LEARNING by DOING

TRANSFORMING THE WAY WE ACT

1ST ANNUAL MEETING OF CORE TEAMS

LAC team Example – Mexico

This note outlines some of the initial research made by the LAC team using Mexico as an example. It focuses on some baseline information for the research. The Mexican economy shows, in the last three decades, a relative continuous but heterogenous and volatile economic growth. This economic growth was associated with a rise in consumption, investment, employment and a reduction of poverty. However, this type of development shows also the persistency of poverty rates, a significant concentration of the income and it also generates significant negative externalities that are affecting the actual dynamism of the Mexican economy. In this sense the actual development is not sustainable.

The base line of the Mexican economy suggests that:

The long term expected annual average rate of growth of the Gross Domestic Product (GDP) of with different filters suggest a trend between 2.37% and 2.59%, with an ARIMA model of 2.4% with a fan chart of rates between 1.37% y 3.46% with 60% of probability and a production function of 2.9% with evidence from 1990-2018.
This rate of growth should be reduce considering the economic consequences of the COVID-19 and that countries with higher GDP per capita tend to growth at slower pace. Therefore, the average annual rate of growth of the GDP, between 2022 and 2050, is 2%.
The historical evolution for the Business As Usual (BAU), using the IPAT identity, indicates of the an average annual rate of growth of the GDP of 2.56%, of the energy consumption of 1.62% and CO2 emissions of 2.09% with a reduction of the ratio of energy/GDP at 0.89% and increase of the ratio between CO2/Energy 0.47% for the period 1990-2018. This is reflected in an average rate of growth of CO2 per capita of 0.61%. This scenar-

LATIN AMERICA

A Latin America team has been formed with members drawn from Energeia, ECLAC, and country teams. It is working on both country analysis and aggregate Latin American data. It is following a low carbon society approach modelling, coupled with a back-casting approach.

The team has taken a cultural, political, and economic approach to examine these societies and transitions. In doing this, the team is examining the interrelation between ideas of a good life and low carbon and climate resilient transitions.

To examine this, the team has been following two complementary, parallel tracks. On the one hand, there is a political economy and cultural narratives strand of work that seek to translate these visions into political coalitions that can deliver them; on the other, there is an accompanying economic track that seeks to interact with the first, and identify how to support it.

In the political and cultural analysis, the team has taken a post liberal approach. By post liberal, it means an approach that includes liberal aspects, but goes beyond them to combine radical and conservative ideas to complement each other in an effort that goes beyond generations, in order to help envision an appealing society that can flourish in specific places. A central aspect of this vision includes an expansion of leisure as a means to a good life, couple with social means to relate culture and nature, and associated infrastructure and

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io should be consistent with an annual average rate of growth of 2% between 2022-2050.
The projected economic scenario is consistent with a net carbon cero between 2050-2070 and considers:

- A scenario of 1.5oC requires 45% less CO2 emissions in 2030 from 2010 and net cero emissions in 2050 (2045-2055). Postpone the CO2 emissions peak after 2030 significantly reduces the probability of this scenario.
- A scenario of 2oC requires 25% less CO2 emissions in 2030 from 2010 and net cero emissions in 20700 (2065-2080).
- In general, these scenarios project a red30 and between 0 and 2 tCO2e in 2050-2070.
- The NDC are not enough. The energy carbon budget represents almost the total carbon budget to 2100.

The main structural changes in 2050:

- Most of the electricity is generated from removable energy sources.
- All the economy uses electricity.
- Transport and mobility are sustainable. This implies that between 50% and 60% of the sales of new cars are electric between 2030-2035 with a reference of 5% in 2020.
- Industrial emissions are reduced 90%.
- 85% of the building are intelligent.
- The cultivated area is stable and arguably shows a reduction with yields increasing above their historical rate and a significant mitigation of CO2 emissions.
- There are significant stranded assets in infrastructure.

This implies:
Electricity from removable sources.

- Electric economy.
- Electric and recyclable industry.
- Sustainable transport and mobility base on public transport and electric fleet.
- Intelligent buildings.
- Sustainable agriculture with a constant agricultural area.
- Sustainable infrastructure.
- Recycling and proper waste management.
- New public and private matrix with significant welfare improvement.
- Negative externalities.
- New life style.

Public policies:
Carbon price: US $40 – US $80 tCO2e.

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cultural aspects. The team is exploring how to combine them to seek how to co create social and natural conditions for evolution that are developed locally to support low carbon transitions.

The emerging postliberal vision is articulated to inform modelling of economic trajectories and infrastructure and service provision. This is assessed using an initial aggregate emissions model and sectoral wedge one. The aggregate Latin American and a Mexico case have been advanced the most. In line with the cultural narrative, this work has focused on a) analysing how it would be possible to make more household income available, particularly in low income levels, and b) means through which this available income could help finance the transition and support the society outlined above. Analysis is advancing to examine how to replace substantial portions of household income such as those associated with energy, transport, food, and housing, associated with high emissions, and replace them with more efficient, less costly low carbon alternatives. These would liberate parts of the household income, thus increasing available income and help fund the transition. Parallel public finance and competition policy components seeks to identify how to avoid any rents emerging from these transitions to be extracted by service providers, and instead remain as possible within households.

The team plans to develop further in three directions: a) on post liberal narratives and links to culture, nature and leisure; b) on the role of similar replacements in other sectors, including the food system environment; c) on various combinations of political coalitions. The team expects to enhance linkages with other teams in the project.