Technical Meeting for Special Surveys and National Accounts of the International Comparison Program

Construction and Civil Engineering

Statistics Division ECLAC







ICP Classification

1000000	GROSS DOMESTIC PRODUCT	GDP	
1500000	GROSS CAPITAL FORMATION	Main Aggregate	
1501000	GROSS FIXED CAPITAL FORMATION	Category	
1501100	MACHINERY AND EQUIPMENT	Group	
	•••		_
1501200	CONSTRUCTION	Group],
1501210	Residential buildings	<u>Class</u>	
1501211	Residential buildings	Basic Heading	
1501220	Non-residential buildings	<u>Class</u>	
1501221	Non-residential buildings	Basic Heading	
1501230	Civil engineering works	<u>Class</u>	 '
1501231	Civil engineering works	Basic Heading	
1501300	OTHER PRODUCTS	Group	-
	•••	•••	

- 3 BHs 1 Survey
- Conducted <u>once</u> for a reference year



Survey Approach: 55 items + metadata

38 GLOBAL MATERIAL ITEMS

- 33 "pure" material items; 5 "equipment-type" items
- Allocated under each BH based on "relevance"

5+5 GLOBAL EQUIPMENT HIRE ITEMS

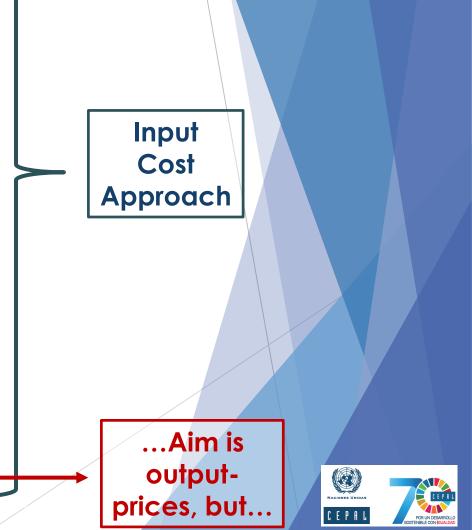
- 5 items duplicated to exclude and include operator

7 GLOBAL LABOR ITEMS

1 un-skilled and 6 skilled labor items

OTHER DATA

- Resource mixes
- Mark-ups and professional fees (not used to date)

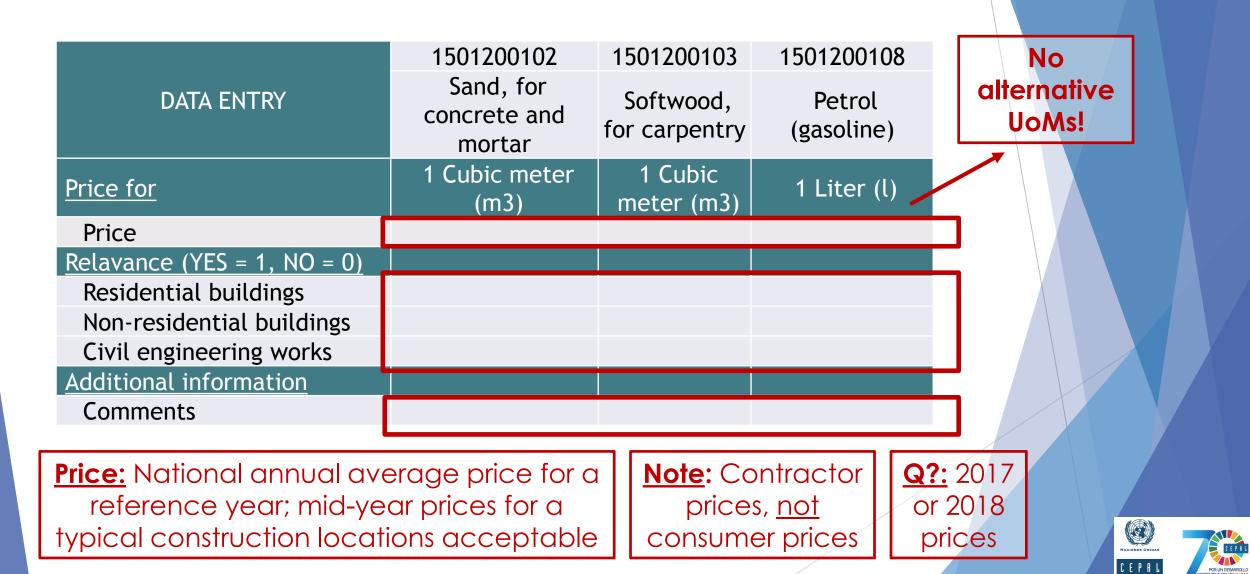


33 "Pure" Material Items: SPDs

Item Code	1501200102	1501200103	1501200108
Item Name	Sand, for concrete and mortar	Softwood, for carpentry	Petrol (gasoline)
Number of units	1	1	1
Unit of measurement	Cubic meter (m3)	Cubic meter (m3)	Liter (l)
Туре	Sand for concrete and mortar	Softwood for carpentry	Petrol (gasoline)
Material	Aggregate washed sharp sand	Sawn softwood sections	
Quality	Fine	Pre-treated (national standard)	Standard grade
Size		50 mm x 100 mm	
For		Structural use	Motor vehicles
Packaging			
Exclude			



33 "Pure" Material Items: Data to Enter



Relevance (Annex)

Indicative list of the relevant material inputs for construction basic headings materials for each basic heading

Item code	Material or product	Residential buildings	Non-residential buildings	Civil engineering works
1501200101	Aggregate, for concrete	Х	Х	Х
1501200102	Sand, for concrete and mortar	Х	Х	Х
1501200103	Softwood, for carpentry	Х	Х	Х
1501200104	Softwood, for joinery	Х	Х	
1501200105	Exterior plywood	Х	Х	Х
1501200106	Interior plywood	Х	Х	
1501200107	Chipboard sheet	Х	Х	
1501200108	Petrol (gasoline)	Х	Х	Х
1501200109	Diesel fuel	Х	Х	Х
1501200110	Oil paint	Х	Х	
1501200111	Emulsion paint	Х	Х	
1501200112	Ordinary Portland cement	Х	Х	Х
1501200113	Ready mix concrete	Х	Х	Х



5 "Equipment Type" Material Items

Item Code	1501200133
Item Name	Electric pump
Number of units	1
Unit of measurement	Piece
Туре	Electric pump for pumping water
Flow rate	10 litres per second
Temperature range	5-80 C
Head pressure	150 Pa
Specify	Brand and model

DATA ENTRY	1502111133 Electric pump
Price for	1 Piece
Price	
Relavance (YES = 1, NO = 0)	
Residential buildings	
Non-residential buildings	
Civil engineering works	
Additional information	
Brand	
Model	
Comments	



5+5 Equipment Hire Items: SPDs

Item Code	1501200201	1501200211	
Item Name	Wheeled loader and	Wheeled loader and	
	excavator, with operator	excavator, without operator	
Number of units	1	1	
Unit of measurement	Hour	Hour	
Tuno	Rental of loader and	Rental of loader and	
Туре	excavator, four wheel drive	excavator	
With operator	Yes	No	
Brand (indicative)	JCB	JCB	
Model (indicative)	3CX Super Sitemaster	3CX Super Sitemaster	
Engine power (indicative)	70 kW (94 hp)	70 kW (94 hp)	
Travel speed (indicative)	30 km/h	30 km/h	
Operating width (indicative)	2 m	2 m	
Operating weight (indicative)	8000 kg	8000 kg	•
Operating conscitut (indicative)	4000 kg (loader); 700 kg	4000 kg (loader); 700 kg	
Operating capacity (indicative)	(backhoe)	(backhoe)	
Dig depth (indicative)	4 meters	4 meters	
Price excludes	Operating fuel	Operating fuel	
Specify	Equipment brand and model	Equipment brand and model	



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5+5 Equipment Hire Items: Data Entry

DATA ENTRY	1501200201 Wheeled loader and excavator, with operator	1501200211 Wheeled loader and excavator, without operator
Price for	1 Hour	1 Hour
Price		
Additional information		
Brand		
Model		
Comments		

Potential daily or weekly rates need to be converted to hourly rates



7 Labor Items: SPDs

International Standard Classification of Occupations (ISCO)

Item Code		1501200301	1501200302
Item Name		General labourers. unskilled	Bricklaver. skilled
ISCO code		9313	7112
ISCO name		Building construction labourers	Bricklayers and related workers
Number of u	units	1	1
Unit of meas	surement	Hour	Hour
Skill level		Unskilled	Skilled
Salary type		Gross	Gross
Training		No training required	Training in a technical college or similar institution or on the job training
General defi	inition		Lays bricks, pre-cut stones and other types of building blocks in mortar to construct and repair walls, partitions, arches and other structures
Example tas	ks (a)	 (a) cleaning used building bricks and doing other simple work on demolition sites 	(a) laying stone, brick and similar building blocks to construct or repair walls, partitions, fireplaces and other structures such as smokestacks, furnaces, converters, kilns and ovens, piers and abutments
Example tas	ks (b)	(b) mixing pouring and spreading	(b) laying footpaths, kerbs and pavements
Example tas	ks (c)	(c) digging and filling holes and trenches using hand held tools	(c) laying bricks or other masonry to build patios, garden walls and other decorative installations



7 Labor Items: Data Entry

	DATA ENTRY	1501200301 General labourers, unskilled	1501200302 Bricklayer, skilled		Potential daily or
Γ	Price for	1 Hour	1 Hour		weekly rates need
	Price				to be
	Additional information				converted
	Average number of hours worked per day				to hourly rates
	Average net-to-gross rate			l	Tales
	Comments				
			Average rate for net-salaries to gross-salaries		



Resource Mixes (Sheet "Support")

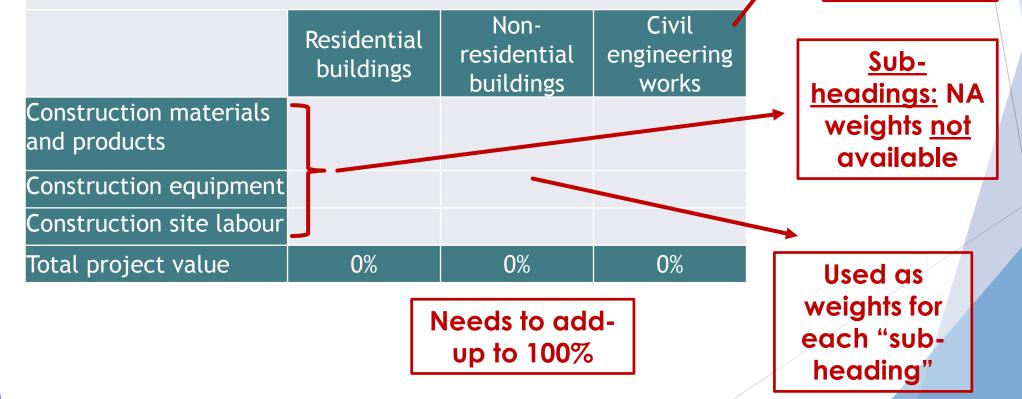
A. The mix of construction resources

What proportion of overall construction project value is taken by the main inputs to construction work (materials and products, labor and equipment) in the following types of projects? <u>BH-level:</u> National account weights available

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Contractors' mark-ups (Sheet "Support")

B. Contractors' mark-ups

What percentages should typically be added to contractors' input costs to arrive at contractors' bid prices or construction purchaser prices? Please indicate approximate percentage values.

	Residential buildings	Non-residential buildings	Civil engineering works	
General site costs and temporary works				
Head office overheads				
Profit				
Other contractors costs 1 (please specify)				
Other contractors costs 2 (please specify)				
Other contractors costs 3 (please specify)				F
Other contractors costs 4 (please specify)				
Other contractors costs 5 (please specify)				
Other contractors costs 6 (please specify)				
Total mark-up	0%	0%	0%	



Professional fees (Sheet "Support")

C. Professional fees

What percentage additions should be allowed for both pre and post-contract services on different types of work? <u>Professional fees will typically comprise pre- and postcontract services, including architectural and engineering design, technical supervision, project management and other specialist services, but national rules and practices must be taken into account. Please enter the total amount as a percentage of the contractor's cost (which will include the contractor's mark-up described above). The intention is to arrive at the end-user or purchaser price for construction work.</u>

	Residential buildings	Non-residential buildings	Civil engineering works	
Overall percentage addition for professional services				





Questions or comments?

