

Spain and the brain drain in the 21st century: It is not only what you can do for your country, but also what your country can do for you

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Introduction

J. F. Kennedy famously said that it is not only a case of what your country can do for you but, what you can do for your country. The current economic crisis and financial uproar is affecting much of the world and having a heavy toll on the labor market. Most countries have seen a dramatic increase in their unemployment rate. In Spain, the increase is making headlines as it is the highest among developed countries with an unemployment rate of close to 20% in November 2010. As a consequence, Spain is suffering a modern labor migration process that is only paralleled in Ireland. In fact, it has been reported that Ireland “is facing a wave of emigration on a scale unseen since the 1980s, as young people desperate for work turn their backs on an economy ravaged by debt crisis, high unemployment and tough austerity measures.”¹ Since 2002, and intensified since 2007, Spain is losing a number of highly skilled and well-educated workers who are leaving the country to find job opportunities abroad. The question is why this migration is taking place; the answer rests on what the country can do and offer to retain these workers who escaped from the current labor market.

¹ Guy Chazam, and Ainsley Thomson, “Tough Irish economy turns migration influx to exodus,” *The Wall Street Journal*, January 21, 2011. <http://online.wsj.com/article/SB10001424052748703921504576094201825868600.html>

What the western hemisphere, in particular, is facing is the recessionary phase of the business cycle which negatively affects the living standard and purchasing power of citizens. When the business cycle is in the recessionary phase, unemployment is the outcome. In certain extreme cases, high unemployment rates might lead to labor migration trends. Changes in the labor structure of a country affect factors of production, the economic growth, and social stability.

The purpose of this study is three-fold. First of all, this paper studies how the current economic crisis is affecting the labor market of Spain in a way that is resulting in a human capital flight or brain drain. As a consequence, Spain suffers an impoverishment of factors of production while those countries which receive these workers witness an improvement. Secondly, this paper presents a snapshot of the labor market in Spain in comparison with some Eurozone member states. This section will show that since 1990, Spain is the country with the highest level of unemployment and that labor market conditions have improved only due to the expansionary phase of the business cycle. Thus, Spain needs to adjust its factors of production to end the brain drain and improve the unemployment rate in the country. Finally, this study presents some factors that are not only triggering the exit of workers but also not incentivizing the return of those who are currently living and working in another country. This final section, therefore, sheds light into some of the major problems that Spain is facing and that could explain the current migration trends.

This paper concludes that labor migration results when the country is not able to retain and attract well-educated and highly-skilled workers to contribute to economic growth and social prosperity.

The current economic crisis in Spain: The modern brain drain

Spain is a country of emigrants. The history of emigration in Spain dates back to 1492 when “the conquistadores” went to the new world searching for fortune and glory. Spain also suffered an emigration wave during the Spanish Civil War (1936-1939) when most intellectuals left Spain and fled to the US and Latin America. This wave had the most brilliant minds which formed the so-called Generación del 27.

In the 1950’s Spain suffered difficult economic times which forced another major labor migration and the creation of the Instituto Español de Emigración. This group was formed by young males with relatively low levels of education and almost no professional skills. These workers left to find a better life in Latin America where they arrived at their own cost and peril. However, the majority of them went to northern Europe including Germany where immigration was structured, organized, and agreed upon by the Spanish and German governments making it even today a case to study and a model to imitate.

In the 1990’s Spain as member of the European Union experienced improved economic conditions. The country then stopped being a net “exporter of labor” and became a “net receptor” of labor coming mainly from Latin America. These workers came to Spain looking for work to improve living standards. History tended to repeat itself and these workers, as those that emigrated in the 1950s, sent remittances back to their countries to maintain their families. Those remittances have become a vital source of income for their families and an important economic indicator for the country of origin.

Since 2007, Spain is suffering an economic crisis which is leading to high levels of unemployment including among by highly skilled workers with years of professional experience who lost their jobs due to the economic downturn. Further, this worsening of the labor market is

reducing the chances of newly graduated students to find a job. As a consequence, Spain has a supply of highly educated and skilled workers that would be the envy of many countries. Tragically, these workers are not finding the opportunities they deserve in Spain and are migrating to other countries to find a job where they can practice their academic and professional skills. Therefore, Spain is suffering from a brain drain.

The current economic downturn is affecting everyone in Spain including an estimated 3.5 million workers who have arrived in Spain since 1990. These workers now have the Spanish citizenship and are going back to their country of origin at a rate that rose as high as 90,000 workers in just the last quarter of 2009. The loss of this group of workers—with or without the Spanish citizenship—should also be considered a brain drain as they have acquired knowledge and skills, and increased their human capital with experience and know-how.

This overall emigration of workers leaves Spain with less qualified and prepared worker, negatively affecting the productive capacity of the country. Also, the fact that the euro is relatively high against the dollar is contributing to this current trend. The following figure shows that the euro has been reaching record highs although it is in a down trend as each high is lower than the previous one.



Source: Graph provided courtesy of eSignal/Interactive Data Corporation

Reports and statistics support that Spain has been the European country with the highest level of brain drain, particularly accentuated during the economic crisis that started in 2007.² Workers looking for better job opportunities in Europe and the US are young professionals highly qualified in areas such as engineering, architecture, and computer sciences. There is another group of people with knowledge and expertise in the areas of social sciences—economics, management, etc—that are settling down in countries of Latin America.³

Spanish economic growth and factors of production are not only affected by brain drain, but also by the fact that, according to the study released in 2005 by the External Advisory Group (EAG), Spain only attracts 1 of each 1,188 researchers that leave the country to find chances elsewhere.⁴ A study published by Gilles Saint-Paul⁵ (2008) shows interesting findings regarding European immigration to the US. Immigrant workers in the US enjoy better working opportunities in the US than in their country of origin. For instance, in 1990 the employment rate of Spaniards in the US was 85.4% while the employment rate in Spain was 79.5%. In 2000, the statistic showed that 80.8% of the Spaniards living in the US were working versus 80.2% in Spain. When it comes to female employment, the data show that in 1990 the employment rate was 60.9% in the US against 32.7% in Spain. In 2000, the employment rate for Spanish females in the US was 61.4% while the employment rate in Spain was 45.1%. When it comes to education, it is interesting to report the proportion of workers with a Ph.D. compared to the average US worker. This means that these who come to the US form a group of highly qualified, and motivated, workers. In the case of Spain, 2.7% of Spaniards living in the US had a Ph.D. in

² “España es el país de la Unión Europea con mayor 'fuga de cerebros,’” *El Mundo*, February 18, 2005. <http://www.elmundo.es/universidad/2005/02/11/actualidad/1108144411.html>

³ Pascale Harter, “Immigration and economy fuel Spanish anxiety,” *BBC*, October 9, 2010. http://news.bbc.co.uk/2/hi/programmes/from_our_own_correspondent/9074463.stm

⁴ “España es el país de la Unión Europea con mayor 'fuga de cerebros,’” *El Mundo*, February 18, 2005. <http://www.elmundo.es/universidad/2005/02/11/actualidad/1108144411.html>

⁵ Silles Saint-Paul, “The European brain drain: European workers living in the US,” *VOX*, December 24, 2008. <http://www.voxeu.org/index.php?q=node/2739>

1990 and in 2000 that percentage increased to 4.6%. According to the data, only 0.82% of the US population had a Ph.D. degree in 1990 and 0.98% in 2000.

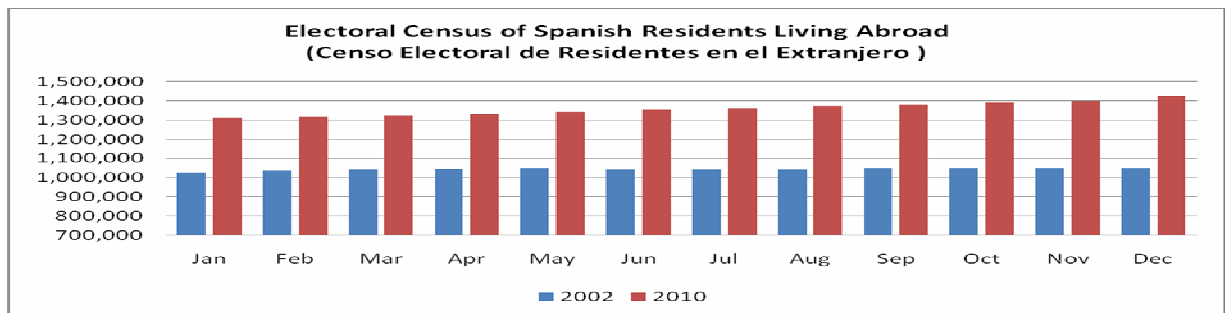
Expatriates with a Ph.D. in the US		
Countries	1990	2000
Belgium	4.33	5.78
France	3.1	4.9
UK	3.2	3.9
Spain	2.7	4.6
Italy	0.96	2.0
Germany	1.72	2.36
USA	0.82	0.98

However, it is not just the academically brightest that are in the US, but also those with high entrepreneurial skills even compared to the US. In the case of Spain, almost 11% of the Spanish population living in the US was engaged in some entrepreneurial activity in 1990 and 10.29% in 2000. For the US, the level of the entrepreneurial skill was about 8% in 1990 and about 9% in 2000.

Entrepreneurial skills of expatriates living in the US		
Countries	1990	2000
Belgium	13.18	11.51

France	10.67	11.39
UK	9.84	10.55
Spain	10.96	10.29
Italy	13.42	14.21
Germany	9.85	9.39
USA	8.08	9.08

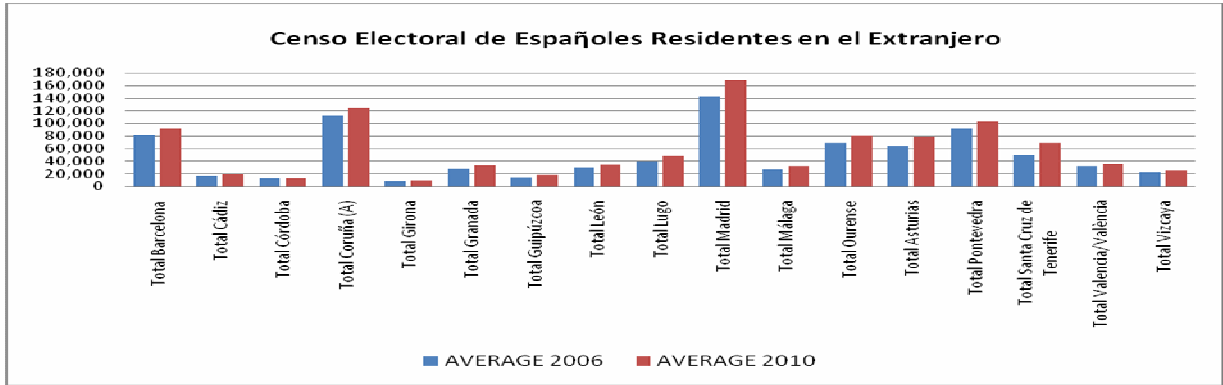
The Spanish Instituto Nacional de Estadística (www.ine.es) reported that according to the data from the Censo Electoral de Españoles Residentes en el Extranjero (CERE), the number of Spaniards who have left Spain to set their residence in another country has increased significantly from 1 million in 2002 to 1.4 millions in 2010.



Source: Author based on data from the Instituto Nacional de Estadística.

http://www.ine.es/oficina_censo/cifras_electores.htm

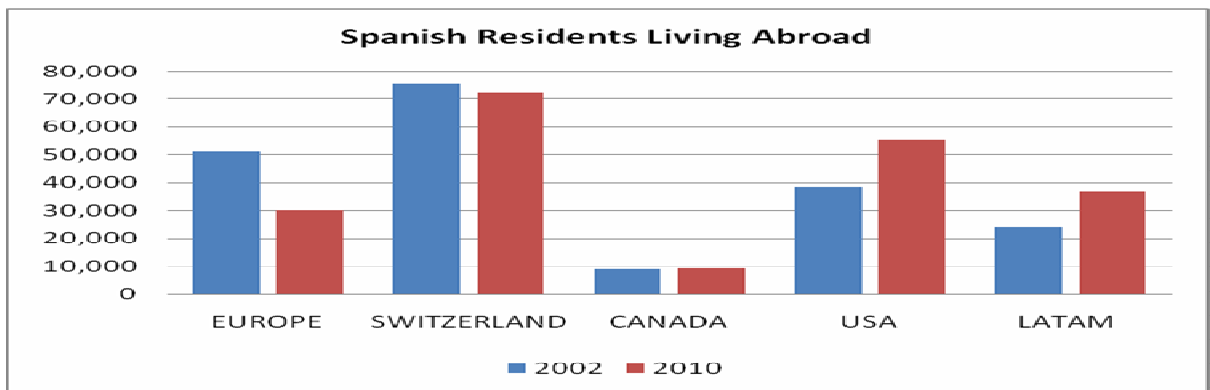
An analysis by city shows that Madrid, Barcelona, and A Coruña have witnessed the highest emigration trend.



Source: Author based on data from the Instituto Nacional de Estadística.

http://www.ine.es/oficina_censo/cifras_electores.htm

It is significant that despite the fact that labor market in Europe is open to Spaniards, the number of Spaniards choosing to move within Europe has decreased significantly. For instance, the number of people choosing Switzerland—the traditional working country chosen by most Spaniards in the 1950's— has decreased. This graph shows that instead the US and Latin America are the two areas which have been receiving this new wave of Spanish emigration.



Source: Author based on data from the Instituto Nacional de Estadística.

http://www.ine.es/oficina_censo/cifras_electores.htm

Its underlying production strength and growing exports have meant that Germany is once again short of workers. This time, however, they do not need low skilled workers to help built and reconstruct the country as it happened in the 1950s. Rather, Germany needs “between 500,000 and 800,000 new skilled employees”⁶ to continue supporting its economic growth which in 2010 surpassed 3%. This shortage of workers and a possible project of bilateral cooperation in the workplace were the main theme of the German agenda during the regular Spanish-German consultations that took place on February 3 in Madrid.⁷

The Unemployment rate as an economic and political indicator

Unemployment has historically been the Achilles’ heel of the Spanish economy. For this reason the health of the economy is mostly measured by the unemployment rate reported every month. The unemployment rate hints at the performance of other economic indicators. For instance, if the unemployment rate is high, it is expected to be followed by a drop in gross domestic product (GDP), inflation, and consumer and investment spending, and an increase in government spending, among others. There are three important types of unemployment—actual, natural, and cyclical—and each one sheds light on what is the main problem affecting the country.

⁶ Efecom, “Alemania estudia ofrecer trabajos cualificados a jóvenes españoles en paro,” *Eleconomista.com*, January 21, 2011. <http://www.eleconomista.es/economia/noticias/2762832/01/11/Alemania-estudia-ofrecer-trabajos-cualificados-a-jovenes-espanoles-en-paro.html>

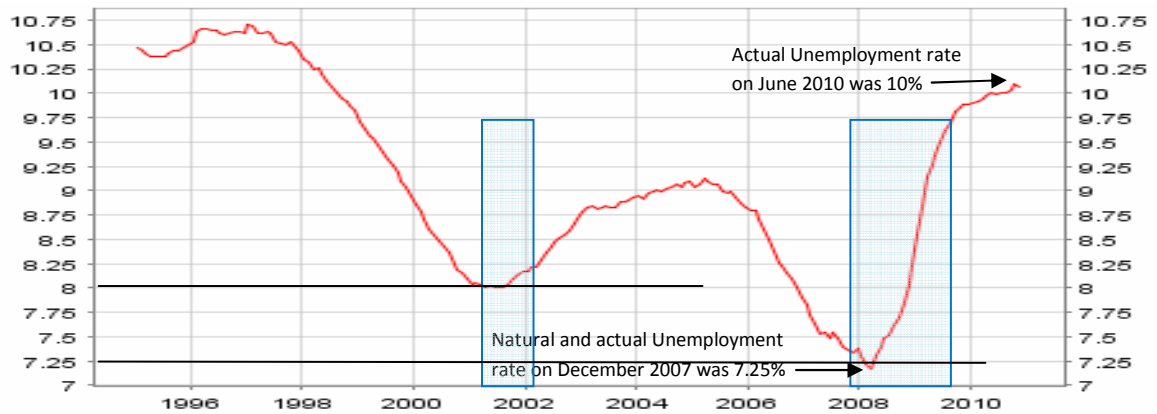
⁷ Europa Press, “Germany plans to offer jobs to unemployed young Spanish,” *Libertad Digital*, January 22, 2011. <http://translate.google.com/translate?hl=en&sl=es&u=http://www.libertaddigital.com/economia/alemania-planea-ofrecer-trabajo-a-jovenes-espanoles-en-paro-1276412505/&ei=Nqc9TcuhBMH68Aa2grj6Cg&sa=X&oi=translate&ct=result&resnum=1&ved=0CCMQ7gEwAA&prev=/search%3Fq%3DAlemania%2Bplanea%2Bofrecer%2Btrabajo%2Ba%2Bj%25C3%25B3venes%2Bespa%25C3%25B1oles%2Ben%2Bparo%26hl%3Den%26client%3Dfirefox-a%26hs%3D0ek%26rls%3Dorg.mozilla:en-US:official%26prmd%3Divns>

The actual rate of unemployment is the one reported for a particular time period. The following graph portrayed the evolution of the unemployment rate in the Eurozone, and shows that the actual rate of unemployment on November 2010 was 10.1%. The natural rate of unemployment is the unemployment recorded when the economy is not suffering from severe fluctuations. The evolution of the unemployment rate in the Euroarea shows that, in the past two years, the Eurozone has suffered a dramatic increase in unemployment from an all time low of 7% in the first quarter of 2008 to an all time high of 10% in 2011. It would be safe to say that the natural rate of unemployment in the Euroarea 15 is between 7%-8% as this level is the lowest rate right before the recessionary phase of the business cycle. Finally, cyclical unemployment is the involuntary unemployment associated with a change in the business cycle which, in this case, would be 3%.

Following the data provided by the National Bureau of Economic Research (NBER)⁸, I have highlighted in blue the beginning and end of the last two recessions together with the unemployment rate. According to the NBER, the business cycle reached its peak in December 2007 inaugurating the recessionary phase of the business cycle which reached its trough in June 2009.⁹ The graph shows that despite the NBER marked the end of the recession on June 2009, the unemployment rate in the Eurozone has kept on rising.

⁸ National Bureau of Economic Research, "Business Cycle Dates." <http://www.nber.org/cycles/cyclesmain.html>

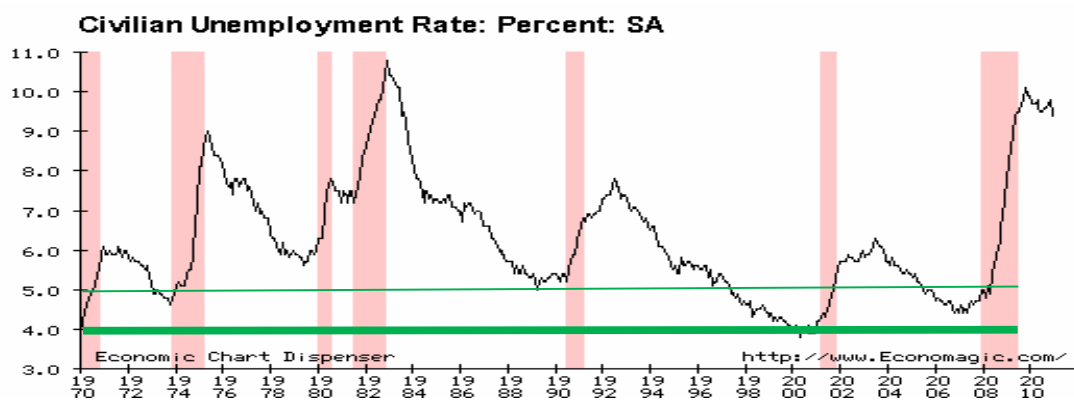
⁹ The World Bank, "Doing Business." <http://www.doingbusiness.org/rankings>



Source: European Central Bank, “Unemployment rate.

<http://www.ecb.europa.eu/home/html/404.en.html>

However, the following graph demonstrates that the unemployment rate in the US is synchronized with the business cycle because since June 2009 the unemployment rate has been going down. In the case of the US, the natural rate of unemployment is considered to be around 4%-5% and the cyclical unemployment is about 6%.

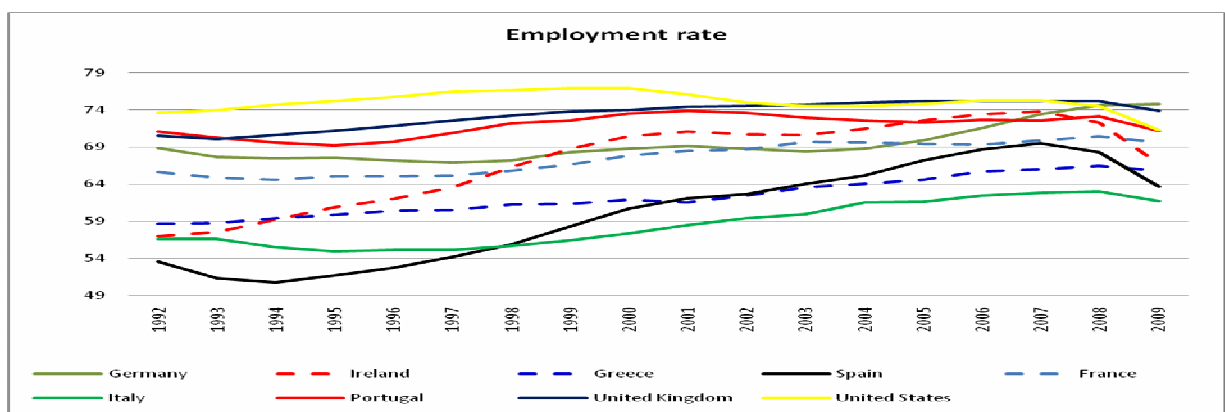


Economagic. “Civilian Unemployment Rate: Percent: SA.”

<http://sub0.economagic.com/gif/g9806401220154161026364265083538293.gif>

These two graphs show that while in the US the natural rate of unemployment is around 4.5%, the Eurozone has a natural rate of 7%. This difference could be explained by understanding and analysing different structural factors that affect the functioning and organization of each labor market.

The most important piece of information is the unemployment/employment rates which together with GDP and Consumer Price Index make up the three main macroeconomic indicators. The graph below demonstrates that the employment level in Spain has fluctuated significantly from an employment rate of about 50% during the first years of the 1990's to all time high of 70% in 2007. This graph shows that the US has the highest employment level and that the U.K and Germany enjoy the most stable and high employment levels among the EU-27. Finally, Ireland and Spain have witnessed an impressive improvement in their employment rates; however, since 2007 have suffered a dramatic drop. This sharp fall of the employment rate has not only economic effects, but also very painful social implications and, in some cases, potentially dangerous political results.

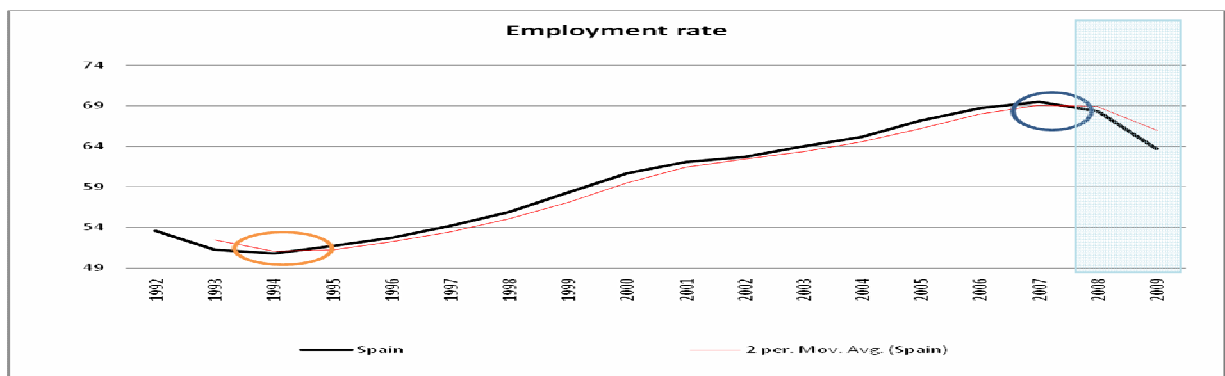


Source: Author based on data from the Organization for Economic Co-operation Development.

“Employment rate.”

http://www.oecd.org/statsportal/0,2639,en_2825_293564_1_1_1_1_1,00.html

The following graph shows the employment rate in Spain from 1992 to 2009 with a two years simple moving average (SMA). The crossing of the SMA and the employment rate signals the change in trend. In 1994 the SMA crossed the employment rate marking the beginning of an improvement in the employment rate that has lasted until 2007. This year they crossed again and the employment rate began to decline. Further, the blue box in the graph indicates the recessionary period as recorded by the NBER. In 2008, the SMA and the economic indicator had crossed and there was a change of trend which coincides with the beginning of the recessionary period.



Source: Author based on data from the Organization for Economic Co-operation Development.

“Employment rate.”

http://www.oecd.org/statsportal/0,2639,en_2825_293564_1_1_1_1_1,00.html

It is important to mention that this symbiosis between the unemployment rate, the SMA, and the business cycle transform the Spanish employment rate into a solid economic indicator capable of signaling a change of a trend. This is very valuable information not only for economics, but also for political purposes.

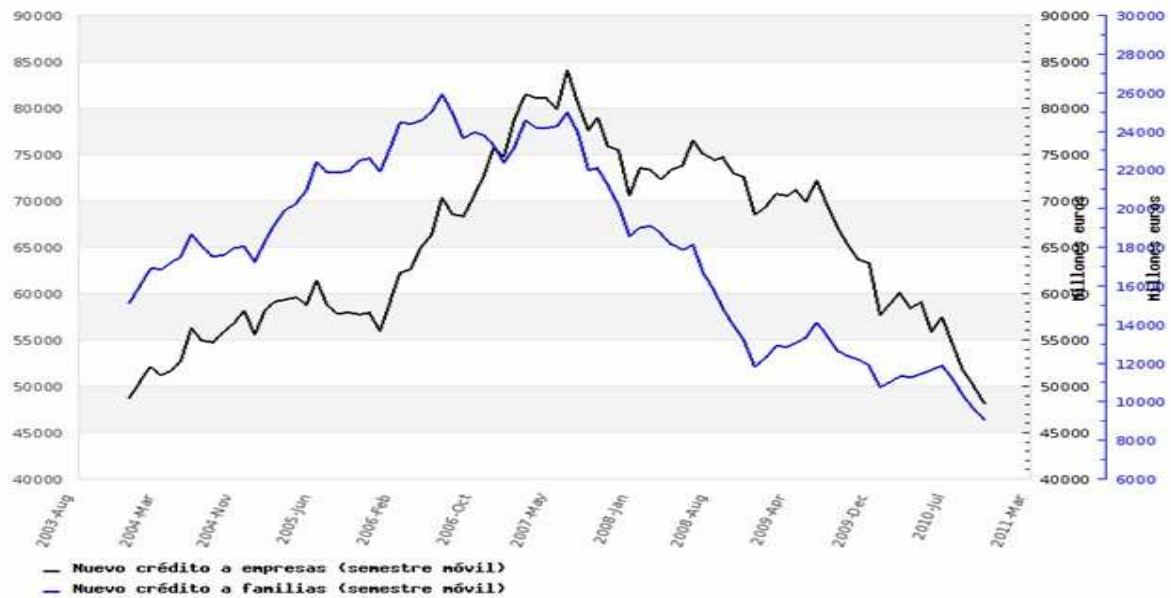
Spain and the brain drain: What your country can do and offer you

There are many factors that could explain the current wave of migration and why Spain is currently not offering what is needed to retain highly skilled and well-educated workers. However, this section would focus on the importance of credit to creating and maintaining businesses and companies, and the weight of innovation and research to maintain and attract the brightest. These two points would help explain that in Spain the entrepreneurial spirit is very low.

To begin with, the latest data from the Banco Central de España demonstrates that businesses are cutting down on credit. In fact, the rate of demand for credits worth less than one million euros has dropped 14.3% and has dropped 24% for credit over one million euros.¹⁰ This reduction in credit demand is portrayed in the graph below and it is what has been labeled the Spanish Credit crunch.¹¹ This credit crunch means that businesses are reducing demand of funds which means that business are still stalling investment project. This lack of investments explains that one in every four employers are expected to cut its workforce in 2011 because the negative views on the performance of the Spanish economy.

¹⁰ Banco de España, “Tipo de interés aplicado por las IFM a los residentes de la UEM.” <http://www.bde.es/webbde/es/estadis/infoest/a1921.pdf>

¹¹ Juan Carlos Barba, “El crédito a las familias y empresas se desploma a un ritmo record,” *Libertad Digital*, January 10, 2011. <http://www.libertaddigital.com/economia/el-credito-a-familias-y-empresas-se-desploma-a-un-ritmo-record-1276411403/>



Source: Juan Carlos Barba, “El crédito a familias y empresas se desploma a un ritmo record.”

Libertad Digital, January 10, 2011. <http://www.libertaddigital.com/economia/el-credito-a-familias-y-empresas-se-desploma-a-un-ritmo-record-1276411403/>

In an effort to halt this credit crunch, the Instituto de Crédito Oficial has just renewed the 2011 collaboration with La Caixa to allow businesses and individual freelancers to have access to more than €1,500 millions to finance start-ups and businesses in three fronts.¹² These funds are expected to first provide capital to help businesses with new investment plans. These new projects would help companies find new business opportunities and, in turn, kick start GDP growth. Secondly, part of these funds are destined to help those companies which are expanding

¹² “La Caixa concede más de 40,000 créditos ICO a empresas y autónomos,” *Libertad Digital*, January 5, 2011. <http://www.libertaddigital.com/profesionales/la-caixa-concede-mas-de-40000-creditos-ico-a-pymes-empresas-y-autonomos-1276411086/>

internationally. Finally, the purpose of these resources is to provide capital to business which are facing liquidity problems.

To accompany this effort, the Spanish government approved on January 14, 2011 the Plan Apoyo a los Emprendedores. This plan has received €84 million to contribute to the creation of companies; in particular, the government believes that this endowment will help create 5,000 new companies and will end up moving up to €300 mil.¹³ This new plan must be implemented by the Government in order to keep up with the so-called “Small Business Plan” approved by the European Commission in June 2008.¹⁴ The government has earmarked €15 million to launch a new guarantee program for entrepreneurs. Also the Ministry of Industry, Tourism and Trade is going to renew specific funding lines for young entrepreneurs worth €20 million and for women entrepreneurs worth €1 million. Also, €20 million are budgeted to help create and consolidate more than 150 new companies, and around €6 million have been approved to advise entrepreneurs to launch their initiatives. Finally, up to €2 million are budgeted to hold seminars to promote business values and, most curiously, the so-called “Entrepreneurs Day.”¹⁵

However, in order to create new companies and increase business investments to boost the economy, it might be more important and cheaper to reduce red-tape and taxes, and improve the labor market conditions. Nonetheless, the number of companies that filed for bankruptcy fell by 3%, which is a good recovery sign according to the ‘Schedule Bankruptcy 2010’ prepared by PwC.¹⁶ According to the data published by the “Doing Business Index”¹⁷ which measures how

¹³ EFE, “El Gobierno destina 84 millones de euro al Nuevo Plan de Emprendedores,” *Libertad Digital*, January 14, 2011. <http://www.libertaddigital.com/profesionales/el-gobierno-destina-84-millones-de-euros-al-nuevo-plan-de-emprendedores-1276411878/>

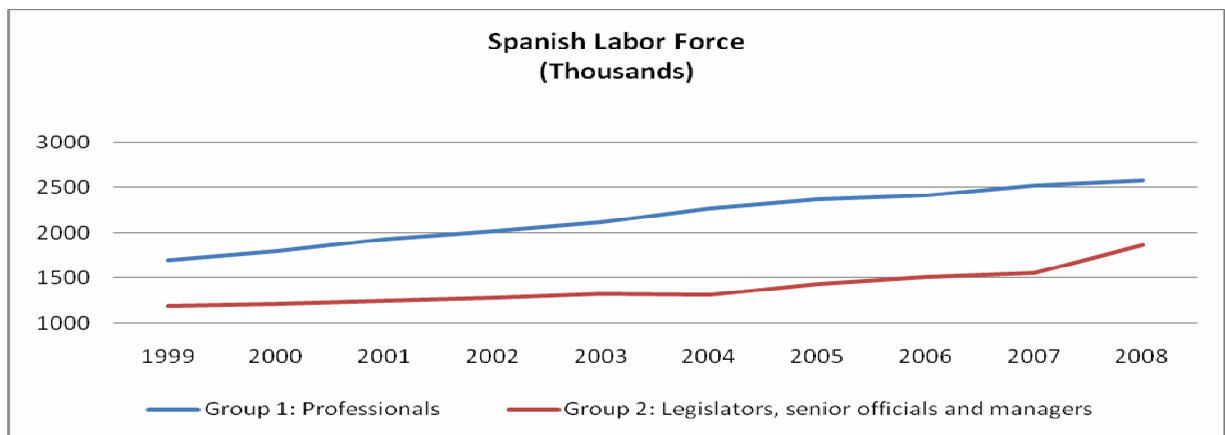
¹⁴ Eurostat, “Science, Technology and Innovation.” http://epp.eurostat.ec.europa.eu/portal/page/portal/science_technology_innovation/data/database

¹⁵ Rodolfo De Juana, “84 millones para apoyar a nuevos emprendedores,” *MuyPymes*, January 14, 2011. <http://muypymes.com/agenda/ayudas/6973-84-millones-para-apoyar-a-nuevos-emprendedores.html>

¹⁶ Europa Press, “Las quiebras empresariales bajan un 3% en 2010,” *Libertad Digital*, January 10, 2011. <http://www.libertaddigital.com/profesionales/las-quiebras-empresariales-bajan-un-3-en-2010-1276411423/>

“business friendly” countries are, in 2011 Spain ranks number 49 in a list of 183 economies. Spain ranked 144 in 2010, and 147 in 2011 on the measure that determines how easy is to start a new business. On a third important category—dealing with construction permits, registering property, getting credit, and protecting investors—Spanish ranking dropped rather than improved it. Finally, where Spain must really improve is in speeding up important tasks such as legalizing the company’s registration and obtaining a municipal license to open a business premises which can take from 15 days to up to 3 months.

These results explain that although 93% of the population in Spain has a high literacy rate, only 5.7% of the population has in mind the idea of opening a business in the next 3 months versus a level of 14% in the US. The following graph compares employment levels between two very important sectors of the labor market: professional workers, and legislators and other political appointees. While the first group which represents the economic motor of any nation seems to be in a plateau, the second group has seen a significant increase.

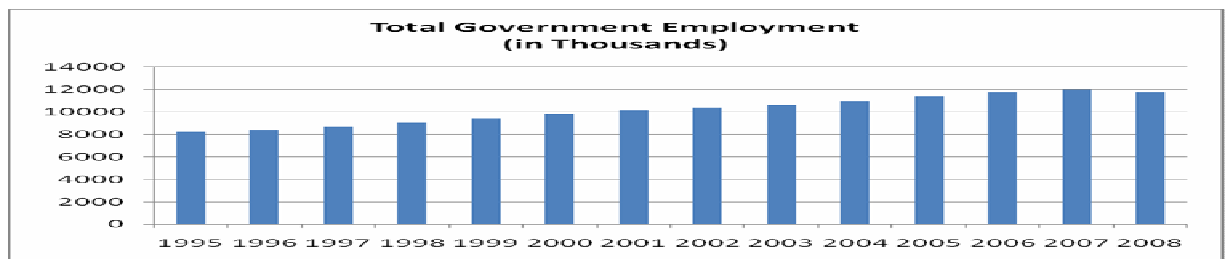


Source: Author based on data from International Labor Organization. “Spanish Labor Force.”

<http://laborsta.ilo.org/STP/guest>

¹⁷ The World Bank, “Doing Business.” <http://www.doingbusiness.org/rankings>

Another important type of employment that should be analyzed is the total government employment in Spain. The following graph shows that this level has increased significantly from 1996 to 2007. It is interesting to highlight that this increase took place during the expansionary phase of the business cycle; that is, when the entrepreneurial spirit of Spain should have been at its peak.



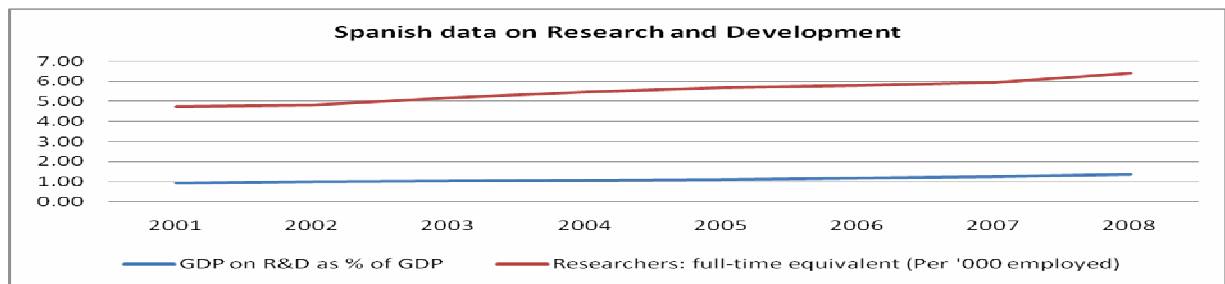
Source: Author based on data from International Labor Organization. “Spanish Labor Force.”

<http://laborsta.ilo.org/STP/guest>

The second reason that can explain the current rate of brain drain in Spain is the lack of investment in research and development. The last Community Innovation Survey¹⁸ concluded that between 2006 and 2008, 80% of companies in Germany had tried any kind of innovative activity versus 43% of Spanish companies which makes Spain the country with the worst record among the EU-15. For instance, in today’s technological environment, only 62% of business and companies in Spain have a webpage to sell or advertise its products versus Denmark (88%), Germany (84%), or Austria (80%). The graph below shows that there has not been a serious attempt to invest in research and development since it has only increased 1.5% from 2001 to

¹⁸ Catherine Bolgar, “Germany — The Home of Smart Innovation,” *Wall Street Journal*.
<http://online.wsj.com/ad/article/germany-innovation.html>

2008, a very small percentage compared to the fact that according to the World Economic Forum’s WEF Global Competitiveness Report 2010-2011 “Germany is the international leader in terms of capacity for innovation, occupies fourth place for company and government spending on -R&D, and secures the sixth spot for quality of scientific research institutions.”¹⁹



Source: Author based on data from Organization for Economic Co-operation Development.

“Spain Statistical Profile.”

http://www.oecd-ilibrary.org/economics/country-statistical-profile-spain_20752288-table-esp

Similarly, the number of full-time researchers has not increase during this time either. The Ramon y Cajal plan to bring back Spanish talent has not worked as expected since “out of the 774 researchers given contracts in the first phase of the program, only 437 have managed to obtain permanent positions.”²⁰ Also, during the “Jornadas de jóvenes post-doc en el extranjero” organized by the Consejo Superior de Investigación Científica (CSIC) in Madrid on December 2010, was concluded that

¹⁹ Catherine Bolgar, “Germany — The Home of Smart Innovation,” *Wall Street Journal*.
<http://online.wsj.com/ad/article/germany-innovation.html>

²⁰ El País, “Ramón y Cajal Program: Spain’s brain drain scheme leaves scientists redundant,” *Barcelona Reporter*, November 16, 2006.
http://www.barcelonareporter.com/index.php?pg_print_article/ramn_y_cajal_program_spains_bain_drain_scheme_leaves_scientists_redundant/

el problema no es la falta de institutos de alto nivel en España, sino que con la formación que traen tras sus estancia en el Extranjero, estos científicos españoles jóvenes no deberían optar a puestos de investigación junior, que son los que hay disponibles, sino que tendrían que tener a su cargo su propio proyecto.²¹

Based on these findings, it makes sense that most of the Spanish companies listed on the IBEX-35 have been looking for opportunities outside Spain. For example, Telefónica, Santander, Repsol, Prosegur, OHL and Mapfre are some of the Spanish companies which have been successfully branching out in Latin America for the past ten years and who have been responsible for taking with them the best and the brightest. But not only multinational companies are expanding, but also Spanish small and medium size businesses are looking for business opportunities outside national borders; the latest effort has been a delegation of 24 mid-size companies going to Turkey. Part of the reason maybe that Turkey is receiving funds from the EU to improve public infrastructure and services to the point that Spanish total investment in this country in 2009 reached an impressive €118 million.²² But Spain is mainly expanding in South America at the same time the Interamerican Development Bank (IDB) and the World Bank are investing new money in this region.²³ The IDB has pledged to provide the area with new money totalling US\$12.900 million to fund a total of 170 projects and increased by US\$512 the already provided amounts to fund

²¹ Europa Press, "Dificultades de los jóvenes científicos para regresar a España," *El País*, December 26, 2010. http://www.elpais.com/articulo/sociedad/Dificultades/jovenes/cientificos/regresar/Espana/elpepusoc/20101226elpepusoc_1/Tes

²² "24 Empresas españolas analizan en Estambul nuevas posibilidades de negocio," *Libertad Digital*, January 14, 2011. <http://www.libertaddigital.com/profesionales/24-empresas-espanolas-analizan-en-estambul-nuevas-posibilidades-de-negocio-1276411828/>

²³ "América Latina ofrece a las empresas madrileñas proyectos de desarrollo," *Libertad Digital*, January 11, 2011. <http://www.libertaddigital.com/profesionales/america-latina-ofrece-a-las-empresas-madrilenas-proyectos-de-desarrollo-1276411617/>

technical cooperations. Also, the World Bank has earmarked US\$49,300 millions—which supposes an increase of 18%—to fund projects that would continue fighting poverty.

Final Words

This paper argues that when the economic conditions of a country worsen, there tend to be an increase in the level of unemployment which in extreme cases ends in mass labor migration. If this is led by highly-skilled and qualified workers is called a brain drain. This labor migration is a zero-sum game since those leaving the county take with them knowledge and expertise—impoverishing the country politically, economically and socially—but enhance the factors of production in the country of adoption.

This migration could be prevented depending on the measures taken by the country to retain their highly qualified workers. These workers have spent time and put effort into obtaining knowledge and skills; thus, they are contributing much to their country. But the political, social, and economic stability of a country not only depends on what society can do for the country but also on what the country is willing and able to do for its citizens.

This paper presents that the Spanish working population is well-qualified and highly skilled and due to the current economic crisis these qualified workers are finding job opportunities in other countries. This has a negative effect on Spanish factors of productions. Also, this paper has identified two reasons that explain this trend. One factor is the current lack of credit available to develop businesses that is not only hindering the entrepreneurial spirit but also postponing hiring and affecting the level of unemployment. The second factor is a very low investment in research and development which is negatively affecting the opportunities for researchers and academics.

History tends to repeat itself. This time Spain is suffering a surplus of labor and Germany is suffering a shortage due to Germany's spectacular economic growth. The first law of economics is that demand and supply will always tend to find equilibrium. In this case, Germany has reported that in order to sustain economic growth, the country is in demand of more workers with qualifications in the areas of engineering and telecommunications. Spain has a large surplus of workers with those requirements and it can be anticipated that the equilibrium will be achieved in a way that is unfavorable to its economic prospects.