Team Brazil: Virtual Presentation

Slide 1 – Intro

Before analyzing the Brazilian economy, we assumed the future economic prospects of Brazil must be promising based off the fact that it is one of the often mentioned BRIC countries. However, we came to realize that this was not necessarily the case. As such, we developed some recommendations for Brazil's economic growth through this project that would justify your investment in this country only under the best scenario where all the recommendations are well implemented.

Slide 2 – Brazil's Growth History

First, let's take a look at growth trend of Brazil's real GDP per capita. From 1960 to 1986, the end of military regime, Brazil had recorded 3.34% of annual GDP per capita growth. After the formation of a civilian government, Brazil's growth rate of annual GDP per capita actually decreased. Annual growth rate from 1986 to 2013 was 1.36%. The fact that a period of military rule shows higher growth rate doesn't necessarily mean dictatorship is a more appropriate political system for growth of underdeveloped country.

It is more proper to interpret these findings by noting that achieving a high growth rate is relatively easier in an earlier stage of economic development, rather than a later one. Labor force and capital stock with a high rate of return rapidly goes up as population growth and urbanization increases and with the emergence of a financial market system. In this stage, contribution of TFP is also high since imitating an advanced country's growth formula adds to the effectiveness of the developing country's own efforts.

However it is not easy to maintain such a high growth rate as the country becomes more developed. Labor and capital stock have diminishing returns and the effectiveness of benchmarking becomes reduced overtime. In this situation, role of government becomes more important for maintaining strong TFP. The Government of Brazil has developed many good policies which can have positive impact on the TFP. For instance, the quality of labor force has been improved through the 'Bolsa Familia Program' which enhanced the accessibility to education opportunity. However, in Brazil, there are still many problems which can be improved to further strengthen TFP.

Slide 3 – Frame Work & Summary

'Team Brazil' used the growth accounting equation as a framework for analyzing your investment and deep dived into each growth driver's potential contribution in order to forecast Brazil's future GDP growth. Future GDP growth driven by capital and TFP is possible, but there are some actions required to realize this growth potential.

The feasibility of labor driven growth seems relatively limited since the proportion of young adults has decreased and urbanization has nearly peaked. On the other hand, driving GDP growth through accumulating more capital stock is still feasible, since the lack of business infrastructure is one of the problems which hinders economic growth. The role of TFP is also very important. In general, as an economy becomes advanced, TFP plays a significant role in achieving sustainable GDP growth. To clarify, it seems that Brazil has an opportunity to improve TFP by lowering transaction costs, minimizing macroeconomic risks, and encouraging creative destruction.

Slide 4 – Labor's limited contribution to future GDP growth

As mentioned above, 'Team Brazil' concluded that the impact of labor on Brazil's economic growth would be limited. We could reach this conclusion by analyzing demographic changes in the country.

First of all, Brazil's human capital has weakened. As indicated by the graph, the birth rate of Brazil is continuously decreasing. As an added drag, the percentage of the elderly whose age is 65 or above keeps increasing. UN categorizes countries where the elderly is more than 7% of the total population as an aging society, which would mean Brazil now qualifies for this categorization.

Urbanization has also reached a highly concentrated level. In 1960, the percentage of the population who lived in urban areas was about 46%; this figure has since reached 85%. It is not only much higher than other developing countries, but also slightly higher than advanced countries' urbanization level. It implies labor force increases driven by additional urbanization is almost impossible.

Slide 5 – Brazil's Insufficient Business Infrastructure

Unlike labor, capital stock can still have a large positive impact on Brazil's growth. Ironically, this is because Brazil economy is suffering from a lack of proper business infrastructure.

Brazil has been stingy about investing in its own country. Comparing various countries' average gross capital formation clearly points out Brazil's problem in this area. As the graph on the left side of the slide shows, Brazil reinvested 17.9% of the GDP from 2002 to 2013. Among China, India, and Russia, there is no country which has lower investment rate than Brazil. China actually has a reinvestment rate twice that of Brazil's.

You can see the result of Brazil's limited capital investment on the right side of the slide. This rank is from the 'Global Competitiveness Report 2015'. Unfortunately, it is hard to find any type of Brazilian infrastructure which has good quality, with transportation and utility supply infrastructure being extremely bad. 'Global Competitiveness Report 2015' points out inadequate supply of infrastructure as one of the most problematic factors of doing business in Brazil.

In short, limited capital investment brought about inferior infrastructure which deteriorates Brazil's competitiveness. However, to look on the bright side, it implies that achieving GDP growth by accumulating capital and improving infrastructure is still possible.

Slide 6 – Root Cause of Brazil's Insufficient Business Infrastructure

On the previous page, we already mentioned that Brazil reinvested a relatively smaller portion of their GDP compared to other developing countries. We think the factor which makes Brazil unable to raise the necessary funds and mobilize them well is because of the underdevelopment of the financial market.

Both 'Global Competitiveness Report' and 'Doing Business Report' point out the problems of the financial market in Brazil. 'Global Competitiveness Report' mentioned that Brazil's level of financial market development is ranked 53rd among 144 countries. It also highlighted that limited accessibility to financing makes running business in Brazil more difficult. 'Doing Business Report' also said getting credit is difficult and resolving insolvency takes time and costs a significant amount of money.

Overall, inefficiency in financial market system hinders resource allocation, resulting in less money being invested in business infrastructure.

Slide 7 – Brazil's High Transaction Cost & Macroeconomic Risk

While increasing GDP growth by accumulating more capital stock is possible, we think it is more advantageous to increase GDP growth by improving TFP.

High transaction costs currently plague the Brazilian economy. The ‘Doing Business Report’ points out that it is extremely difficult to run a business in Brazil. Many businesses in Brazil complain that official and hidden procedures make the process of doing business inefficient. There are numerous stories about how difficult it is to run a business in Brazil, such as how a miserable French chef had to spend 11 months to open a small bakery. The high transaction costs hinder entrepreneurship which in turn lowers the agility of business entities in Brazil.

High macroeconomic risk is also a large risk that hinder Brazil’s growth. As the S&P rating chart shows, credit was recently degraded. BBB^- looks still fine, but considering that Brazil already experienced a financial crisis in late 90’s, concern about credit risk is increasing. The unstable political situation in the country also aggravates macroeconomic risk. Large protests are currently demanding the president to be impeached because of corruption. In this situation, business activity would shrink because of difficulty in forecasting the direction of the government policy.

Both high transaction costs and macroeconomic risks lower TFP, ultimately leading to limited economic growth. Therefore solving this issues successfully will increase the TFP and bring about additional future GDP growth.

Slide 8 – Lack of Creative Destruction

Lack of creative destruction is another factor which weakens the TFP. It is very difficult to quantify the level of the innovation. We referred to ‘The Bloomberg Innovation Index’ which ranked countries based on their overall ability to innovate. This index is developed with six criteria such as R&D, manufacturing, high-tech companies, education, research personnel and patents. Although it is undeniable that some of the ways of measurement are a bit unnatural (for instance, level of the innovation in R&D function is measured by R&D expenditure as % of GDP), ‘Team Brazil’ decided to use this index since there is no other way to measure a country’s level of the innovation.

Surprisingly, South Korea was ranked as the most innovative country in the world. As explained in the class, South Korea has recorded remarkable growth based on strong TFP. In this sense, ‘Team Brazil’ has confidence that we can utilize this index to evaluate how Brazil’s creative destruction contributes to its TFP.

Unfortunately, Brazil is ranked as the 47th innovative country. This ranking is much lower than other developing countries such as China and Russia. It seems that the business environment of Brazil is not supportive for creative destruction. Conversely, it implies there is an opportunity to boost GDP growth by encouraging creative destruction.

Slide 9 – Root Cause of Brazil’s Inferior Total Factor Productivity

‘Team Brazil’ tried to figure out the root cause of Brazil’s inferior TFP in order to develop recommendations.

First of all, huge bureaucracy directly incurs high transaction costs. Excessive regulations, taxes and paperwork are a big burden for many companies. This also related to Brazil’s lack of creative destruction. Since entrepreneurship is usually discouraged in this environment, Brazil is losing the chance to get fresh and innovative ideas from new entrepreneurs. Bureaucracy naturally causes corruption, since people have huge incentive to pay for the shortcut. Widespread corruption increases transaction costs and macroeconomic risks, because it weakens political leadership.

On top of that, the government’s inconsistent policy aggravates macroeconomic risk. Brazil failed to keep the announcement about its budget balance and S&P pointed out mixed policy signaling as a reason for downgrading the country's credit.

Lastly, protectionism hinders creative destruction. Brail is apparently pursuing an open economy, but there are still many barriers. Entry barriers leads to less competition between players, ultimately leads to a lack of creative destruction.

Slide 10 – Action Required

Fostering financial markets, simplifying regulations, eliminating corruption, having a time consistent policy, and encouraging competition are required to solve the current issue and to attain the sustainable GDP growth.

To be specific, incentives to encourage private sector's investment should be created. Benchmarking of advanced countries' successful financial market development case can also be effective for accumulating sufficient capital stock.

Simplifying the approval process and tax structure is also required as would getting rid of unnecessary regulations in order to lower transaction costs and fostering creative destruction. Designing a corruption monitoring system and setting strong penalties would be necessary for lowering the transaction cost.

Policy development with a long-term view that is not influenced by short-term wants will make the macroeconomic environment more stable. It will ultimately contribute to the boom of creative destruction, since stable business environment make people take more risk.

Lastly, devising an entrepreneurship support system and lowering trade barriers will bring about more creative destruction by fostering sound competition.

Slide 11 – GDP per Capita Forecasting

With the all the analysis we conducted, we developed a base and best scenario to forecast Brazil's future GDP per Capita growth. Key assumptions for base model is that the current trend will continue. The best case scenario is developed with an assumption that Brazil will follow our recommendations. In the best case scenario, we assume that the investment rate for accumulating capital stock will go up due to financial market development. We also assume that TFP will increase dramatically by lowering transaction cost, managing macroeconomic risk and encouraging creative destruction. Detailed numbers are in appendix.

As the graph shows, it is forecasted that Brazil's annual growth rate will be 3.68% in the best case scenario. In the base scenario, it will only be 1.93%. It seems that the difference in TFP makes up the difference between best and base scenario.

With all this taken into account, we believe you must continue monitoring Brazil's government policies before making an investment decision. If the country is able to effectively carry out our recommendations, investing in this country can achieve the high returns you are seeking.