

Spain Economic Investment Analysis:

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Companies are constantly looking to make their next major step into new regions and continue their expansion to multi-national levels. Decisions to invest in a new region and country should not be taken lightly and the economic landscape of a country needs to be considered as one of the highest priorities. If an investment in Spain is to be considered and recommended, there are many aspects of the economy we would like to highlight before an “invest” or “don’t invest” recommendation can be given. As a group, we have analyzed Spain’s trade and resources and institutional quality, performed a Solow model analysis and Growth accounting analysis and reviewed unemployment statistics. From this analysis we believe you will see that an investment in Spain would not be in a company’s best interest at this time.

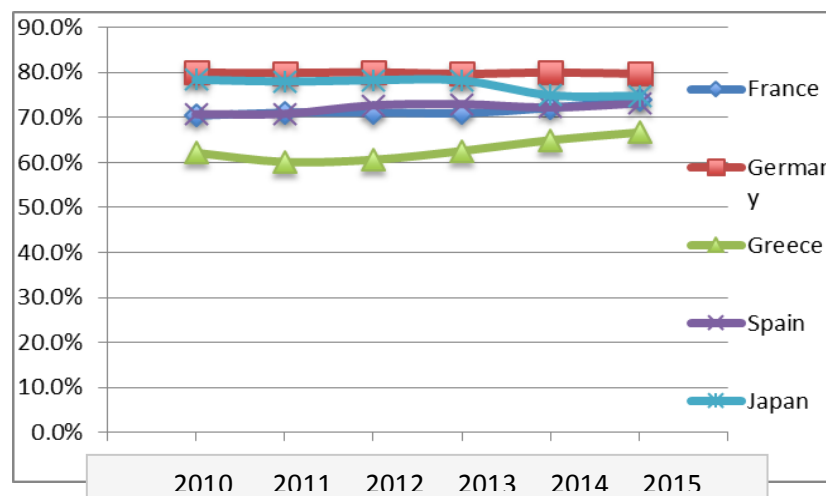
Institutional Quality

The implementation of an efficient institutional and legal framework in a country plays a fundamental role in encouraging growth and facilitating economic transitions and social reforms. Spain, over the last 40 years has successfully transitioned from a monarchy to a democracy and the establishment of adequate institutions and legal frameworks have played an important role in ensuring the success of the economy. While Spain faced a significant downturn during the crisis and continues to face many macro-economic issues, there have been some improvements in the institutional and legal frameworks in the country.

Some notable improvements in conditions for doing business through reforms:

- **Starting a business:** Introduced an electronic system linking public agencies simplifying business registration. Reduced the cost to start a business by decreasing the minimum capital requirement.
- **Registering Property:** Made transferring property easier by reducing the property transfer tax rate.
- **Resolving Insolvency:** Made easier by introducing new rules for out-of-court restructuring and workouts. Amended its regulations with the aim of reducing the cost and time.

Based on the data provided by doingbusiness.org we found that Spain has shown some marginal progress in its institutional setups and legal frameworks and continues to lead laggards such as Greece and Italy and in line with levels in Japan. However, it still trails the leader Germany and work needs to be done to improve:



Source: Doingbusiness.org

Solow Model

The historical growth and institutional analyses identify poor institutional quality as the primary factor limiting levels of employment, and thus of GDP growth. Projections for the future based on the Solow Model investigate various scenarios under which certain institutional changes and circumstances will impact future GDP growth.¹

Base Case Scenario: assumes historical population and TFP growth rates (1981-2011) and the average investment rate over that period (23.49%). It assumes no significant institutional reforms over the next 25 years, and projects a 0.69% GDP per capita growth rate over the next 25 years. Compared to the 2.64% growth rate achieved over the past 30 years, the base case scenario should worry any multinational firm considering a large, irreversible investment in Spain.

Base +L1: The first labor scenario assumes immediate reforms to the labor market that improve accession and separation rates. The permanent change in firm-worker matching will result in lower levels of unemployment. Scenario L1 assumes improvements in unemployment levels begin immediately (starting in 2016) and take 5 years to achieve long-run historical levels (1965-2013) of 10.93% unemployment. The scenario projects a 0.43% incremental increase in GDP growth for a total of 1.12% over the next 25 years. It is important to note that this policy reform provides a stimulus for the 5 years of growth in employment, attaining a higher level of GDP per capita—but returns to the same base case scenario growth rate after 2021.

Base +L2 (Lag): The second labor scenario assumes a similar reform to matching efficiency in the labor market. Instead of immediate improvements in unemployment rates, it assumes a 5 year lag before reforms have effects on labor market statistics. In this case, the “catch-up” period occurs between 2020-2025. After this temporary stimulus in employment, GDP per capita level reaches the same as projected by L1, with the same return to base case scenario GDP growth after 2025.

Base +1: Historical growth accounting identifies the recent demise of TFP growth as another constraint on GDP growth. The decades between 1961-2001 saw consistently positive TFP growth between 1.23% and 3.61% with the exception of the 1970’s (0.62%). However, between 2001-2011, Spain TFP contracted by 1.23%, due to the Great Recession. The base case scenario assumes investment in institutions that will improve technology and worker productivity will result in a 1% increase in TFP growth over the base scenario (from 0.76% to 1.76%). According to DBI ranks, the areas Spain has most room to improve with respect to frontier countries is in 1) construction permits, 2) starting a business, 3) paying taxes and 4) enforcing contracts. Increasing TFP growth over the next 25 years by 1% corresponds with a 1.17% increase in GDP per capita growth over the base case during the same period (to 1.86%).

Best Case: The best case scenario combines an immediate 5-year stimulus in labor markets with a 1% increase in TFP over the base scenario. It results in a 1.61% increase in GDP growth over the base scenario (to 2.30%). Historical GDP growth exceeds even the best case scenario for our 25-year projections.

Worst Case: The unemployment analysis projects a steady state unemployment level of 33.78%. The worst case scenario builds this factor into GDP growth projections, with steady state unemployment reached over the next 5 years (by 2021). The approximately 7% decrease in

¹ <https://data.oecd.org/gdp/investment-gfcf.htm#indicator-chart> (Investment rate)

employment level over 5 years results in a 0.21% decrease in GDP growth below the base case scenario (to 0.48%).

Growth Accounting

Range		Growth Accounting (by Decade)			
		Y/N Growth	L/N Growth	TFP Growth	K/L Growth
1961	1971	5.49%	(0.22%)	3.61%	2.41%
1971	1981	2.54%	(1.79%)	0.62%	3.38%
1981	1991	2.38%	1.00%	1.23%	0.15%
1991	2001	4.24%	1.54%	2.28%	0.43%
2001	2011	1.29%	(0.39%)	(1.23%)	2.91%
Long-run		3.19%	0.03%	1.30%	1.86%

Spain's long-run (1961-2011) average annual GDP growth is 3.19%, but more recently (1991-2011) growth has been only 1.29% per year. Further breaking down the most recent decade, GDP growth averaged 2.66% per year before the 2008 financial crisis and -1.89% per year since.

Clearly the 2008-2009 recession was a dramatic event across the developed world, but it is interesting to see how different countries have performed since. Compared to a select group of other countries, Spain's post-crisis recession was not as steep as in wealthier nations. Japan and Germany, for example, contracted more than 6% from 2008 to 2009, but both have had positive growth rates every year since. Spain, on the other hand, continues to have negative GDP growth.

Annual Growth Rates 2008-2011				
	Y/N	L/N	TFP	K/L
Spain	(1.89%)	(4.22%)	0.64%	5.06%
Greece	(3.36%)	(3.12%)	(0.86%)	1.85%
Germany	0.32%	0.57%	(0.45%)	0.59%
France	0.15%	(0.86%)	0.09%	2.76%
Japan	(0.46%)	(0.86%)	0.30%	0.31%

This continued recession puts Spain in the same company as Japan and Greece, both of whom have also been struggling to return to growth since 2009. Separating Spain from the rest of Western Europe and Japan is the dire employment situation. At -4.22%, the Employment Ratio is dragging significantly on growth and is a much bigger factor than in other countries. We will examine the employment situation and its causes in more detail in the next section.

Another observation is that the Capital to Labor ratio is a much larger contributor to growth than in other countries due to the nature of the calculation. As previously mentioned, employment has dropped significantly while population grew slightly each year since 2007 leading to a negative L/N contribution to GDP growth. Spain's real capital stock decreased by just over \$100 billion in 2009, but recovered quickly. Spain's level of capital stock was nearly \$6.5 trillion in 2008, so that represented about a 1.5% decrease. Overall, then, for a steadily increasing population and capital stock, the effect of the ~10% decrease in the labor pool from 2008-2011 is a -1.35% contribution to GDP growth.

Unemployment

In gathering data on Spain's employment statistics, we had the following observations (from 2013):

- Labor Force = 23.19 million
- Employment Rate = 66.18%
- Unemployment Rate = 26.09%
- Participation Rate = 89.54%
- Average Unemployment Rate (1956-2013) = 10.93%
- Youth Unemployment (ages 15-24) = 50.90%

Currently, Spain is faced with the highest levels of national unemployment in the past 6 decades. After sourcing values for the accession rate (3.98%) and separation rate (2.03%), we were able to calculate steady state unemployment at 33.78%. This suggests that unemployment will actually continue to increase in the foreseeable future if hiring (accession rate) does not improve. In the current job climate, it is very difficult to find a job, and relatively easy to lose one. We created a Beveridge curve for Spain, and the results were startling. Not only is there temporary (cyclical) weakness in the Spanish economy, but also a rightward shift in the curve following the Global Financial Crisis suggests that poor institutional quality has permanently deteriorated Spain's job matching efficiency.

Largely to blame for Spain's current woes: a housing bubble that burst in 2007 and "cookie-jar accounting" that eventually forced Spain to apply for a €100B package to bailout its financial sector. Without getting into too much unnecessary detail -- the Spanish banks were using "Dynamic Provisioning"² to mask volatility, and appeared to be much healthier than they really were. This technique allowed them to finance the housing bubble, and the cookie jar was empty when the "music stopped". The financial crisis led to extreme levels of unemployment and several high profile bankruptcies. The moral of the story is that quality institutions should exist to facilitate economic activity and growth rather than turmoil. Spanish "Rule of Law" is a pivotal institution that has proven to be weak, at best.

Trade and Resources

Spain has a well-diversified export and import mix. Its three main export categories are transportation products, machines and chemical products. Transportations constitute 14% of Spain's exports and that includes cars, trucks and automotive parts. Machines are the second most exported category; it includes products such as insulated wires, combustions engines and valves. As for Chemical exports, Spain mainly exports packaged medicament. The total value of the exports stand at \$270 Billion. In contrast, the country imports around \$319 billion. The main import categories are Mineral products, Machines and Chemical products. Mineral products are a quarter of the imports. Main products in this category are crude petroleum, refined petroleum and gas. The second most imported category is machines and that includes computers, broadcasting equipment and insulated wires. Lastly, chemical products, these include packaged medicament, industrial fatty acids, oils and alcohols. Spain mainly trades with other European Union countries. Around 70% of exports and 60% of the imports are to and from the EU respectively. One major non-EU trade partner is China where Spain imports are around 7%.

Spain's main resources are minerals, agricultural and solar power. Minerals include coal, lignite, iron ore, uranium, mercury, pyrites, fluorspar, gypsum, zinc, lead, tungsten, copper, kaolin, potash and sepiolite. As for agriculture, it is number two in Europe and eighth in the world in area dedicated to ecological

² Jonathan Weil (14 June 2012). "[The EU Smiled While Spain's Banks Cooked the Books](#)". *Bloomberg*.

crops. Furthermore, Spain is one of the top exporters of olive oil and a variety of fruits such as citrus, melons, lettuce and cabbages. Spain has been heavily investing in solar technology to harvest the country's abundant solar radiation. Spain is one of the most advanced countries in the development of solar energy, and it is one of the European countries with the most hours of sunshine. Total solar power in Spain was around 4GW by the end of 2010. Spain's weather and historical attractions helped its tourism sector to flourish. Tourism in Spain is a major contributor to the economy contributing 6.4% of Spain's GDP. In 2007, Spain became the second most visited country in the world after France. That year, almost 60 million foreign visitors came to visit Spain.

Conclusion

The model projects between a 0.48% and 2.30% GDP per capita growth with an average 1.26% GDP growth across all scenarios over the next 25 years. Despite these potential institutional changes, Spain's attractiveness as a place to invest is limited at best. Labor market reforms will only provide temporary stimulus to GDP growth. The most efficient investment by policymakers will be in areas that improve worker productivity, firm technology, and thus TFP. Given the high levels of unemployment, low accession rate, poor job matching efficiency, and questionable institutions, we feel that an investment in Spain is not advisable at this time. If Spain can make the necessary reforms to their most crucial needs, our analysis may change to support an investment within the country.