

Cost-benefit analysis (CBA) is a methodology for calculating all social benefits and all social costs of an investment project. It determines the viability of an investment and can provide a basis for the comparison of alternative projects before spending public money. In essence, CBA consists of comparing the expected cost of a project against its expected benefits, in order to determine whether benefits exceed costs and hence decide if the investment is convenient for society and leads to an efficient allocation of resources. In CBA, benefits and costs are expressed in monetary terms, and are adjusted for the time value of money; therefore expressed in terms of their net present value (NPV). The most important application of cost-benefit analysis has been to decide upon public investment projects, though it has also been used in other areas such as the evaluation of regulatory initiatives, called Regulatory Impact Assessment (RIA).

According to the 2015 OECD survey on CBA, it was found that there is generally a nationwide legal requirement or framework for CBA in the LAC region (75% of surveyed countries). However, at the state/local levels such requirement exists only for a quarter of surveyed LAC countries. In the majority of cases, such as Costa Rica, Honduras, Panama, Paraguay and Dominican Republic, it is firmly prescribed as a tool for project selection typically at the pre-feasibility stage or in any case at an early stage of the decision-making process. Additionally, 33% of LAC countries (Argentina, Guatemala, Mexico and Peru) have reported CBA to be increasing in role and importance.

When asked about the general objectives and main roles of CBA according to legislation, regulation or official documents, answers were relatively similar for both LAC and OECD countries. For instance, both groups of countries consider that the key objective of CBA is to provide justification for project selection, decision and financing in the feasibility phase (92% of LAC countries and 80% of OECD countries). To a lesser extent, it is considered an assessment to support the design of an investment project (83% of LAC countries and 50% of OECD countries). Moreover, CBA is considered to play the role of a decision-making tool (67% of LAC countries and 70% of OECD countries). In all surveyed LAC countries, CBA was reported as playing a critical role in decision-making,

signaling the importance of CBA as key tool for assessing the convenience and viability of public investment projects.

In LAC countries, CBA is more commonly used in large investment projects to improve transportation systems such as roads, railroads, airports, ports and waterways, and urban transport. Furthermore, CBA is also generally used for water and energy-related developments. On the other hand, sectors such as culture and leisure, capacity improvement and scientific research seldom apply CBA. Guatemala is the only LAC country that reported performing CBA for all types of projects.

Methodology and definitions

The net present value (NPV) is the valuation in the present of a sum of money. It is obtained by discounting future flows of economic benefits to the present period.

Data from the two figures come from the 2015 OECD Survey on Challenges and Applications of Cost-Benefit Analysis for the Preliminary Feasibility Study of Capital Investments. The survey collected responses from 12 LAC countries. Respondents were predominantly country representatives in charge of public investment units or departments, within ministries of finance or equivalent departments with investment assessment and decision-making roles.

Further reading

- Lomborg, B. (2009), *Latin American Development Priorities: Costs and Benefits*, Cambridge University Press, New York.
- Musgrave, R. (1969), "Cost-Benefit Analysis and the Theory of Public Finance", *Journal of Economic Literature*, Vol. 7, No. 3, pp. 797-806.

Figure notes

- 2.27 and 2.28: Chile updated their answers and therefore some changes related to the information published in *Government at a Glance* 2015.

2.27. The general objective of CBA in your country according to legislation, regulation or official documents

Legal foundation of CBA	General Objective of CBA						Main Role of CBA					
	Tool for prioritising investment	Justify project selection/ decision and financing	Accountability/ transparency tool	An assessment supporting project design	Tool for project monitoring	Tool for policy learning	Decision tool in allocating funding to agencies	Differs depending on actors	One among other decision making tools	Does not play a decisive in decision making	Is increasing in role and importance	
Argentina	■	○	▲	○	▲	▲	○	▲	○	▲	○	▲
Chile	●	▲	▲	○	▲	○	○	○	○	▲	○	○
Costa Rica	□	▲	▲	○	▲	○	○	○	○	▲	○	○
El Salvador	◆	○	○	○	▲	○	○	▲	○	○	○	○
Guatemala	○	▲	▲	○	▲	○	○	○	○	○	○	▲
Honduras	■	○	▲	○	○	○	○	○	○	▲	○	○
Mexico	●	▲	▲	▲	○	○	○	▲	○	▲	○	▲
Panama	●	▲	▲	○	▲	○	○	▲	○	▲	○	○
Paraguay	◆	○	▲	▲	▲	○	▲	○	○	▲	○	○
Peru	●	▲	▲	○	▲	○	○	▲	○	○	○	▲
Republica Dominicana	■	○	▲	▲	▲	▲	▲	▲	○	▲	○	○
Uruguay	■	○	▲	○	▲	○	○	○	○	○	○	○
LAC total		6	11	3	10	2	2	6	0	8	0	4
OECD total		10	16	11	10	8	3	6	13	14	2	10

● Yes, CBA is mandatory nationwide by legislation for all capital investment projects above a certain financial threshold.

■ Yes, there is a legal requirement nationwide for CBA, but only for a specific category of projects.

□ Yes, there are different legal frameworks depending on procuring/regulatory agencies at national levels.

◆ There is no nationwide legislation, but there is a legislation requiring CBA at state/regional/local government level.

○ No

◆ There is no legal requirement, but CBA is recommended by government and used anyway.

▲ Yes.

× Not applicable.

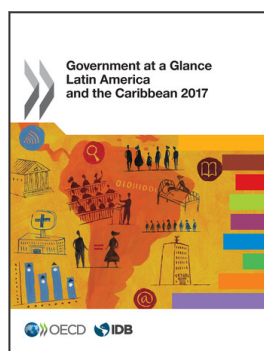
Source: OECD (2015), Survey on Cost-Benefit Analysis.

StatLink  <http://dx.doi.org/10.1787/888933431611>

2.28. Sectors in which CBA is usually performed, 2014

Sectors	Countries
Road	ARG,CHL,CRI,DOM,GTM,HND,MEX,PRY,SLV,URY
Rail	ARG,CHL,CRI,GTM,HND,MEX,PRY,URY
Airports, ports and waterways	ARG,CHL,CRI,GTM,HND,MEX,PRY,SLV,URY
Urban transport	CHL,CRI,DOM,GTM,HND,MEX,PRY,URY
Urban development	CRI,GTM,URY,SLV
Water supply and wastewater	ARG,CRI,DOM,GTM,HND, MEX,SLV,URY
Solid waste management	ARG,CRI,DOM,GTM,PAN
Housing	DOM,GTM,SLV
Other environmental projects (risk prevention and mitigation)	CRI,GTM,HND
Energy	ARG,CRI,DOM,GTM,HND,MEX, PRY,URY
Education	CRI,DOM,GTM,MEX,SLV
Health	CRI,DOM,SLV,GTM
ICT	CRI,GTM,HND,PRY
Culture and leisure	CRI,GTM
Scientific research	GTM
Technological development and innovation	CRI,DOM,GTM
Capacity improvement	CRI,GTM

Source: OECD (2015), Survey on Cost-Benefit Analysis.



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