.65	0.32
Admin. overheads	2.10	0.42	4.05	0.79	1.27	0.72
Depreciation		0.46		0.16		0.22
Production costs	**11.44**	**11.05**	**16.55**	**16.89**	**10.78**	**5.55**

US$/min

Country	*Abbrev.*	*Direct labour costs*	
		Oxford	Athletic
Czech Republic	CES	1.07	1.13
France	FRA	20.79	
Hungary	HUN	1.02	1.02
India	IND	0.24	
Italy	ITA	14.30	14.30
Kenya	KEN	0.19	
Philippines	PHI	3.66	
Zimbabwe	ZIM	0.38	