



UNIVERSITAT
POLITÈCNICA
DE VALÈNCIA

ESCUELA TÉCNICA SUPERIOR
DE INGENIEROS DE CAMINOS,
CANALES Y PUERTOS



APPENDIX 3. QUESTIONNAIRE RELATED TO THE PRODUCTIVITY DATA OF CRITICAL CONSTRUCTION TRADES

**Study on improving labor productivity in the construction
industry. The cases of Europe and Hong Kong.**

Titulación: Grado en Ingeniería Civil

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**Productivity Data of Critical Construction Trades
QUESTIONNAIRE SURVEY**

Dear Sir or Madam,

I am a final year student from the Department of Civil and Environmental Engineering at the Valencia Polytechnic University doing my final year project at the Hong Kong University of Science and Technology. The project focuses on construction trade productivity in Europe. Through a previous questionnaire survey, we had identified the critical construction trades for both building and infrastructure projects. In this current survey, we would like to obtain the sample productivity data of the identified critical construction trades based on your experience. Your participation is highly appreciated.

We would also like to express our gratitude towards people who had participated in our previous survey.

Thank you for your kind support and help!

Background of Respondents

Name(optional)

Organization(optional)

Email Address (optional)

Job/Position

Primary Area of Practice

<input type="checkbox"/> Developer/client	<input type="checkbox"/> Estate/facilities manager	<input type="checkbox"/> Contractor
<input type="checkbox"/> Professional consultant	<input type="checkbox"/> Manufacturer/supplier	<input type="checkbox"/> Government employee
<input type="checkbox"/> Academic	<input type="checkbox"/> Others _____	

Years of Experience

1-5 6-10 11-20 21 and above

Education Level

Dr. Master Bachelor High School

Others _____

Table 1. Critical Construction Trades for Building Projects

Construction Trade		Measurement Unit	Productivity Range		Average
			From	To	
Bar Bender and Fixer	Bar bender	kg/manhour			
	Steel fixer	kg/manhour			
Concrete and Grouting Worker	To grout the floor	m ³ /manhour			
	To grout the beam	m ³ /manhour			
	To grout the column	m ³ /manhour			
Rigger/Metal Formwork Erector		kg/manhour			
Woodworker		m ² /manhour			
Welder		m/manhour			
Metal-steel Worker		kg/manhour			
Scaffolder		m ² /manhour			
Piling Operative		m/manhour			
Plant and Equipment Operator	Piling (master)	m/manhour			
	Excavator	m ³ /manhour			
	Tower crane	m ² /manhour			
Curtain Wall and Glass Panes Installer	Curtain wall installer	m ² /manhour			
	Glazier	m ² /manhour			

Table 2. Critical Construction Trades for Infrastructure Projects

Construction Trade		Measurement Unit	Productivity Range		Average
			From	To	
Bar Bender and Fixer	Bar bender	kg/manhour			
	Steel fixer	kg/manhour			
Piling Operative		m/manhour			
Tunnel Worker		m/manhour			
Concrete and Grouting Worker		m ³ /manhour			
Metal-steel Worker		kg/manhour			
Electrician		m/manhour			
Welder		m/manhour			
Prestressing Operative		kg/manhour			
Woodworker		m ² /manhour			
Plant and Equipment Operator	Piling (master)	m/manhour			
	Excavator	m ³ /manhour			
	Tower crane	m ² /manhour			