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*for a sustainable future*

## OCCASION

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**TOGETHER**  
*for a sustainable future*

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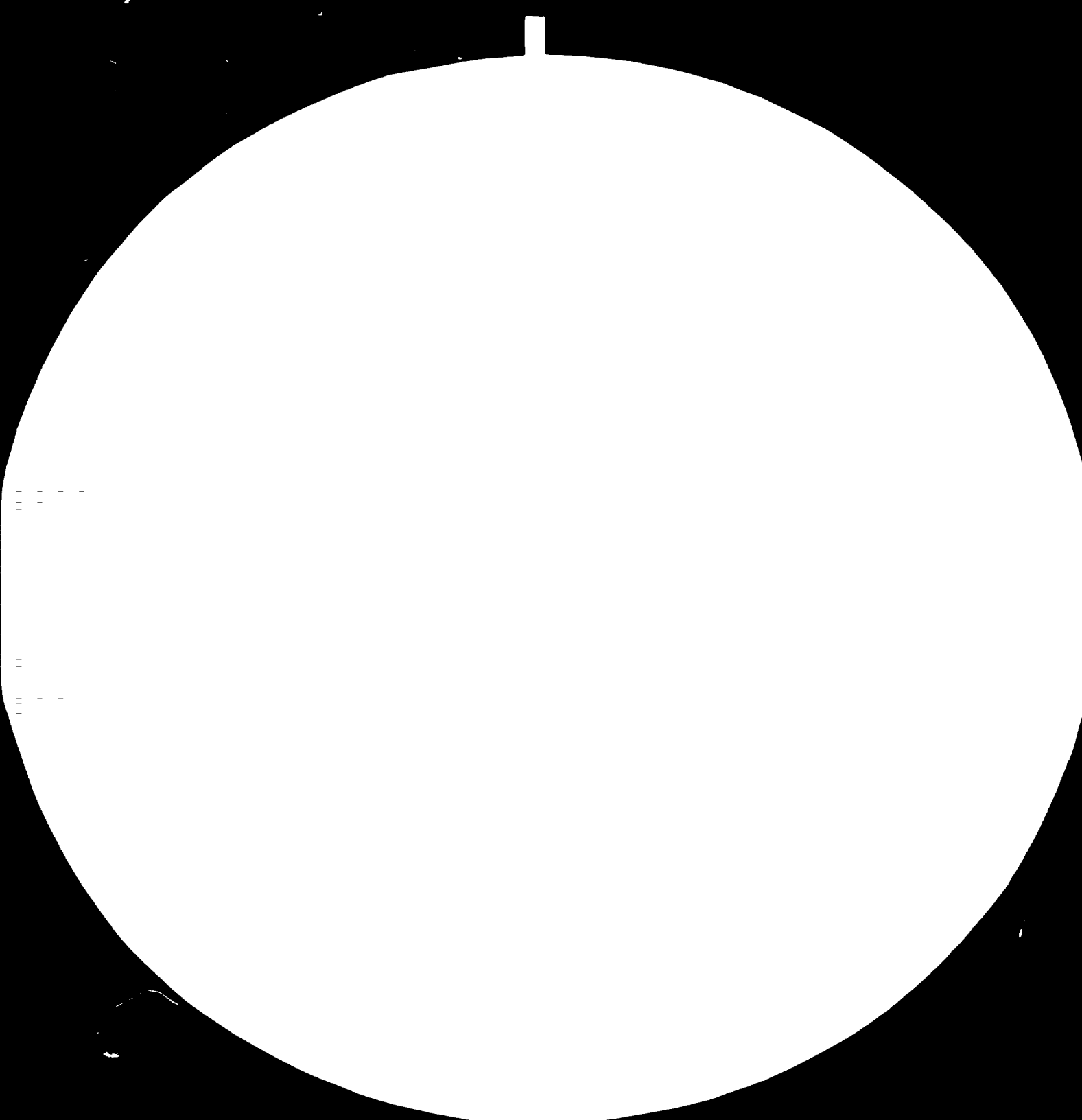
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REPORT ON MISSION TO MEXICO  
from 18 - 26 October 1980

11252

to

Mexico. ATTEND THE VI INTERNATIONAL COST ENGINEERING CONGRESS "MEXICO 1980"

AND THE IV PANAMERICAN COST CONGRESS AND CONCURRENT CONGRESSES

DURING THE "ENGINEERING WEEK"

presented by:

E. Zorrilla-Vazquez  
Industrial Development Officer

IO/FCTY

October 1980

## CONTENTS

	<u>Page</u>
INTRODUCTION	1
FINDINGS	1
CONCLUSIONS AND RECOMMENDATIONS	6

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## ANNEXES

- I Letter of Invitation to Congress and Programme
- II Paper (presented by writer to Congress)
- III Principal People Met
- IV Letter from Prospective Trust Fund Donor/TA  
Solicitant to IO/FEAS
- V Project Concept (by writer) of TA Possibilities  
to Comptroller General of Mexican Legislature

## INTRODUCTION

1. The Organizing Committee of the referred Congress extended the writer an invitation (please see attached letter - Annex 1) to attend the Congress and speak during the plenary session held Wednesday, 22 October (please see attached speech - Annex 2).

2. Opportunity was taken to promote and discuss several projects with UNDP/SIDFA Officers and other Government and non-Governmental Organization's officials in Mexico City (please see attached list - Annex 3) as indicated below.

3. Advantage was taken to stop-over in New York to hold discussions with several UNDP officials regarding:

- a) Status and implementation of the project system for Nicaragua as per mission results of last February.
- b) Perspectives of Central America IDB/CABEI Regional Factory Promotion project.

## FINDINGS

4. The Cost Engineering Congress was highly successful, counting with the presence of over 600 specialized engineers from 18 Latin American and 12 European and Asian countries. It is relevant to mention the official presence of the Cost Engineering Societies (or Associations) of Brazil, Canada, India, Netherlands, Norway; the Panamerican Federation including individual representations from Argentina, Bolivia, Colombia, Costa Rica, El Salvador, Paraguay, Peru, Venezuela and also the corresponding Associations of the United Kingdom and the United States. The Technical Programme contained relevant and current topics, for example: Cost Management, Venture Analysis, Project Management, Productivity, Cost Elements of Energy and Food Supplies.

5. The "Engineering Week" conclave, from the 20 through the 24 of October, included five simultaneous congresses, namely: Engineering Education, Oceanic Engineering, Earth Sciences, Technological Development and Cost Engineering.

6. Under the auspices of the Union Mexicana de Asociaciones de Ingenieros (UMAI), the cupola organization of Mexican Engineering Societies, the (umbrella) Congress of the Union Panamericana de Asociaciones de Ingenieros (UPADI) also took place. The latter is a member of the World Federation of Engineering Organizations, and both are, we understand, consulting non-governmental organs to the United Nations. Of relevance in this respect was the inauguration of the Engineering Congresses Week and activities by President Jose Lopez Portillo on October 20th at the Palace of Fine Arts, Mexico City, ceremony to which UNIDO was invited in the person of Dr. A. Khane, Executive Director and which, because of previous commitments it was not possible to accept. The writer had the opportunity to reiterate to the principals of the Engineering Associations and Societies the Executive Director's appreciation for the invitation and his regrets for not being able to accept for reasons already mentioned.

7. The concurrent congresses provided an opportunity to foster two practical actions in relation to UNIDO's activities:

- a) Promote individual expert/consultant interest in soliciting registration in UNIDO's Project Personnel Recruitment Section's roster.
- b) Disseminate UNIDO's needs as regards increasing the registration of consultant/engineering firms from developing countries for UNIDO's Purchase and Contract Service's roster.

8. The response was effective insofar as both UPADI, at the continental level, and UMAI, at the national level, offered to look into the matter from an institutional standpoint to enhance South-South relationships in technological transfer and technical assistance and to follow-up through indicated channels in UNIDO (IO/PPR and IO/PAC). In the meantime, P-13 forms and other material were selectively distributed for prompt submittal for the consideration (and evaluation) of IO/PPR and IO/PAC. Specific contacts can be expected from Messrs. Jose Aguilar A. and Rafael Decelis, respectively President of UMAI and the Sociedad Mexicana de Ingenieros, the major institutional engineering societies in Mexico.

9. Conversations were held with Mr. Miguel de la Madrid, Secretary of Programming and Budgeting regarding UNIDO activities. Informal comments were related to eventual contributions to UNIDF. Continued and increasing interest is expected. The writer was informally requested diverse opinions on current industrial policies related to local programming matters.

10. The contact with Mr. M. Viejo Zubicaray, Director of the University of Mexico's Cuautitlan Unit, involved projects related to the use of small computers and the possibility of establishing a training/consultancy/dissemination centre: thus opening an additional avenue for the promotion (already advanced to the Centro Nacional de Enseñanza Tecnical Industrial - CENETI) to this effect. The idea was well taken and the documents (Guidebook, project concept and prototype project documents: ref. Mr. N. Suzuki) preliminarily discussed with Mr. Viejo were left for his further perusal.

11. Mr. Rafael Decelis, a major authority on energy sources and uses in Mexico, was given a copy of the project concept "Regional or National Industrial Energy Management Consultancy Centre" (ref. Mr. V. Ishchenko) which he perused with interest and offered to send a commentary on the approach and a preliminary view on project possibilities in Mexico, before the end of the year.

12. Follow-up conversations with Mr. E. Ojeda Norma, Head Major Accountant of the Major Fiscal Accounting Office (please see the writer's report on Mission to Mexico to Attend II Seminar of Superior Governmental Fiscalizing Entities for Public Expenditure, June 1980; and attached project concept and letter of 8.10.80 - Annexes 4 and 5) centered on further defining the project nature and possibilities of UNIDO Technical Assistance as pertaining to previous contacts. As a consequence Mr. Ojeda was explicit in that he wishes to strengthen his Office's capacity to assess ex-ante, monitor and evaluate ex-post public expenditure programmes in the framework of the Global Development Plan 1980-82. Programmes such as SAM (Sistema Alimentario) and COPLAMAR (Coordinación del Plan para las Zonas Marginadas) would be reviewed for consistency, congruency from a Programme Budgeting and cost-benefit standpoint. For the moment he



indicated that UNIDO's assistance would be most useful in relation to the SAM programme with which, in passing, the writer is quite familiar since its origins. In this light Mr. Ojeda indicated he has opted and will formally request UNIDO for ad hoc technical assistance involving the writer's consultancy for a period of approximately six weeks spread over a 12 month period in the course of 1981.

It is estimated that the specific request for this pipeline "project", involving the referred consultancy, and which Mr. Ojeda indicated would be financed wholly (air fare and per diem) by the Major Fiscal Accounting Office, will be established in the forthcoming weeks.

13. Mr. Pedro Galicia, General Manager, Nacional Financiera S.A. was approached on two topics:

- a) Trust Funds for Preinvestment Studies: in this respect a preliminary proposal was made regarding a sub-regional or regional or inter-institutional (development bank) meeting that might be held under Nacional Financiera/UNIDO auspices and dealing with origins, nature, experience, evolution and current practices and problems facing established and prospective preinvestment funds. It is contemplated that the topic is relevant in relation to the concept being contemplated of possibly creating an industrial project preparation facility within UNIDO.
- b) Increasing Consulting Firm Concurrence from Developing Countries: Nacional Financiera has for some years fostered the enhanced participation of Latin American consultancy firms' services for feasibility and similar studies related to industrial and infrastructure projects. It has also promoted regional and Pan American congresses to examine the role and promote greater use of indigenous consultancy capacity. In this relation a preliminary probe was made as to ways and means by which UNIDO and Nacional Financiera could combine efforts to promote South-South vertical and horizontal relationships involving consultancy services that would favor the transfer of technology, expertise and increasing cooperation.

Interest was manifest in both areas; however further ad hoc promotion will have to be done to follow-up and pin-point project contents and scope and UNIDO Technical Assistance with Mr. Galicia.

14. Advantage was taken to follow-up conversations with the Ministry of Agrarian Reform with respect to the topic of integration and increased women's participation in development and concretely the industrialization process: a topic discussed with Ms. Amalia Dahl and Mr. Gerhard Bauer of the Office of the Director, Division of Policy Co-ordination, on occasion of conversations related to the World Conference to the effect and Mr. Bauer's recent trip to Mexico (ref.: my Note to the File of 19 June 1980). Ms. Marta Lopez Escobar, Special Assistant to the Undersecretary for Planning and Infrastructure and to the Director General of Agroindustry was approached in reference to the topic and previous work done involving small-scale cottage industry and related community services (basic product warehousing and distribution) in which the women in the rural areas, specifically in the agrarian "ejidos" informally participate. Such an experience can be explored for the design of new and/or improved models of action therefrom, perhaps pass on to more extensive or deeper programmes and eventually disseminate if successful, as an attempt to further promote the relationship between UNDP programmes and eventual UNIDO projects that could be promoted with the Ministry. Ms. Lopez suggested that contacts should be maintained in an attempt to build up a project concept which may be of mutual interest to the Ministry and UNIDO in the near future.

15. The main outcome of the conversations held with UNDP Officials in New York relate to the fact that funds are not available to finance the Central America IDB/CABEI Regional Industrial Factory Promotion (please see the writer's Mission Report to Honduras of July 1980). The shortage of funds is reflected as well on other projects in the area discussed such as a regional textile development centre in Central America.

CONCLUSIONS AND RECOMMENDATIONS

16. The writer has found, in his time with UNIDO, a strong willingness and interest of specialized professional societies in Latin America (and others) to establish contact and relations with UNIDO. There is at the very least a positive reply from the cost and industrial engineering societies with which the writer is actively associated; contacts are being further developed, from the writer's viewpoint, for specific projects and in liaison with the IO/Project Personnel Recruitment Section. These situations surely have been and can increasingly be useful for expert/consultant/firm inscription in the rosters: particularly candidates from developing countries. A second possibility is the greater use of the expertise available within these societies for training seminars, workshops and the like: whether it is to be had from active or retired members (indeed, more so from the latter by virtue of experience).

17. Messrs. Jose Aguilar A. and Rafael Decelis have offered and requested increased contact with UNIDO as regards expert/consultant recruitment possibilities from Mexican engineering circles (please see Annex 6): such contact is to be suggested.

18. It is envisaged that technical assistance to the Major Fiscal Accounting Office will be requested, in principle, in the course of February, May and December of 1981. This assistance opens added possibilities for additional UNIDO advisory services directly from Headquarters on highly specific topics and for short periods of time, which the writer, in coordination with the SIDFA, can promote in view of the increasingly specialized assistance that Mexico will be requiring/soliciting within its development framework.

20. Needless to say, future projects appear to point in the direction of agroindustrial, agricultural product (processed and non-processed) warehousing-distribution logistics, parastate enterprise management training/rationalization/planning, activated capital goods' project promotion/implementation and mini-computer uses/applications, as well as very specific plastics engineering/production know-how, for example, and

programming projects for the pharmaceutical industry; also novel approaches for project development at the State level (e.g. Michoacan: forest/wood products and derivatives plus integral development plan for "Las Truchas" steel complex; Tlaxcala: industrial diagnosis/programming for metalmechanic industry, etc.).

21. It is suggested that pro-forma content/scope/results be designed for a prospective meeting regarding preinvestment funds' nature, policies, operations, etc. and experiences about which views might be interchanged in a forum promoted jointly by UNIDO and Nacional Financiera S.A., including topics related to project promotion/implementation mechanisms: all related to the project preparation facility concept being contemplated. This proposed material can then be sent or discussed personally with Mr. P. Galicia, General Manager at that Institution. The writer is following-up the topic through the appropriate correspondence and for liaison with the Feasibility Studies Section as conversed with Messrs. W. Behrens and L.F. Biritz.

22. As regards project prospects regarding the integration of women in development, it is recommended that the matter be further pursued with Ms. M. Lopez Escobar to define a pilot project for proposal within the third cycle (please see Annex 6).

24. It is also suggested that Messrs. V. Ishchenko and N. Suzuki contact Messrs. R. Decelis and M. Viejo as a follow-up to energy management consultancy and mini-computer project prospects, respectively (please see Annex 6).

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VI CONGRESO INTERNACIONAL DE INGENIERIA DE COSTOS  
**MEXICO 1980**  
 6th INTERNATIONAL COST ENGINEERING CONGRESS

México, D. F., Julio 28 de 1980.

SR. ING. EMILIO ZORRILLA VAZQUEZ  
 OFICIAL DE DESARROLLO INDUSTRIAL  
 O N U D I, P.O. BOX 300  
 VIC/ VIENA, A-1400  
 AUSTRIA.

RECIBO  
 19 JUL 1980  
 Sr. ZORRILLA  
 VAZQUEZ  
 505351  
 File: S44

ICIG  
 AACF  
 AGE  
 CEPA  
 DACE  
 FEPIEC  
 HACPE  
 SMIIC

Estimado Sr. Ingeniero :

Dada la relevante y fructífera labor que caracterizó su gestión como Presidente de la III Mesa Directiva de nuestra Sociedad en el bienio 1973-1975 y ahora, como funcionario internacional que distingue a los cuadros técnicos de nuestro país nos es grato extenderle una invitación a fin de contar con su presencia en el VI CONGRESO INTERNACIONAL DE INGENIERIA DE COSTOS que tendrá lugar del 20 al 22 de Octubre venidero. Por otra parte, será una excelente oportunidad para que usted pueda intercambiar impresiones con las diferentes representaciones de la Ingeniería Mexicana, toda vez que dicho Congreso estará enmarcado por la Semana Internacional de la Ingeniería concurriendo diversos con claves técnicos.

Manifiesto a usted que en el foro de nuestro VI CONGRESO referido, participarán entre otras distinguidas Asociaciones de Ingenieros de Costos de los Estados Unidos de Norteamérica, de Gran Bretaña, de Holanda, de la India, de Noruega, así como la Federación Panamericana de la especialidad.

Durante el Congreso se celebrarán tres reuniones plenarios únicas, en las cuales dirigirán unas palabras al auditorio, señaladas personalidades del ámbito técnico nacional, entre ellas el Sr. Director General de PEMEX, representando al sector público del país, y el Presidente del Grupo Bufete Industrial en representación del sector empresarial y bajo este tenor, sabemos que Ud. aceptará la invitación de ser el tercer exponente de la técnica en las actividades internacionales.

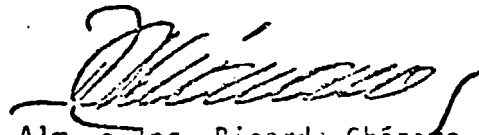
VI CONGRESO INTERNACIONAL DE INGENIEROS DE COSTOS  
**MEXICO 1980**  
ON INTERNATIONAL COST ENGINEERING CONGRESS

- 2 -

Estamos ciertos de que sus palabras tendrán especial relevancia en torno a las disciplinas en que se especializa nuestra Sociedad, dada su reconocida experiencia en el ámbito técnico-industrial latinoamericano e internacional.

El día de su elocución está fijado específicamente como el miércoles 22 de Octubre en la Asamblea Plenaria que se celebrará a las 13:30 horas.

Atentamente,



Alm. e Ing. Ricardo Cházaro Lara  
Presidente del Comité Organizador

IGIE

AACE

ACE

CEPA

DACE

FEPIEC

NACPE

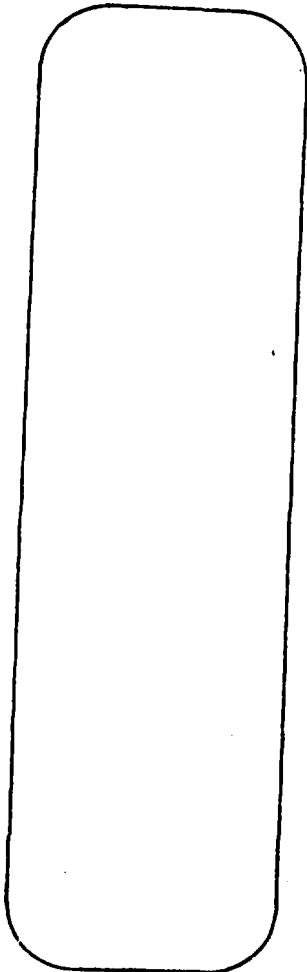
SMIEC

c.c. Ing. Edgar Fernández Gómez, Presidente de SMIEC  
Ing. Agustín Navarro Herrera, Director General del Comité Organizador

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# 6th INTERNATIONAL COST ENGINEERING CONGRESS

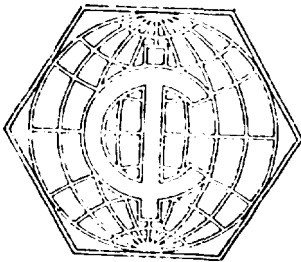
6th NATIONAL COST  
ENGINEERING CONGRESS



HEADQUARTERS: HOTEL FIESTA PALACE

OCTOBER 20-22, 1980  
MEXICO CITY

**COST ENGINEERING:  
HELPING TO SHAPE  
A BETTER WORLD**



MEXICAN SOCIETY OF COST AND ECONOMIC ENGINEERING  
TACUBA 5, MEXICO 1, D.F.

6th INTERNATIONAL COST ENGINEERING CONGRESS TONALA 239, MEXICO 7, D.F.

Simultaneously with the International Engineering  
Week and the A.S.T.M.



6th BOARD OF DIRECTION OF THE  
MEXICAN SOCIETY OF COST AND  
ECONOMIC ENGINEERING  
(SMIEC)

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INTERNATIONAL COST ENGINEERING  
CONGRESS

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Renato Arriola Aguilar

SMIEC has organized five National Congresses, one Latin-American Congress and one International Congress, more than forty seminars or meetings for the study of specific topics in Mexico and abroad, with a total participation of more than 6,000 professionals and technical experts.

In 1978 SMIEC collaborated in the creation of a Master Degree in Economic and Cost Engineering at La Salle University in Mexico City. This Master Degree is the first of its kind in the world, and therefore aroused great interest not only in Mexico but in other countries. At present SMIEC is making a special effort to introduce this Master Degree at the National School of Professional Studies in Acatlán, of the National University of Mexico.

**MEXICAN SOCIETY OF COST AND  
ECONOMIC ENGINEERING  
(SMIEC)**

SMIEC was founded in 1969 for the purpose of furthering the science and the techniques of Cost Engineering through professional, scientific and educational media for the benefit of the community, and the country. It was set up as a civil professional society, composed of specialists in Economic and Cost Engineering. Furthermore, it was founded as a non-profit organization. In accordance with its objectives, SMIEC has a distinctive interdisciplinary and intersectorial character. This allows its members to enrich their knowledge and experience in appropriate ways

In order to attain these basic objectives, SMIEC, within its regulations, collaborates with other private and public organisms and associations, promoting discussions at national and international level. It has also promoted the inclusion of these branches of science in the curricula of the Educational Institutions of the country

Its apolitical views and economic self-sufficiency have allowed a highly professional development. Thus, SMIEC has become one of the most respected technical societies in Mexico, and its prestige reaches beyond our frontiers. SMIEC is one of the founding societies of the International Cost Engineering Council

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Moreno  
Hermann Harrsch Bolado

Anuar Karam Abdo

Jaime Luna Trail  
Antonio Murrieta Necoe-  
chea

Abel Jaime Navarro

Enrique Núñez Jiménez

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Mario Martínez Morales

Juan José Vilchis Vivero

## INTERNATIONAL COST ENGINEERING COUNCIL

ICEC was founded officially in July 1976, in Boston, Mass., U.S.A. Its members are:

AACE	American Association of Cost Engineers USA.
ACE	Association of Cost Engineers - United Kingdom
SMIEC	Mexican Economic and Cost Engineering Society - Mexico
DACE	Dutch Association of Cost Engineers, The Netherlands
FEPIEC	Panamerican Federation of Economic and Cost Engineering
NACPE	Norwegian Association of Cost and Planning Engineers.
CEPA	Cost Engineers and Procurer Association, India

ICEC is an international non-profit organization founded to foster cooperation between similar organizations around the world and to help develop the basic principles and techniques of this branch of science. For this purpose ICEC has set up International Task Committee. Likewise, it promotes the creation of new associations and the organization of International Congresses

Up to now ICEC has organized the following International Cost Engineering Congresses:

July, 1971	Montreal, Canada
February, 1972	Mexico, Mexico
October, 1974	London, England
July, 1976	Boston, U.S.A.
October, 1978	Utrecht, The Netherlands

## LADIES PROGRAM

Sunday, October 19:

09:00-19:00 Registration  
19:00-21:00 Welcome Cocktail

Monday, October 20:

08:30-09:30 Opening Session  
Free day

Tuesday, October 21:

09:00-13:00 Visit to Teotihuacan  
13:00-16:00 Lunch and "Fiesta Charra" at  
"Cortijo La Morena"  
21:00-24:00 Gala Dinner

Wednesday, October 22:

10:00-13:00 Visit to colonial houses and gardens in San Angel, D.F.  
13:00-15:00 Lunch in San Angel, D.F.  
16:45 Closing Session

## GENERAL INFORMATION

Main Congress Office:

Tonalá No. 239  
Colonia Roma  
México 7, D.F.  
Telephones: 564-29-12 and 584-47-77

Auxiliary Office:

Mrs. Silvia S. de Rosenkranz  
Baja California No. 245-1103  
México 11, D.F.  
Telephones: 564-58-75 and 578-16-41

Travel Arrangements:

Viajes Kuoni de México, S.A.  
Hamburgo No. 66  
México 6, D.F.  
Telephone: 533-62-75

## GENERAL PROGRAM

The Organizing Committee has accepted 139 papers. Ninety-six papers will be presented by specialists from the following countries:

Abu Dhabi  
Saudi Arabia  
Argentina  
Brazil  
Canada  
Spain  
United States  
France  
Greece  
The Netherlands  
India  
England  
Ireland  
Israel  
Italy  
Japan  
Kuwait  
Norway

Forty-three papers will be presented by specialists from Mexico.

Moreover, specialists from the People's Republic of China and other interested countries will attend.

Specialists will set forth the most advanced theories and techniques of this branch of science, and the way in which they are being put into practice in their countries at different degrees of technological development.

### Conference Site:

Sessions will be held at the Fiesta Palace Hotel, located in the heart of the City, October 19-22, 1980.

Continuing Education Seminars will be held in the Palacio de Minería, Tacuba No. 5, Mexico City.

Thursday, October 16:

16:00-21:00 Continuing Education Seminars

Friday, October 17:

09:00-14:00 Continuing Education Seminars  
15:00-19:00

Saturday, October 18:

09:00-13:00 Continuing Education Seminars  
14:00-18:00

Sunday, October 19:

09:00-19:00 Registration  
19:00-21:00 Welcome Cocktail  
09:00-13:00 Continuing Education Seminars  
14:00-18:00 Continuing Education Seminars

Monday, October 20:

07:30-08:20 Speakers Breakfast  
08:00-12:50 Registration  
08:30-09:30 Opening Session  
10:00-12:50 Technical Sessions  
13:00-14:30 Lunch or Buffet  
14:40-18:30 Technical Sessions

Tuesday, October 21:

07:30-08:20 Speakers Breakfast  
08:30-12:50 Technical Sessions  
13:00-14:30 Lunch or Buffet  
14:40-17:30 Technical Sessions  
21:00-24:00 Gala Dinner

Wednesday, October 22:

07:30-08:20 Speakers Breakfast  
08:30-12:50 Technical Sessions

13:00-14:30 Lunch or Buffet  
14:40-16:00 Technical Sessions  
16:15-16:45 Plenary Session and Closure

Thursday, October 23:

09:30-13:00 Continuing Education Seminars  
14:00-17:00

Friday, October 24:

09:30-13:00 Continuing Education Seminars  
14:00-17:00

There will be appropriate recesses during the Seminars and the Technical Sessions

Official Languages: Spanish and English

#### TECHNICAL AND SIGHTSEEING TOURS

(These tours will take place if there is a sufficient number of participants)

- 1) Thursday, October 23-Saturday, October, 25: Visit to the Hydroelectric Plant of Chicoasén, Chiapas, and tour to the Archaeological Zone of Palenque, Chiapas
- 2) Thursday, October 23-Saturday, October, 25: Visit to the installations of the Oil Complex of the Southeast, and tour to the Archaeological Zone of Palenque, Chiapas
- 3) Wednesday, October 22-Saturday, October, 24: Visit to "Lázaro Cárdenas" Industrial Complex, Michoacán (Las Truchas) and tour to Ixtapa, Guerrero.

During these tours there will be a special ladies program.

The Technical Program fee does not include the cost of these tours.

Mexico has been designated by the ICEC for hosting the

#### 6th INTERNATIONAL COST ENGINEERING CONGRESS

Subsequent Congresses will be held in Manchester, England, 1982, and in Montreal, Canada, 1984

#### TECHNICAL PROGRAM OF THE 6th INTERNATIONAL COST ENGINEERING CONGRESS

#### MAIN SUBJECT

#### "COST ENGINEERING: HELPING TO SHAPE A BETTER WORLD"

Under the above general subject, the 6th International Cost Engineering Congress intends to highlight the social impact of cost engineering and its significance for the future wellbeing of mankind. For this reason, basic issues of today's world -education, energy, food and human settlements- along with the more conventional topics, are included in the following

#### TECHNICAL PROGRAM

- |                                |                     |
|--------------------------------|---------------------|
| *Cost Technology               | *Management Science |
| *Cost Management               | *Productivity       |
| *Venture Analysis              | *Education          |
| *Inflation and Economic Change | *Energy             |
| *Human Settlements             | *Food               |
| *Project Management            |                     |

# 6TH INTERNATIONAL COST ENGINEERING CONGRESS

- |                       |                       |                                  |                      |
|-----------------------|-----------------------|----------------------------------|----------------------|
| A. COST TECHNOLOGY    | D. VENTURE ANALYSIS   | G. INFLATION AND ECONOMIC CHANGE | J. FOOD              |
| B. COST MANAGEMENT    | E. MANAGEMENT SCIENCE | H. EDUCATION                     | K. HUMAN SETTLEMENTS |
| C. PROJECT MANAGEMENT | F. PRODUCTION         | I. ENERGY                        | L. U.K. WORKSHOP     |

MONDAY, OCTOBER 20, 1980

	CONFERENCE ROOM 1	CONFERENCE ROOM 2	CONFERENCE ROOM 3	CONFERENCE ROOM 4	CONFERENCE ROOM 5	CONFERENCE ROOM 6
11:00	A-2 G. ENYEDY JR. PROCESS SIMULATORS AND PROCESS EQUIPMENT COST.	B-2 R.B. WATSON. QUALITY, PRODUCTION AND CONTROL. CONSTRUCTION COST.	C-2 J.M. SESTON. CONSTRUCTION PROJECT PUR- CHASING & CONTROL COST.	D-2 J.A. PERAZZI. RISK ANALYSIS IN CAPITAL COST ESTIMATING.	E-2 F.C. POSTOLA & W. C. FINCH. PROGRAM EVALUA- TION-METHOD OF SELECTING ALTERNATIVES.	I-2 A. PATRASCU. CONTROL OF INDIRECT COSTS IN OIL FIELD DEVELOPMENT.
11:30						
12:00	A-3 W.H. GAGE. GRAPHIC PRESENTATIONS IN COST ENGINEERING.	B-3 A.L.B. THOMPSON. QUANTITY SURVEY PRACTICE IN THE OIL PROCESS ENG.	C-3 T.L. PATTICHAIR. THE FUNCTIONAL ROLES IN PROJECT MANAGEMENT.	D-3 H.C. THORNE. BUSINESS ENVIRONMENT PRO- JECT STUDIES.	E-3 M. CHEIKH-ROUHOU. ECONOMIC AND SOCIAL FIRM PERFORMANCE. FRENCH EX- PERIENCE.	I-3 K. HUMPHRES. THE OUTLOOK FOR FUTURE ENERGY SUPPLIES & COSTS.
12:30						
13:00	L U N C H E O N					
14:30	A-4 W.C. LEGROW & W.S. THALE. COMPUTERIZED COST MONITORING IN NUCLEAR IN- DUSTRY.	B-4 P.C. YENNING. HOW CONSTRUCTION IS PUR- CHASED.	C-4 S.L. OSBORN & J.L. BELOWS. THE DEVELOPMENT OF THE PROJECT MANAGEMENT PLAN.	D-4 J.D. SMYTH. OWNER INVOLVEMENT IN CON- STRUCTING A NEW PLANT.	E-4 S.R. RANGAR. A DECISION MAKING TOOL IN FISHING ALTERNATIVES.	I-4 R.R. BUCHANAN. AN IN-DEPTH ANALYSIS OF POWER PLANT COSTS IN U.S.
15:00					E-5 P. BARDEGA & M. URBEL. INTEGRAL PLANNING OF PHEM & DEC. PET-CHEM INDUSTRY.	
15:30	A-5 A. DOSCALOPOULOS & M. MANTARIS. CONSTRUCTION EQUIPMENT OPERATION & MAINT. COST.	B-5 E.B. SONEY. COST MONITORING IS SHULD- TRACT TENDER DOCUMENTS.	C-5 E. SHARAH. THE SYSTEM OF PROJECT MANAGEMENT.	D-5 K.P. WESTBYER. RATIONAL ECONOMIC EVALUA- TION OF PROJECTS.	E-5 L. POLAGA. INTERVENTION OF RELIABLE IN BREAK-POINT (B.E.P.).	I-5 J. FISBENSCHTZ. ENERGY CONSERVATION PROG. IN TRANSPORTATION SECTOR.
16:00	A-6 J.B. KUSEWITZ. METHODOLOGY TO ESTIMATE COSTS AIRCRAFT PROGRAMS.	B-6 R.D. GURBATH. CONTRACT ADMINISTRATORS & COST ENGINEER ALLIES.	C-6 K. BURGESS. OWNER MANAGEMENT FOR LARGE PROJECTS.	D-6 L.V. KLUMPAR. SENSITIVITY ANALYSIS CHARTS.	E-6 C.E. ESCOBAR. EFFICIENT DISTRIBUTION OF RESOURCES IN PET-CHEM IND.	I-6 S. DOMOVNE. COGENERATION.
16:30	A-7 E. MANAFRAS. AN APPROACH TO ESTIMATE CONSTRUCTION COST.	B-7 G. VISCONTI. LEGAL NATURE OF CLAIMS IN INTERNATIONAL CONTRACTS.	C-7 E. HOLER. LUMP SUM FOR PLANNING AND ENGINEERING TARGET COST.	D-7 P. GAUCIA. PROJECT ADMINISTRATION.	E-7 A. ROSE. COST MODELS IN PLANT LOCA- TION.	I-7 R.L. BASHARFU. U.S. EXPERIENCE IN CONST. NUCLEAR POWER PLANTS.
17:00	A-8 D.J. CASE. YOU CAN DO IT WITH A MIN.				E-8 E-8-B-B	I-8
17:30						

TUESDAY, OCTOBER 21, 1980

08:30	A-9 J.W. HACKETT. ESTIMATING SYSTEM FOR WORLD-SCALE PROCESS PLANT.	B-9 A.F. ENYEDY & R. LETCHFORD. OFF-SHORE CONTRACTING IN THE NORTH SEA.	C-9 E. WISHO & R.H. HERMES. CONTRACTOR PROJECT CON- TROL-A NEW CONCEPT.	D-9 C.L. HICKS. HISTORICAL PERFORMANCE ANALYSIS.	F-4 D.F. PARRINSON. THE PRACTICAL APPLICATION OF PRODUCTIVITY DATA.	I-9 E. MUREZ. MINERAL CARBON A PRO- DUCER OF ENERGY IN MEXICO.
09:00						I-10 WILLIARD. WASTE ENERGY FROM MULT EFFECTS EVAPORATORS.
09:30	A-10 T.E. BRIG. AN INTRODUCTION TO PARAMETRIC ESTIMATING.	B-10 W.L. MONROE. COST ENGINEERING. PAP. R. WORK MANAGEMENT.	C-10 E.A. WYNNANT. COST & SCHEDULE CONTROL OF THE TRANS-ALASKA PIPELINE.	D-10 C.L. HICKS. FUTURE PERFORMANCE ANALYSIS.	F-5 D.E. RYE. RESOURCE AND COST OF TIMBERLION.	I-11 J.B. MACARTHUR. H-OIL TECHNOLOGY AND IN- VESTMENT COST.
10:00						I-12 R. MORTERA. INCIDENCE OF CONSTRUCTION AND FINANCING COST.
10:30	C O F F E E B R E A K					
11:00	A-11 R. KAGEYAMA & R.J. STOKELY. PROBABILISTIC COST ESTIM. ANALYSIS COMP. PROGRAM.	B-11 P.J. DUNNONS. ORIGIN AND EVOLUTION OF ESTIMATING IN A MULTIPLEX.	C-11 A. LOPIAZZI & R. WESTNEY. MULTI-CRITERIA SMALL PRO- JECTS CAN BE CONTROLLED.	D-11 E.F. DE LA ORTA & OTHERS. COMPUTER INVESTMENT EVAL. SYSTEM FOR INDUSTRIAL PLANTS.	F-6 R. NOFFANO. THE ECONOMY OF SCALE-THE END IS VIEW.	I-13 P. PARALUM & M. GASPARI. EFFECTS OF ENERGY CRISIS ON PROCESS INDUSTRY. ITALY.
11:30				D-11 (E-J) C. UMBRO. DECISION ANALYSIS UNDER CERTAINTY & UNCERTAINTY.		
12:00	A-12 E. BRYZ. COST ENGINEERING IN THE FUTURE.	B-12 P. THAMM.	C-12 A. THOMSON.	D-12 S. CHATELIER. MULTI-CRITERIA IN LARGE PROJECT INVESTMENT.	F-7 H. JAHN.	I-14 C. POLAGA. COST ENGINEERING IN THE FUTURE.

L U N C H E O N						
14:30	A-13 A. TAPIA & M. ESTRELLA COMPUTERIZED BUILDING	B-12 M. NELSON COST EFFECTIVE BLDG FOR BUILDING CONSTRUCTION	C-13 P.W. HELAND COST OF DELAYS IN CON- STRUCTION OF PLATFORMS	H-3 F. HAYFIELD EDUCATION AND PROJECTS	F-8 R. SHRIJASTAV PRODUCTIVITY, HUMAN DELAY AND PROJECT MANAGEMENT	I-15 A. BARRERA, J. LOZANO & P.M.G. OVERLAPPING CONSTRUCTION ACTIV. NUCLEAR GEN. COSTS
15:00			C-14 K.S. PARAKSHI PROJECT COMPLETION REPORT			I-16 S. DE LA MORA REINFORCEMENT OPERATION COSTS
15:30	A-14 F. DE LA CRUZ & R. ANAYA PHYSICAL LOGIC IN COST ESTIMATE COMPUTER PROG GRAM	B-13 R.G. JAMES PREPARING CAPITAL COST ESTIMATES N-SEA PROJECTS	C-15 A.S. JAMES COST CONTROL OF ENGINEER- ING PROJECTS	H-4 M. VERCELLON & C. SINCORN ITALIAN BACKGROUND AND PERSPECTIVE FOR COST ENG.	F-9 E. SUKAIMAN, ARLOH & A. AKBAR PRJCT. MANAGEMENT IN HQ DEI EAST OWNERS POINT OF VIEW	I-17 R. TORRES TOWARDS A STRATEGY FOR CAPITAL GOODS IN CON. IND.
16:00	A-15 D. VALLE, C. ODOMAN & A. RAMIREZ CONCEPTUAL COST ESTIMATE OF OFF-SHORE PLATFORMS				F-10 P.F. RAO & G.T. DEB SCHED. METHD. TO REDUCE WORKSPACE CONGESTION	I-18 M. CAPALES & E. ARIAS T. INDETERMINATE LEVELS AN ALTERNATIVE SOURCE ENERGY
16:30	A-1 M. FISKE MODERN ON-LINE PROJECT CAPITAL COSTS CONTROL	B-14 J. DINATALE CONCEPTUAL ESTIMATING RE- QUIREMENT & CONDITIONS	C-16 A. LOPEZ P. PROJ. COST CONTROL SYSTEM A SMALL CAMP ENVIRONMENT	H-5 J.M. NEEL CONSTRUCTION COST ENG. AT TEXAS A & M	F-1 C. TRELLO EVALUATE QUALITY CONTROL IN PREMIXED CONCRETE IND.	I-19 (17) VALLECORTA, RAMON M. & MONTENA APPLICATION OF AN IN- TEGRATED SYSTEM IN A NUCLEAR PLANT
17:00					F-2 F. ORDOÑEZ & C. SANCHEZ COST AND PRODUCTIVITY	

WEDNESDAY, OCTOBER 22, 1980

08:30	J-3 A. DESVIGNES T. SOCIAL COST AND FOOD SUPPLY	B-15 L. POPAT COST DATA FOR PARAMETRIC ESTIMATE. COAL FIRED POWER	C-1 J.A. VAN BUSEN THE KEY TO A SUCCESSFUL PRO- JECT	H-6 G.G. WALKER THE ROLE OF THE COST ENGINEER IN THE 80'S	F-11 R.J. JACOB & K. REFENCE HOW PRODUCTIVITY INCREASE AND ABSORB INFLATION	K-3 P. GARDNER WIDER HORIZONS COST ENG. URBAN DEVELOP.-WORLDWIDE
09:00						
09:30	J-4 L.J. EMBEND NEW TECHNOLOGIES TO COPE WITH WORLD FOOD DEMAND	B-16 D. WORME WHAT IS CONTINGENCY AND HOW TO CALCULATE IT	C-18 R. MYC & C. GUSARNA PROJECT CONTROL IN MEDIUM SIZE ENGINEERING COMPANY	H-7 C. ORFEGAS Y. A. M. ESMEN JACO PRESENT & FUTURE OF MIS PROGRAM IN COST ENG'NG.	G-2 J. CRAN COST INDICES AND ECONOMIC INDICATORS	K-4 J. LUNA T. URBAN DEVELOP. NAT. PLAN & URBANIZATION COST. 2000
10:00			C-19 A. DIAZ, R. MONTIEL & J. MORALES MANAGEMENT OF ENGINEER- ING PROJECTS			
10:30	C O F F E E B R E A K					
11:00	J-5 E. ARIAS T. THE FOOD INDUSTRY AND ITS WORLDWIDE IMPACT	B-16 A. GOMEZ M. COST DETERMINATION ON FREIGHT SERVICE TRANSPORT	C-20 J.-C. PIOT ARE WE DESIGNING PROJECTS AS THEY SHOULD BE BUILT?	H-1 R. BARRA, C. CARRO & F. RIVAS TEACHING OF COST ENG. IN ENG. & ARCH. SCHOOLS URAM.	G-1 A.W. BROOKHUIS A NEW APPROACH TO PLANT COST INDICES	K-1 J. GONZALEZ S. CARRASCO & R.D. INSPECTION OF CONTRACTS & PLUGG. WORKS SCHEDULING ST.
11:30	J-6 J. URBE STANDARDS FOR INCREASING THE PRODUCTIVITY OF LAND					K-2 R. ZUÑIGA, C. ZAMORA & G. MOLZ G. CAPITAL BUDGET SYS. YEARLY CONST. TO LOG SPACE EDUC.
12:00	J-7 E. MARTINEZ G. HUMAN RESOURCES FOR FOOD TECHNOLOGY	B-19 M. MARTINEZ & M.A. TAPIA CONTRACT ADJUSTMENT AND THEIR ELECTRONIC PROCESS	C-21 J. DOGGETT, R. WILLIAMSON & J.G. QUANTITY ANALYSIS: A STATISTICAL APPROACH	H-2 F. EDWARDS & M. PROFESSIONAL DEVELOP. AND ON TECHNOLOG. INNOVATION	G-4 Y. GAUTIERE PRICE ESCALATION AND COST INDEXING	K-5 A. RIVA ORGANIZATION OF MASS PROD. INTO CONSTRUCTIVE SYSTEMS
12:30	J-2 A. REYNOLDS V. IMPORTANCE OF TECHNOLOGY DEVELOP. IN FOOD SECTOR	B-20 E. LO CASCO COST MANAGEMENT				
13:00	L U N C H E O N					
14:30	J-9 R. ARAGON T. SITUATION & PERSPECTIVES FOR BASIC FOODS	B-21 E. LEAL, C. PEREZ & E. ESTRELLA COMPUTER SYSTEM CALCULATE UNIT PRICES & ESTIMATES	C-22 J.A. BUDEN PROGRESS & COST CON- TROL-NORTH SEA PROJECTS	M UNITED KINGDOM WORKSHOP	G-5 A. ANAYA, R. MENCEZ & R. ARAGON APPLICATION OF INDICES & ESCALATION FROM BUILDING	K-7 M. HARRISON B. COST MODELS IN PLANT LOCA- TION
15:00	J-10 T.R. PRESTON A STRATEGY FOR CATTLE IN THE TROPICS	B-22 A. LOPEZ M. & A. SANCHEZ R. COST ESTIMATION AND CON- TROL				K-8 C. TRELLO, G. LUGO & J. COSTA L. ANALYSIS OF ALTERNATIVE SOURCE OF WATER IN A CITY
15:30	J-11 J.G. PUNES FOOD TECHNOLOGY IN MEXICO AND ITS SOCIAL ECONOMIC	B-23 J.J. BASTIDA CONSTRUCTION SCHEDULING ECONOMIC & TECH. ANALYSIS	C-23 T. LA PESH MONITORING PROGRESS OF PETRO-CHEM. CONSTRUCTION		G-3 A. WARSZAWSKI THE INFLATION PROBLEMS IN CONSTRUCTION PLANNING	

NOTE: THE NUMBER ENCLOSED IN PARENTHESIS IDENTIFIES THIS PAPER IN THE PROCEEDINGS.



DISCURSO ANTE LA SESION PLENARIA DEL  
VI CONGRESO INTERNACIONAL " MEXICO 1980 "  
Y  
IV PANAMERICANO DE INGENIERIA ECONOMICA Y DE COSTOS  
EN LA CIUDAD DE MEXICO  
el 22 de octubre 1980

"ALGUNOS FACTORES SUBYACENTES DE LOS COSTOS EN LA COYUNTURA ACTUAL  
DEL DESARROLLO ECONOMICO Y SOCIAL"

por

Emilio Zorrilla-Vazquez

Oficial de Desarrollo Industrial  
de la  
Organización de las Naciones Unidas  
para el Desarrollo Industrial

y

Ex-Presidente de la Sociedad Mexicana de Ingeniería  
Económica y de Costos

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Los puntos de vista expresados por el autor no necesariamente reflejan aquellos del Secretariado de ONUDI.

Damas y Caballeros:

Esta es en verdad una honrosa oportunidad para dirigir unas palabras a tan distinguido auditorio pleno de amistades.

Me complace decir que, como ya es costumbre, los Congresos de SMIEC se caracterizan por aglutinar especialidades diversas de la ingeniería, por reunir personalidades de diferentes rumbos y enfoques en fraternal intercambio: todo ello para abordar una variedad de asuntos de interés real, cuyo vigencia rebasa las fronteras sectoriales en lo nacional, y geográficas, en el ámbito internacional.

Esta prismática cosmopolita y rigor técnico de los temas tratados, antes y hoy, honran a esta Sociedad en su perenne interés de amarrar cuestiones técnicas con la problemática social y, la solución técnica, con el bienestar de la comunidad.

Las disciplinas y métodos que convergen en la ingeniería económica y de costos y que generan el instrumental de estas especialidades, tienen un papel ascendente y, al paso del tiempo, mayor aplicación. Ello más aun, ante la multiplicación de necesidades impulsadas por el crecimiento demográfico y el ejercicio de los derechos sociales básicos de los individuos resultante del progreso secular de los países; también la creciente escasez de lo insuficiente que se agudiza en relación a las demandas reales y suntuarias; por la creciente competencia; y frente a los artificios que se ingenian los contrincantes en la contienda económica internacional.

Los fenomenos que subyacen la problematica del proceso de decisiones economicas y sociales difiere en matiz y oportunidad al cruzar latitudes y longitudes: mas no en su esencia. Es extraordinaria la semejanza de los factores en juego, para la tarea de aumentar el bienestar y la calidad de vida de las personas independientemente de las diferencias aparentes en los ecosistemas.

Las culturas y las costumbres son diferentes, la naturaleza pródiga o magra, pero los derechos humanos y sociales son los mismos. Las alternativas para y los variantes de los procesos del desarrollo económico y social son tambien parecidos en un horizonte, digamos, conceptual y tecnológico al año 2000. Es la opción la que es diferente: la opción del "como".

En este marco es claro que algunas de las cuestiones mas apremiantes de la actualidad atañen a combinaciones diversas entre elementos tales como la energía, la alimentación, el empleo, la salud, la capacidad adquisitiva, la educación y, agregariamos, la productividad.

Los retos del futuro inmediato para el ingenio de la técnica son claros: entre 1950 y 1975 engrosaron a la fuerza de trabajo 200 millones de seres; entre 1975 y el año 2000 se incorporarán más de 550 millones: o sea algo más del doble.

La población urbana de los países en desarrollo crecio en 400 millones de habitantes en el periodo tambien de 1950 a 1975. En los proximos 25 años, hacia el año 2000, algunos calculan

que el incremento en la población urbana será del orden de un billon de personas. Para fines de siglo, se estima que habrá 40 ciudades con cinco a seis millones de habitantes y aproximadamente 18 de ellas tendrán más de 10 millones de habitantes: quizás cinco con más de 25. Esta gran urbe que es la Ciudad de México tendrá más de 30 millones de habitantes para entonces de continuar su acelerado crecimiento.

Otro perfil se refiere a las tendencias de la producción agropecuaria y los requerimientos de calorías alimentarias en el año 2000 que se estima sean cerca de 70% mayores que los actuales.

Uno de los escenarios centrales de la evolución económica latinoamericana, por ejemplo, es el que se refiere a la articulación del sector agrícola con el resto del sistema económico. Es evidente el desequilibrio entre las corrientes migratorias de las zonas rurales y la capacidad de generación de empleo del sector urbano - industrial. La importancia de esto se comprende mejor si se considera que en el periodo 1950 - 1976 más de 40 millones de campesinos migraron hacia las zonas urbanas.

En otro aspecto y bajo ciertas premisas que se pueden establecer en la relación alimentación - energía, es interesante observar que la energía de un barril de petróleo crudo equivale a la necesaria para la producción agrícola del alimento mínimo de tres personas durante un año.

Por consiguiente, son fáciles de imaginar los requerimientos en servicios administrativos, educativos, de salud, infraestructurales, en materia de industrialización, de alimentación, y de conservación y regeneración del medio ambiente, en un futuro inmediato.

La ingeniería económica y de costos incide, en efecto, sobre todos estos capítulos con cada vez mayor vigor, justamente en pro-

porción al grado en que los recursos financieros son insuficientes o los recursos físicos y humanos requeridos manifiestan alguna insuficiencia.

Es este orden de ideas una breve reflexión es aquella que se refiere al costo como una consecuencia en primera instancia y no un factor causal original. Es pues una consecuencia de todavía otros factores. Porque el costo refleja la moderación o el abuso, la conjetura o el calculo, refleja el conocimiento o la improvisación, la deficiencia o eficiencia; y visto el costo como un precio, refleja el capricho o la necesidad y la escasez o la abundancia.

Para el logro de un costo social o comercialmente aceptable parece requerirse - por simple que parezca, la voluntad, un consenso, el metodo, los instrumentos, la organización y los recursos monetarios.

Un caso típico de esto que comentamos lo es la productividad: fenomeno que tan intimamente esta ligado a los costos. Es conocida la influencia que, sobre la productividad, ejercen elementos tales como la capacitación, la calidad, la confiabilidad de las maquinas; y, suele olvidarse, aquella que ejercen el estímulo, la motivación, y la actitud hacia el trabajo.

La producción no depende tanto de maquinas como de actitudes y de la voluntad, humanas, pues en ultima instancia es el hombre el que las crea, el que se organiza para producirlas, el que las hace funcionar y el que aquilata su operación y comportamiento.

En el campo, a la tierra la hacen producir hombres y mujeres con esperanza fundada, con enfoques y actitudes constructivas, y con una participación justa en la distribución de los frutos de su trabajo.

Esta quizás sea una época en la historia donde el binomio de la educación y la capacitación constituya más que en otras, el catalizador del desarrollo económico y social.      Ambas porque

en lo general hay indicios de que la educación sin capacitación estratifica la sociedad - eliteza la estructura social y denigra el trabajo manual; por el otro lado, capacitación sin educación engendra un automata del trabajo, del consumo, aísla al individuo del progreso institucional y del cambio social. Estos dos elementos, íntimamente vinculados, por lo tanto, configuran parte medular de la escala de valores; permiten integrar un enfoque que ubica al futuro respecto del presente y vice-versa. La combinación de la educación y la capacitación propicia la realización personal en si misma y para la sociedad.

Son esos dos rubros pues que redimen del subdesarrollo, de la subproductividad, de la suborganización. Es quizá sobre ellos que habría que volcar todo el apoyo para tender con esfuerzo lineal hacia el bienestar económico y social.

Cada día se hace más patente la conveniencia de enfocar la problemática del desarrollo como sistemas y subsistemas de programas y proyectos en el espacio geográfico y en el tiempo: congruentes en la planeación, oportunos en la programación, viables en la evaluación y consistentes en sus beneficios.

Sencillamente las magnitudes, la extensión de las fronteras, de las interrelaciones y, la urdimbre de causas-efectos involucrados en los procesos de decisión modernos solicitan un análisis y el planteamiento de alternativas cada vez más sustanciadas en lo técnico. Las circunstancias piden, asimismo, cada vez mayor apuntalamiento de la intuición y la creciente ponderación del costo real y el virtual de las acciones de amplio efecto en lo social. En la perspectiva, el vínculo entre la decisión administrativa y la decisión técnica se afianzará en función de la complejidad de las actividades: por ejemplo, se observa ya una mayor aceptación de la planeación, en las empresas y en los gobiernos.

A pesar de los sombríos panoramas que persistentes diferencias y desmedidas ambiciones entre los hombres pueden producir, se vislumbra la posibilidad de un desarrollo acelerado en el hemisferio sur. A la energía potencial de los petrorecursos para generar empleo productivo y producción agrícola tecnificada, se suma su enorme capacidad para inducir la transferencia tecnológica programada, para vigorizar el comercio de bienes y servicios industriales, y para profundizar en la integración industrial local.

En este foro de ingeniería cabe señalar que las perspectivas son halagueñas para que países en semejantes etapas de desarrollo implementen medios e instrumentos de cooperación industrial, tecnológica y científica: sin embargo, es conveniente promover esas acciones con mayor ahínco. En especial por lo que toca a la promoción y la ejecución en conjunto de proyectos industriales claves, de gran escala, que puedan nuclear demandas y todavía otras empresas industriales y servicios conexos. Asimismo para el intercambio de experiencias en áreas de la ingeniería, de la investigación aplicada, en el diseño de programas y la aplicación de políticas industriales, y de modalidades institucionales: todo ello a fin de cristalizar acciones de apoyo mutuo-financiero y técnico.

Soluciones técnicas de corto plazo existen en la mayoría de los casos y, cuando no, siempre afloran en la frontera tecnológica pero ello no es suficiente. Aunado a ello, es una exigencia de la época desplegar un esfuerzo verdaderamente especial, reducir la descoordinación interesada, negociar las diferencias y evitar pugnas que desgastan la energía social: en especial en aquellos lugares que menos están en condiciones de desperdiciarla.

Estamos ciertos que esta y las demás ingenierías de especialidad estarán siempre prestas a responder a esta demanda social. Mis felicitaciones nuevamente a los organizadores y participantes en este relevante Congreso y mis sinceros deseos por el continuado progreso de SMIEC.

Muchas gracias

PRINCIPAL PEOPLE MET

- Admiral Ricardo Chazaro Lara,  
Secretary of the Navy and President of the Congress Organizing Committee
- Mr. Miguel de la Madrid,  
Secretary of Programming and Budgeting
- Mr. Edgar Fernandez Gomez,  
President, Mexican Society of Economic and Cost Engineering (SMIEC)
- Mr. Jose Aguilar Alcerreca,  
President, Union Mexicana de Asociaciones de Ingenieros (UMAI)
- Mr. Rafael Decelis,  
President, Sociedad Mexicana de Ingenieros (SMI)
- Mr. Carlos Lopez Rivera,  
President of Union Panamericana de Asociaciones de Ingenieria (UPADI)
- Mr. Agapito Gonzalez,  
President of the Instituto Mexicano de Control de Calidad, A.C.
- Mr. Enrique Ojeda Norma,  
Head, Major Fiscal Accounting Office
- Mr. Pedro Galicia,  
General Manager, Nacional Financiera, S.A.
- Mr. Manuel Viejo Zubicaray,  
Rector, Universidad Nacional Autonoma de Mexico, Unidad Cuantitlan.
- Mrs. Marta Lopez Escobar,  
Special Assistant to the Director General de Agroindustrias,  
Secretaría de la Reforma Agraria
- Mr. Fernando Faynzylber  
SIDFA, UNIDO
- Mr. M. Gucovsky  
UNDP Regional, N.Y.
- Mr. Fernando Zumbado,  
Oficial de Programas Proyectos Regionales para America Latina  
UNDP, N.Y.
- Mr. Henry Harman,  
Funcionario de Area, Dirección para America Latina, UNDP, N.Y.





OFICINA DEL CONTADOR MAYOR

10/

Mr. W. Behrens  
U N I D O

October 8th, 1980

5. The possible dates in which you could give us the consulting services and
6. Finally, the price involved.

Looking forward to hearing from you, we kindly ask you to give our regards to Ing. Zorrilla.

Very truly yours,



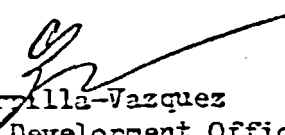
Lic. Enrique Ojeda Norma  
CONTADOR MAYOR DE HACIENDA

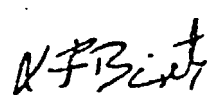
EON'arg

Subject: MEXICO: Project Concept for the "Contaduria Mayor de Hacienda"

1. The "Contaduria Mayor de Hacienda" has the responsibility among others, to review, audit and supply the Mexican Legislature (Chamber of Deputies - Lower House) with techno-economic and financial elements to peruse, evaluate, harness resources and eventually comment on and approve the federal budget (ex-ante) and the public accounts (ex-post). The latter functions make up a Constitutional Mandate for the Legislature.
2. On my recent trip to Mexico as invitee of the Mexican Government to the International Seminar on Public Investment Programming/Evaluation (II Seminario de Entidades Fiscalizadoras Superiores Gubernamentales) we conversed with Mr. Enrique Ojeda Norma "Major Accountant of Public Finance" (Contador Mayor de Hacienda), the Head of the corresponding area, on this matter, in relation to the following:
  - a) The review, comptrolling, and auditing functions are to be reinforced with increased staff: quality and quantity.
  - b) The function will be enhanced by continuing observation, control and evaluation; rather than a one-time exercise at beginning and end of the budget year.
  - c) It would be convenient to enhance the "Contaduria Mayor de Hacienda" capabilities for project evaluation: particularly in relation to cost/benefit analyses, external economies, welfare concepts (pros/cons), and very particularly of public industrial enterprise and secondarily of industrial infrastructure investment.
  - d) To this effect, it was suggested that a short seminar/work-shop could be designed for the new and existant staff of the "Contaduria Mayor" and functionaries selected from the diverse State Comptroller Offices, on Project/Public Expenditure Evaluation regarding inter-alia, techno-economic-financial and, specially cost/benefit analysis related thenes such as, shadow pricing, marginal versus average cost pricing, consumer/producer surplus, social surplus, inflation impact on evaluation criteria including cash-flows, and other current state-of-the-art social (non quantitative) evaluation criteria.
  - e) That insofar as public investment and the "Contaduria's" function encompassed industrial, infrastructure, and agricultural public expenditure, among other items, it would be advisable to secure the concurrence of a FAO and World Bank Expert to touch on agricultural and/or infrastructural questions pertaining to project investment evaluation.
  - f) That the course could be held in Mexico City; possibly in late September or early January; should last a week (5 working days); intensive classroom sessions a.m.; including selected a copious theoretical-practical materials, followed by discussion in p.m. on experiences, methodology/concepts, examples if possible, etc.

3. As a consequence, preliminary conversations have been had with Mr. W. Behrens, Acting Head, IOD/FEAS. Further, specific steps can be taken in this direction in Mexico City during stop-over on the writer's Mission to CABEI of Tegucigalpa, Honduras. This matter and complementary comments are taken up in the writer's report on his recent Mission to Mexico (May 10-17, 1930).

  
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