Public transport in remote and isolated territories of Chile

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Ministry of Transport and Telecommunications
Chile
4,270 km long (longest and thinnest country in the world)

16 administrative regions

Population: 17.5 million
12% rural population

Desert climate in the north, Mediterranean climate in the center, and steppe climate in the south

40% of the population lives in Santiago Metropolitan Region

Metropolitan Region: 462 residents/km²

Magallanes Region: 0.12 residents/km²

Chile features every climate classification and territory spans three continents
Difficult geographic conditions in Chile, especially in the southern portion of the country, make Transport connectivity difficult. Private operators are not interested in providing connectivity services in these areas because they provide a negligent (or nonexistent) return on investment.
The Ministry of Transport has provided subsidized public transport for more than four decades to ensure that geographically isolated localities remain connected with their respective regional capital cities.

Puerto Edén, Magallanes Region
Intervention of the State of Chile in the development of remote and isolated territories

**EMAZA, 1960-2013**
Was in charge of supplying basic consumer goods and products to remote areas

**ODEPLAN, 1985**
Provided public support to isolated areas of the country, granting customs tax-type franchises and direct bonuses to productive sectors of the economy

**SUBDERE, 1994**
Committee for the Development of Remote and Special Areas

**SUBDERE, 2010**
National Policy for the Development of Isolated Locations
Based on "social equity, as it gives all Chilean citizens the same opportunities for access to basic services so that they can develop their potential"

**ODEPA, 2014**
National Rural Development Policy
The **Regional Public Transport Division**, within the Sub-Secretary of Transport, was created in response to the growing and non-deferrable need to raise the standard and quality of public transport in regions outside of Santiago, and to promote public transport to ensure the integrated development of all people and their communities, especially in hard-to-reach isolated areas.

This law provides the Ministry of Transport and Telecommunications (MTT) with almost **US$350** million per year to guarantee territorial connectivity and strengthen public transport throughout the country.
Methodology to target, select, and prioritize Transport services in isolated areas

**Methodology to Identify Isolated Areas for Transport Subsidies**

This updated methodology allows the MTT to **identify, categorize, characterize, and prioritize isolated populated centers** based on their degree of access to a series of basic services.

Uses a **geographic information system** to determine which locations are considered isolated with respect to access to basic services.

Two main steps:

1) Calculate travel times from each location to the destination that offers the basic service(s) under consideration.

2) Prioritize the degree of isolation based on estimated travel times to different services.

**Which services?**

- Public transport
- Education
- Health
- Supply and sale of products
- Financial and administrative
- Special population services
Methodology of targeting, selection and prioritization for transport services in isolated areas
Implementation process

- Design
  - Technical evaluation and application of methodology
- Public Procurement
  - Supply-side subsidy
  - Government provides subsidy through public bidding process
- Contract Execution
- Contract and Payment Management
- End of Contract and Reevaluation
724 connectivity services operating throughout the country:

- **554** Overland
- **111** Maritime
- **15** Air Service
- **18** River/Canal
- **2** Passenger Rail
- **24** Lake Ferry
Vehicle fleet used to service subsidized routes

- **495 BUSES**
- **5 TRAINS**
- **24 MARITIME VESSELS**
- **8 AIRPLANES**
- **98 LAKE/RIVER VESSELS**
Subsidized services viewer (Geo-portal)

https://goo.gl/vz5KD4
Public investment in connectivity services in million USD, 2010-2018

<table>
<thead>
<tr>
<th>Year</th>
<th>Services (million USD)</th>
<th>Expense MUS$ (million USD)</th>
</tr>
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<tbody>
<tr>
<td>2010</td>
<td>228</td>
<td>$19</td>
</tr>
<tr>
<td>2011</td>
<td>325</td>
<td>$23</td>
</tr>
<tr>
<td>2012</td>
<td>397</td>
<td>$31</td>
</tr>
<tr>
<td>2013</td>
<td>475</td>
<td>$33</td>
</tr>
<tr>
<td>2014</td>
<td>520</td>
<td>$39</td>
</tr>
<tr>
<td>2015</td>
<td>550</td>
<td>$44</td>
</tr>
<tr>
<td>2016</td>
<td>633</td>
<td>$49</td>
</tr>
<tr>
<td>2017</td>
<td>671</td>
<td>$64</td>
</tr>
<tr>
<td>2018</td>
<td>724</td>
<td>$80</td>
</tr>
</tbody>
</table>
Likewise, 70% of the services are concentrated in the southernmost part of our country, from the Araucanía region to Magallanes and the Chilean Antarctic.
### Studies developed

<table>
<thead>
<tr>
<th>Study</th>
<th>Objective</th>
<th>Conclusions</th>
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</thead>
<tbody>
<tr>
<td>2009, “Quality Analysis of Services that Receive a Subsidy for Transport in Isolated Areas”</td>
<td>Analyze and diagnose the quality of provision of different types of connectivity services, especially in the southern regions of the country.</td>
<td>Subsidized Transport services generally meet an acceptable level of quality in terms of improving user connectivity; however, quality indicators regarding frequency, capacity, and comfortability of services showed generally unfavorable results.</td>
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<td>2010, “Evaluation of Results of Services of the Subsidy Program in Isolated Areas”</td>
<td>Evaluate the results obtained by the implementation of the Subsidy Program in Isolated Areas.</td>
<td>Subsidies indeed facilitate the connectivity of residents of isolated areas, allowing broader and better access to public services, ensuring a better quality of life for the inhabitants; particularly, through access to health-related services and through greater contact with other public services and, consequently, with the state.</td>
</tr>
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<td>2011, “User Satisfaction Perception Study Regarding Subsidized Services of the Subsidized Program in Isolated Areas”</td>
<td>Design, adjust, and apply a satisfaction measurement model for beneficiaries of the Public Transport Subsidy Program in isolated areas.</td>
<td>On a scale of 1 to 7 (a traditional evaluation scale in Chile), the level of satisfaction of the users of these services corresponded to 6.13. The study captured the most- and least-valued aspects by the users of each service, which has made it possible to define targeted improvements for users.</td>
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</table>
However, as of today, a specific measurement or methodology has not been developed to quantitatively establish how the isolated areas subsidy program has impacted, for example, the economic development in affected towns or economic outcomes that their residents experience as a result of improvements in connectivity services.
Ministry-wide policy strengths

- There is a robust methodology to analyze territorial isolation, which allows the Ministry to precisely identify the degree of isolation in each locality, based on available Transport options.

- The National Merchant Marine Law obliges the MTT to intervene and operate those maritime routes that private companies will not operate.

- Law 20378 provides a legal framework for subsidizing services in isolated areas. This legal basis ensures program stability over time and provides guarantees of certainty for both private operators and bidders, and for program beneficiaries.

- The Ministry focuses not only on expanded service coverage, but also on a progressive improvement in quality standards throughout the country.
Needs for future policy improvements

• Competitiveness of bidding processes: RFPs for maritime, lake, river, and air services receive a low number of interested and qualified bidders

• Develop a methodology to establish baseline analysis, which allows comparisons against the original situation of the localities over time

• On-board vehicle technology must be improved in order to clearly distinguish routes, and generate accurate subsidy payment indicators

• Periodically update and improve auxiliary methodological tools to flexibly incorporate new information or new parameters based on available data and best practices
Around 400,000 residents throughout the country benefit from increased access to services and economic opportunities.
Subsidized fares for overland transport services
Tourism promotion, especially in the far south of Chile
ROUTE CASE STUDIES
The Puerto Montt-Chaitén bimodal route offers a combined and integrated overland (bus) & maritime (barge) connection for passengers and cargo between Puerto Montt and the province of Palena, located in the southeastern portion of the Los Lagos Region in the far south of the country.
Bimodal Route

<table>
<thead>
<tr>
<th>STATUS</th>
<th>FREQUENCY</th>
<th>ANNUAL SUBSIDY</th>
<th>PAX PER YEAR</th>
</tr>
</thead>
<tbody>
<tr>
<td>IN OPERATION</td>
<td>TWO TRIPS</td>
<td>20.500.000 US$</td>
<td>58,000</td>
</tr>
<tr>
<td></td>
<td>per day</td>
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This 28-hour route spans 240 nautical miles and visits 10 ports of call in southern Chile. It connects various localities in the northern coast of Aysén, many of which are only accessible by boat.

In February 2015, the Queulat Barge was inaugurated along this route. Built in 2014, it increased passenger capacity to 285.

Future plans include incorporating a faster vessel to reduce the travel time.
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<th>PAX PER YEAR</th>
</tr>
</thead>
<tbody>
<tr>
<td>IN OPERATION</td>
<td>THREE TRIPS per week</td>
<td>20,000,000 US$</td>
<td>11,000</td>
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</table>
This service will connect communities in the Aysén and Magallanes Regions, which can only be connected through Chilean maritime territory. An overland connection is only possible via Argentina.

The 145-nautical mile trip requires a navigable travel time of over 40 hours.
## Chile via Chile

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<tr>
<th>STATUS</th>
<th>FREQUENCY</th>
<th>ANNUAL SUBSIDY</th>
<th>BENEFICIARIES</th>
</tr>
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<tbody>
<tr>
<td>In Operation</td>
<td>2.5 Trips per month</td>
<td>17,000,000 US$</td>
<td>564</td>
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Promotion of tourism in southern Chile

Torres del Paine, Magallanes
Improved connectivity for the residents of isolated areas throughout the country

San Pedro de Atacama, Antofagasta Region
Increased opportunities for all residents

Tortel, Aysén Region
Quality of life improvements for rural residents

Valle de Elqui, Coquimbo Region
Operating at more than 4,000 meters above sea level, two isolated corridors are served by a bus route that benefits 1,600 residents in the communities of Visviri, Huayancayane, and General Lagos. These communities, located in the extreme northern Chilean plateau, receive a connection with the regional capital of Arica.
Tacora Volcano, located along the subsidized Visviri route. Arica y Parinacota Region.