

**Document of
The World Bank**

Report No: NCO00001775

**NOTE ON CANCELLED OPERATION REPORT
(IBRD-75740)**

ON A

LOAN

IN THE AMOUNT OF USD 30 MILLION

TO THE

REPUBLIC OF CHILE

FOR

PROMOTING INNOVATION AND COMPETITIVENESS

December 27, 2010

**Poverty Reduction and Economic Management
Bolivia, Chile, Ecuador, Peru and Venezuela Country Management Unit
Latin America and the Caribbean Region**

CURRENCY EQUIVALENTS
(Exchange Rate Effective December 2, 2010)

Currency Unit = Chile Pesos (CLP)
1.00 CLP = US\$ 0.00206079
US\$ 1.00 = 485.250 CLP

FISCAL YEAR

January 1 – December 31

ABBREVIATIONS AND ACRONYMS

APL	Adjustment Policy Lending
CNIC	National Innovation Council for Competitiveness (<i>Consejo Nacional de Innovación para la Competitividad</i>)
CONICYT	National Commission For Scientific And Technological Research
CORFO	Chilean Development Agency (Corporation for the Promotion of Production)
CPS	Country Partnership Strategy
GDP	Gross Domestic Product
LAC	Latin America and the Caribbean Region
LCSFM	Latin America Financial Management Unit
LCSHE	Latin America Education Unit
LCSPF	Latin America Finance and Private Sector Unit
LCSPT	Latin America Procurement Team
M&E	Monitoring and Evaluation
MoE	Ministry of Economy
MSTQ	Measurements, Standard, Testing and Quality
NIS	National Innovation System
OECD	Organization for Economic Cooperation and Development
PCU	Project Coordination Unit
PFM	Public Financial Management System
R&D	Research and Development
S&T	Science And Technology
SIGFE	Budgetary and Financial Management System (<i>Sistema Integrado de Gestión Financiera del Estado</i>)
SIL	Sector Investment Loan
SME	Small and Medium Enterprise
STI	Science, Technology and Innovation
TFP	Total Factor Productivity

Vice President: **Pamela Cox**

Country Director: Carlos Felipe Jaramillo

Sector Director: Marcelo Giugale

Sector Manager: Lily L. Chu

Project Team Leader: Esperanza Lasagabaster

NCO Team Leader : Esperanza Lasagabaster

CHILE
Innovation for Competitiveness Project

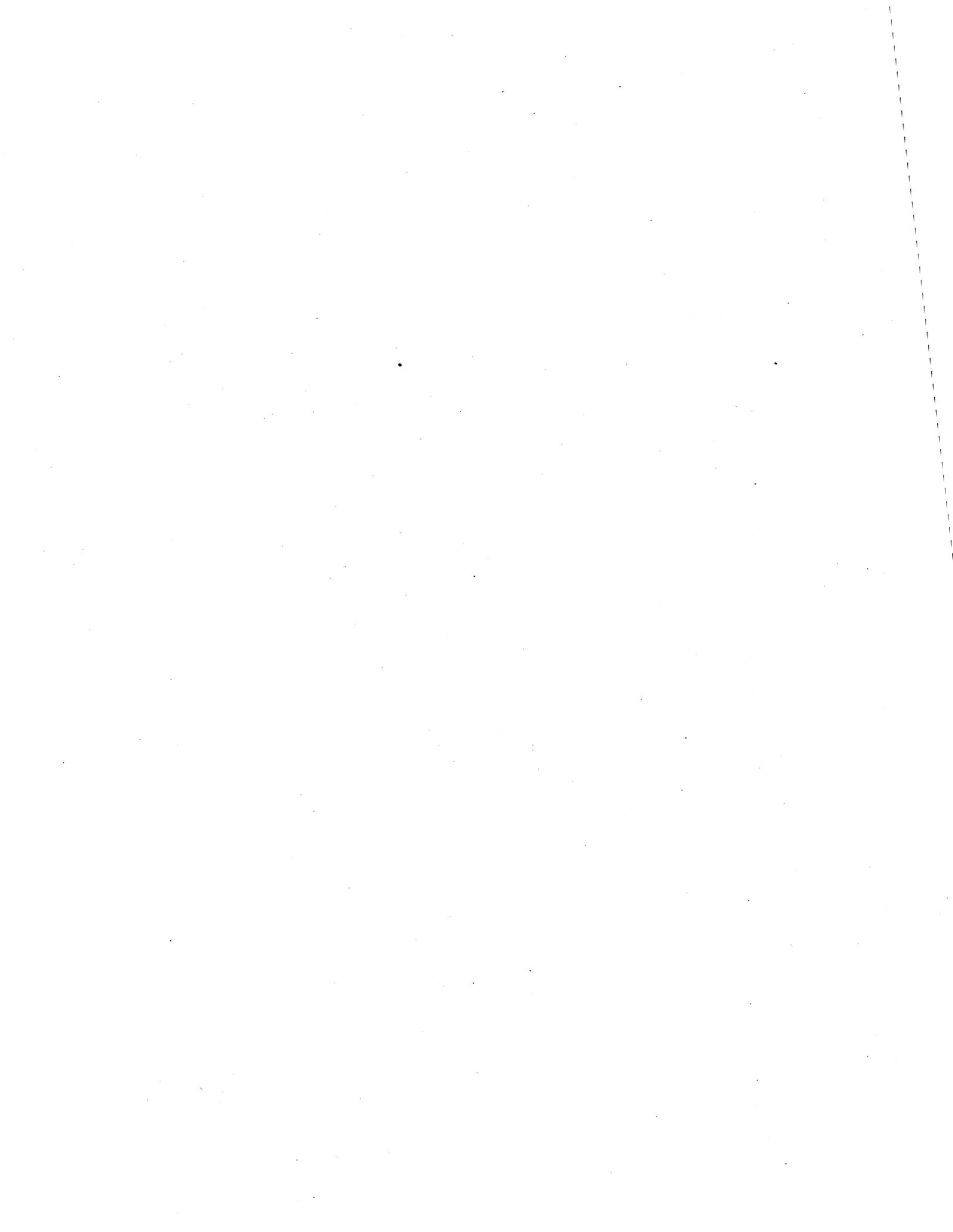
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MAP



A. Basic Information

Country:	Chile	Project Name:	Promoting Innovation and Competitiveness Project
Project ID:	P082927	L/C/TF Number(s):	IBRD-75740
NCO Date:	12/28/2010		
Lending Instrument:	SIL	Borrower:	REPUBLIC OF CHILE
Original Total Commitment:	USD 30.0M	Disbursed Amount:	USD 0.1M
Revised Amount:	USD 0.1M		

Environmental Category: C

Implementing Agencies:

Ministry of Economy

Cofinanciers and Other External Partners:

B. Key Dates

Process	Date	Process	Original Date	Revised / Actual Date(s)
Concept Review:	06/04/2007	Effectiveness:	01/15/2010	11/01/2009
Appraisal:	12/10/2007	Closing:	07/15/2014	07/15/2010
Approval:	07/15/2008			

C. Ratings Summary

Performance Rating by NCO

Outcomes:	Not Applicable
Risk to Development Outcome:	Not Applicable
Bank Performance:	Satisfactory
Borrower Performance:	Moderately Unsatisfactory

D. Sector and Theme Codes

	Original
Sector Code (as % of total Bank financing)	
General industry and trade sector	45
Public administration- Industry and trade	40
Tertiary education	15
Theme Code (as % of total Bank financing)	
Education for the knowledge economy	15

Other financial and private sector development	41
Small and medium enterprise support	12
Technology diffusion	32

E. Bank Staff

Positions	At NCO	At Approval
Vice President:	Pamela Cox	Pamela Cox
Country Director:	Carlos Felipe Jaramillo	Pedro Alba
Sector Manager:	Lily L. Chu	Eduardo Velez Bustillo
Project Team Leader:	Esperanza Lasagabaster	Esperanza Lasagabaster
NCO Team Leader:	Esperanza Lasagabaster	
NCO Primary Author:	Esperanza Lasagabaster	

F. Ratings of Project Performance in ISRs

No.	Date ISR Archived	DO	IP	Actual Disbursements (USD millions)
1	10/16/2008	Satisfactory	Satisfactory	0.00
2	12/20/2008	Satisfactory	Satisfactory	0.00
3	06/09/2009	Moderately Satisfactory	Moderately Satisfactory	0.00
4	12/22/2009	Moderately Satisfactory	Moderately Satisfactory	0.00
5	06/15/2010	Unsatisfactory	Unsatisfactory	0.00

1. Context, Project Development Objectives, and Design

Country Background

Chile has been the fastest growing economy in Latin America since 1990. The impressive performance of the economy owes much to a strong institutional framework, exemplary monetary policies and deep integration into the global economy. Due to strong growth Chile has made notable progress towards the goal of convergence with OECD economies. The income gap, however, remains sizeable. Despite progress in recent decades, Chile remains highly dependent on the export of unprocessed natural resources, notably copper.

Chile will need fast and sustained growth to further reduce poverty, continue improving living standards, and close the income gap with the lower tier of OECD countries by 2020. Sound macroeconomic management is well entrenched. Hence, Chile is in a favorable position to focus on microeconomic reforms aimed at boosting the capacity of firms to sustain productivity growth and develop new business opportunities. Evidence from economies that have successfully diversified and added value to their natural resource base such as Australia and Finland suggests that boosting Chile's capacity to innovate should be at the center of such reforms. Cross-country analysis indicates that half of all differences in income and growth is attributable to differences in total factor productivity (TFP), generally associated with technological development and innovation (see Chile, Development Policy Review, 2006). Chile's total factor productivity has historically been relatively high; however during the 1990s, TFP growth rates decreased.

Sector Background

In the area of science, technology and innovation (STI), Chile has made gains over the last decade but continues to lag substantially advanced economies with respect to most STI indicators. Chile's R&D spending per capita, full-time equivalent researchers as a percent of population, and patent activity significantly lag the efforts of OECD countries, even those with a natural resource base. The differences are not due solely to income disparities; on some STI indicators, Chile also falls behind dynamic economies with lower GDP per capita such as China and India.

Several factors have explained Chile's relatively weaker performance on innovation relative to more advanced economies:

- Chile's policies and institutional framework for innovation were fragmented preventing an efficient use of public support for innovation.
- The capacity to design and evaluate innovation policies can be strengthened.
- Chile's stock of human capital for innovation and technology management is low and geographically concentrated.

- Overall investments in research and development are low and the articulation with private sector is less than necessary.
- Mechanisms for transferring technology to small and medium enterprises can be enhanced.
- The incentives and support for technology based start-up companies are at a nascent stage.

Rationale for Bank Assistance

During the 2000s, the World Bank had assisted the Government of Chile in the innovation area through policy advice (e.g., the preparation of a Strategy to Promote Innovative SMEs (2004), an Investment Climate Assessment (2006), and the Development Policy Review (2006)) and support for two investment projects – *the Millennium Science Initiative followed by the Science for the Knowledge Economy Project*. The latter, implemented by CONICYT, was conceived as a two-stage APL since testing new instruments in the innovation system involved a learning and incubation process before they could be consolidated. The APL1 was satisfactorily implemented and closed at the end of March 2007, as originally envisaged.

In 2007, the Government of Chile requested a new investment project to foster Innovation. The project built on the aforementioned APL1 but had a wider set of objectives to accommodate the new policy vision, which was more ambitious. It supported key elements of the national innovation strategy with a strong emphasis on building robust institutional foundations. The Government regarded the World Bank as a strategic partner due to its expertise in the innovation area, knowledge of a wide range of international experiences such as OECD and Asia, and the capacity to help adapt international practices and instruments to Chile's reality and needs.

The project was fully aligned with the goals of the Country Partnership Strategy (CPS). In particular, it supported the objective of converging with OECD income levels and living standards by accelerating sustainable growth through increases in total factor productivity. The project had strong synergies with other Bank interventions aimed at increasing Chile's innovation capacity, in particular the Tertiary Education Finance for Results APL1.

Development Objective

The project's overall development objective was to enhance Chile's policy and institutional innovation framework for competitiveness and improve the impact of priority innovation programs. More specifically, the project's objective was: (i) to strengthen the Ministry of Economy's capacity on innovation and ensure its coherence with other policies for competitiveness; (ii) strengthen CONICYT and improve the coherence, quality and relevance of research funding policy in Chile; and (iii) stimulate technology transfer and the creation of new technology based enterprises through CORFO.

Components

The project sought to contribute to the aforementioned development objective through three components:

Component one: *Strengthening the MoE capacity on innovation and related competitiveness policies.* This component sought to enhance the MoE's institutional capacity to formulate, monitor, and evaluate innovation policies in accordance with the guidelines of the National Innovation Strategy. In addition, it would have supported selected elements of the broader Strategic Plan to strengthen the MoE, in order to foster consistency between innovation policies and other policies seeking to enhance Chile's competitiveness. The design of this component benefited from an extensive consultation process with internal and external stakeholders.

Component two: *Strengthening Chile's Science Base.* This component aimed to strengthen CONICYT by helping the institution formulate a strategic plan with clear medium-term goals aligned with the national innovation strategy, develop and implement a coherent research support policy, and increase its capacity to design and evaluate programs. At the end of the project, CONICYT would have increased its capacity to design, oversee, and learn from the implementation of its programs. The Inter-ministerial Committee on Innovation and the Ministry of Education were to guide CONICYT in the implementation of this component.

Component three: *Fostering Technology Transfer and New Technology-Based Ventures.* The component intended to strengthen *CORFO*-led programs aimed at start-ups of knowledge intensive businesses and the adoption of higher value technologies by SMEs, and its monitoring and evaluation capacity. It sought to achieve the above through three subcomponents: (i) upgrading new technology based enterprise development, (ii) strengthening technology extension and transfer services for SMEs, and (iii) strengthening *CORFO*'s monitoring and evaluation capacity of InnovaChile's programs.

Costs and Funding

Project Cost By Component/Sub-component	Counterpart Financing US\$ million	Loan US\$ million	Total US\$ million
1. Strengthening the MoE's capacity on innovation and its coherence with other competitiveness policies	7.0	7.3	14.3
1.1 Strengthening the capacity to formulate and implement innovation and related competitiveness policies	3.3	2.7	6.0
1.2 Establishment of a Monitoring and Evaluation Unit	2.9	2.3	5.2
1.3 Project Coordination Unit	0.8	2.3	3.1
2. Strengthening Chile's science base	17.3	13.4	30.8
2.1 Sharpening CONICYT's role within the NIS	3.0	1.9	4.9
2.2 Consolidating/reformulating group research support and promoting mobility of advanced human capital	13.5	9.5	23.0
2.3 Enhancing CONICYT's M&E capacity	0.8	2.0	2.8
3. Fostering technology transfer and new ventures	11.4	8.2	19.6
3.1 Start up of knowledge enterprises	0.3	4.1	4.4
3.2 Promoting technology transfer	9.9	2.6	12.5
3.3 Strengthening CORFO's M&E capacity of InnovaChile's programs	1.2	1.5	2.7
Unallocated Financial expenditures	4.3	1.0	4.3
Front end fee		0.075	0.075
Total Project Costs	40.0	30.0	70.0

Implementation Arrangements

The Project would have been implemented by the MoE, CONICYT and CORFO. A Project Coordination Unit (PCU) within the MoE, reporting directly to the Minister of Economy, was responsible for overall coordination of project activities among the three institutions and for the implementation of component 1. CONICYT and CORFO were responsible for implementing components 2 and 3 of the project, respectively, and inform the MoE accordingly. The PCU within the MoE would have presented semi-annual progress reports to the Bank on the implementation of the three components, progress on achieving project indicators, and other project administration aspects.

Financial Management (FM) arrangements for the project would have relied on the country budgetary and financial management system (SIGFE). Each entity would have executed its component and would have reported execution to the PCU within the MoE,

which would have been responsible for the preparation of the interim and annual financial statements and disbursements for the project as a whole. Procurement activities would have been carried out by each implementing agency (the Ministry of Economy, CONICYT, and CORFO) for their own component. However, the PCU within the MoE would have been responsible for monitoring the consistency of all procurement activities with Bank practices. The PCU within the MoE was adequately staffed with technical experts to support project design and implementation.

Risk Analysis

H - High, S - Substantial, M - Modest, L - Low

Risk	Risk Rating	Risk Mitigation Measure
Ineffective coordination across agencies and ministries forming part of the innovation system hampers project implementation.	S	This risk was mitigated by the establishment of the Inter-ministerial Cabinet on Innovation that comprised key ministries forming part of Chile's support system for innovation. The project's support for the PCU on Innovation at the MoE created the conditions for the Ministry to undertake its coordinating role in an effective manner. The <i>Convenio Marco</i> (Framework Agreements) to be signed between the MoE and CONICYT and the MoE and CORFO will also facilitate coordination and project implementation.
Inadequate progress in strengthening the MoE capacity on innovation and related competitiveness policies	M	The right set of conditions—in particular leadership, vision, government support, and a change management team—were in place mitigating this risk. Furthermore, the change management team developed a consultation process involving all major stakeholders in such a way that there was ownership and coherence in the design and implementation of the institutional strengthening process. Internal and external communications would continue during project implementation.
Potential less demand than expected from the private sector for technology services	S	This risk was mitigated by various factors. First, Chile enjoyed a favorable business climate that encouraged entrepreneurship and private sector investment, and the government was working towards further improving the business climate through <i>Chile Compite</i> and expanding firms' access to new external markets. Second, technology centers and other technology transfer programs would comprise technology brokers that would play a proactive role in reaching enterprises, identifying their technology needs, and linking them with technology service providers.
Resistance to change from research performers and other stakeholders who benefit from the current research funding arrangements	M	This risk stemmed mostly from the traditional separation of Chile's research community from other parts of the innovation system. CONICYT's stakeholders had sometimes impeded changes toward greater accountability and relevance. The risk was mitigated by the close cooperation between CONICYT and the Inter-Ministerial Committee of Innovation and the new vision and strategy developed by the National Innovation Council. Changes to CONICYT's strategic directions would have to be both aligned with the national strategy on innovation and supported (ex-ante) by the Inter-Ministerial Committee of Innovation, the National Innovation Council and the Ministry of Education. This would provide added

		authority to CONICYT's decisions to orient funding mechanisms toward greater relevance for innovation.
Financial Management	L	Project activities would be mainstreamed in the country financial management system (SIGFE) and thus shared the same low risk as Chile's Public Financial Management System (PFM).
Procurement	M	The procurement assessment indicated that the procurement risk was average. A procurement consultant knowledgeable of Bank procurement policies and procedures had been contracted by the PCU of the MoE. In addition, a procurement information system acceptable to the Bank would be put in place during the first year of the implementation.
Overall risk rating	S	

Quality at Entry

The project responded to a demand from the Government of Chile to strengthen key institutional pillars of its innovation system in line with the national innovation strategy. During project preparation, the Bank team carried out consultations with members of the National Innovation Council for Competitiveness, and representatives from the private sector, the academic community, and think tanks. Project formulation was also informed by extensive analytical work on innovation conducted by Chilean academics and World Bank experts as well as lessons learned from the *Chile—Science for the Knowledge Economy Project* and other innovation projects in the region (see Annexes 2 and 12 of the Project Appraisal Document).

Initially, the leadership of the Ministry of Economy requested support for a more ambitious operation that would have encompassed a broader institutional strengthening of the Ministry of Economy together with support for CONICYT and CORFO. On the basis of follow up consultations with the Government and Bank management, it was agreed that the project would focus on strengthening those institutional aspects of the Ministry of Economy that had the greatest bearing on innovation policies and programs. A broader focus would have increased the project's complexity.

2. Post-Approval Experience and Reasons for Cancellation.

(main events leading to cancellation, steps taken to resolve problems, exogenous factors, identification of causes and responsibility if project failed, implications of failure):

The project was approved by the Board on July 15, 2008 and signed by the Minister of Finance on December 31, 2008. It became effective on November 1, 2009, following clearances by the Comptroller's Office. A new Government took office in March 2010. The team visited Chile on May 12-14, 2010, to meet the new authorities, including Mr. Juan Andrés Fontaine, the new Minister of Economy, and to discuss the project's objectives. On June 8, 2010, the new Government of Chile requested the project's cancellation. Only the front end fee for US\$75,000 was disbursed. The innovation strategy of the new Government has a substantially different focus.

3. Assessment of Bank Performance

(lending process/ensuring Quality at Entry, supervision and implementation assistance role, compliance with Bank policies, justification for rating):

Rating: Satisfactory

The Bank performance is rated satisfactory. Project formulation followed a clear demand driven approach, and consultations were conducted with different stakeholders as noted earlier. Its design was also informed by extensive analytical work performed by the World Bank, academics and practitioners. During preparation, the World Bank team was active sharing lessons learned from innovation policies and programs in other Latin American and OECD countries.

Following approval by the World Bank's Board in July 2008 and prior to effectiveness in November 2009, the World Bank's team maintained a very active dialogue with Government counterparts and conducted supervision missions, helping with the implementation of the first project activities as noted in section 4 below. The World Bank management team also maintained active discussions with the Ministry of Finance to follow up on the reasons concerning delays in project effectiveness, in particular the clearance process by the Comptroller's Office.

In May 2010, two months after the new Government took office, the World Bank team conducted a mission to discuss the project's objectives and its scope with the new leadership at the Ministry of Economy, who expressed a different policy approach towards innovation as discussed in the following section.

4. Assessment of Borrower Performance

(government and implementing agency performance, compliance with covenants, justification for rating):

Rating: Moderately unsatisfactory

From the early stages of project preparation, the Government established project units at each of the three executing agencies (the Ministry of Economy, CORFO and CONICYT), which facilitated project preparation. The three units actively contributed to the design of the project following the guidelines of the Inter-ministerial Committee on Innovation. In particular, the unit at the Ministry of Economy played a leadership role in coordinating activities among the three institutions; its head reported directly to the Minister of Economy, Chair of the Inter-ministerial Committee on Innovation.

Following Board approval in July 2008, the loan agreement was signed by the Minister of Finance in December 2008. Project effectiveness did not take place until November 2009, after the project was cleared by the Comptroller's Office. Despite the unusual delay, the Comptroller's Office did not have observations on the project's objectives and scope. During this period, the executing agencies, especially the Ministry of Economy and CORFO, were active launching the first project activities. Most importantly, the Ministry

of Economy created a monitoring and evaluation unit for innovation and competitiveness, started to gather new indicators on STI, and completed the first studies and evaluations; CORFO developed a framework for monitoring and evaluating InnovaChile's programs (Component 3.3) and completed the first phase of the process for selecting the beneficiaries of Component 3.2 to establish technology centers. Activities moved more slowly at CONICYT, although they also started to gather new indicators on science and technology complementing the actions of the other two implementation agencies.

A few months after project effectiveness, a new Government took office. The approach of the new Government on innovation policy differs markedly from the innovation strategy prepared by the previous National Innovation Council for Competitiveness, which served as a key guiding framework for the project along with stakeholder consultations. The new Government considers that the public sector should not play an active role in addressing market failures (or that there are substantial market failures) related to innovation and proceeded to request project cancellation.

5. Lessons Learned

(both project-specific and of wide general application)

The main lesson learned is that consultations with a wide range of stakeholders are critical to the success of a project, but this might not suffice if there is an important political change in the country. In circumstances where a very substantial change in the policy direction occurs, project cancellation might often be the preferable course of action.

Annex 1. Bank Lending and Implementation Support/Supervision Processes

(a) Task Team members

Names	Title	Unit
Lending		
Michael F. Crawford	Sr Education Specialist	LCSHE
Ana Maria Grofsmacht	Procurement Analyst	LCSPPT
Jose L. Guasch	Consultant	LCSPF
Bob Hodgson	Consultant	LCSPF
Efraim Jimenez	Consultant	EAPCO
Esperanza Lasagabaster (TTL)	Sr Financial Economist	LCSPF
William F. Maloney	Lead Economist	DECMG
Daniela Marotta	Country Economist	MNSPR
Marta Elena Molares-Halberg	Lead Counsel	LEGES
Xiomara A. Morel	Sr Financial Management Specialist	LCSFM
Alejandro Roger Solanot	Sr Financial Management Specialist	LCSFM
Bob Hodgson	Consultant	LCSPF
Kristian Thorn	Consultant	ECSHD
Supervision/NCO		
Micky O. Ananth	Program Assistant	LCSPF
Marco A. Arena Duffoo	Economist	LCSPF
Michael F. Crawford	Sr Education Specialist	LCSHE
Ana Maria Grofsmacht	Procurement Analyst	LCSPPT
Jose L. Guasch	Consultant	AFTSN
Robert Hodgson	Consultant	LCSPF
Jose C. Janeiro	Senior Finance Officer	CTRFC
Andres Mac Gaul	Senior Procurement Specialist	LCSPPT
Marta Elena Molares-Halberg	Lead Counsel	LEGES
Rekha Reddy	Economist	LCSPF
Alejandro Roger Solanot	Sr. Financial Management Specialist	LCSFM

(b) Staff Time and Cost

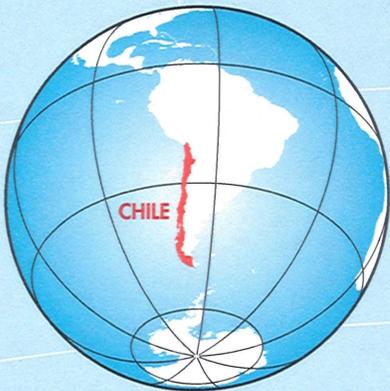
Stage of Project Cycle	Staff Time and Cost (Bank Budget Only)	
	No. of staff weeks	USD Thousands (including travel and consultant costs)
Lending		
FY07	26	174.06
FY08	42	233.84
FY09	1	3.50
Total:	69	411.40
Supervision/NCO		
FY09	17	121.62
FY10	21	99.44
Total:	38	221.06

Annex 2. List of Supporting Documents

Concept Note

Project Appraisal Document

Implementation Supervision Reports



PACIFIC OCEAN

REGIONS OF CHILE

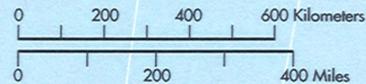
- I. TARAPACÁ
- II. ANTOFAGASTA
- III. ATACAMA
- IV. COQUIMBO
- V. VALPARAÍSO
- RM. REGIÓN METROPOLITANA DE SANTIAGO
- VI. LIBERTADOR GENERAL BERNARDO O'HIGGINS
- VII. MAULE
- VIII. BIO BÍO
- IX. LA ARAUCANÍA
- X. LOS LAGOS
- XI. AISEN DEL GENERAL CARLOS IBAÑEZ DEL CAMPO
- XII. MAGALLANES Y DE LA ANTÁRTICA CHILENA
- XIV. LOS RÍOS*
- XV. ARICA-PARINACOTA*

* Regions approved by cabinet and parliament, will become effective on October, 2007.

This map was produced by the Map Design Unit of The World Bank. The boundaries, colors, denominations and any other information shown on this map do not imply, on the part of The World Bank Group, any judgment on the legal status of any territory, or any endorsement or acceptance of such boundaries.

CHILE

- SELECTED CITIES AND TOWNS
- ⊙ REGION CAPITALS
- ⊕ NATIONAL CAPITAL
- RIVERS
- MAIN ROADS
- RAILROADS
- REGION BOUNDARIES
- - - INTERNATIONAL BOUNDARIES



FALKLAND ISLANDS (ISLAS MALVINAS)
A DISPUTE CONCERNING SOVEREIGNTY OVER THE ISLANDS EXISTS BETWEEN ARGENTINA WHICH CLAIMS THIS SOVEREIGNTY AND THE U.K. WHICH ADMINISTERS THE ISLANDS.