

# Entrepreneurship, Youth Unemployment and Macroeconomic Policy: Lessons from Korea and Spain

Tae-Seok Jang\* and Stephen Sacht†

October 21, 2014

## Abstract

In this paper we shed light on the relationship between entrepreneurship, job creation and youth unemployment prior to and in the aftermath of the global financial crisis. We seek to understand the differences in macroeconomic and, in particular, labor market dynamics in Europe and East Asia. While our focus is on Korea and Spain, we discuss the situation, where the use of macroeconomic policy is largely ineffective in reducing high levels of youth unemployment after 2007 — with a most severe outcome for the member state in the European periphery. Based on our analysis, we recommend several policy measurements in order to strengthen entrepreneurial activity (as one of the main drivers for job creation) and, hence, reducing long-term youth unemployment. While policy makers should focus primarily on structural labor market reforms in the case of Spain (with respect to temporary job contracts and the minimum wage), the recent development of the Korean economy shows that investment in newly founded businesses should be supported by appropriate funding as well as macroeconomic stability, where the latter can help companies to navigate through difficult times.

**Keywords:** Entrepreneurship, Youth Unemployment, Labor Market Policy, Macroeconomic Policy.

**JEL classification:** E24, E61, J13, L26.

---

\*Corresponding Author. Korea University & Seoul National University of Science and Technology, Republic of Korea, Email: taeseok.jang@gmail.com

†Kiel Institute for the World Economy, Hindenburgufer 66, 24105 Kiel & Department of Economics, Christian-Albrechts-University Kiel, Olshausenstrasse 40, 24118 Kiel, Germany. Email: stephen.sacht@ifw-kiel.de *or* sacht@economics.uni-kiel.de

We thank Ignat Stepanok and Ki-Un Ohn for valuable discussions and comments.

# 1 Introduction

The turmoil in the aftermath of the financial crisis, which started in 2007 with the fall of Lehman’s Brothers, has caused severe economic problems and structural changes in the world. While the countries in the periphery of the Euro Area face a situation where output lies below potential, a constant rise in sovereign debt and enormous unemployment rates are observed. Similarly, the Asian region deals with a situation of economic stagnation among (almost) all countries — with an exception of this geographical area’s dray-horse China. Among economists and policy advisers, the ongoing debate on which measurements — such government spending programs and traditional (or even unorthodox) monetary policy interventions — are needed to stimulate world-wide recovery, however, is mainly short-sighted. We claim that one drawback of the temporizing policies is the high youth unemployment rate in (Southern) Europe and East Asia. Interestingly, although both regions exhibit different kinds of economic adjustments during the Great Recession period, the level of young participants of the labor force being unemployed exceeds the total number of the unemployed workers (ILO (2013)). The latter observation is striking and can be observed empirically for the last two decades (Görlich et al. (2012)).<sup>1</sup>

The objectives of this paper are linked to the understanding of macroeconomic policy measurements and youth unemployment in Europe and Asia. First, we show how traditional monetary policy interventions are not enough to restore a low level of youth unemployment in these regions.<sup>2</sup> Next, we shed more light on structural approaches to entrepreneurship. We define the latter as the bundle of activities in order to start and run a newly founded company, while for simplicity we see this expression being equivalent to a ‘start-up’ enterprise. Besides training-on-the-job schemes, entrepreneurial activities subsidized by government officials might be promising in order to reduce unemployment with respect to the entrepreneur herself and the associated job vacancies to be filled by the start-up. For example, newly funded businesses in the service sector with focus of biotech industry, as well as telecommunication and internet industry, can provide a new stimulus to employment of young (high-skilled) adults. Hence, we aim to address the role of entrepreneurship in job creation, while analyzing the business challenges facing entrepreneurs in Europe and Asia.

Our emphasis of the analysis lies on Korea and Spain as being representative economies in dealing with the high levels of youth unemployment. For Europe or, more precisely, the Euro Area we choose Spain over Greece, where the latter country in the European periphery exhibits also incredible high rate of (youth) unemployment. However, Greece suffers from various structural eco-

---

<sup>1</sup>It goes without saying that high rates of youth unemployment hinders the opportunities of future economic growth and stability. High labor market barriers for young adults and the loss of personal economic perspectives we judge as one of the main obstacles for sustainable and long-run recovery after the crisis.

<sup>2</sup>We follow the definition of ‘youth’ by the United Nations as the age group between 15 and 24 years, which is common in the literature.

conomic problems linked to an inefficient degree of bureaucracy, political reforms and a depressive economic environment. Hence, an isolate discussion on youth employment and the associated measurements to fight against it, seems to be difficult without a deep analysis of economic (or even political) transmission mechanisms in Greece. Instead, Spain slightly recovers after the financial crisis and the burst of the Spanish real estate bubble in 2007, which causes a phase of job destruction in the construction sector. Although the country has reimbursed (a fraction of) the financial aid provided by the the European member states under the leadership of the so-called ‘Troika’ (European Commission (EC), the European Central Bank (ECB) and the International Monetary Fund (IMF)), Spain still has to tackle imminent labor market problems.

Indeed, the problem of high youth unemployment is not a recent phenomenon in the modern economy. The notions of a young and unskilled labor force are commonly associated with a higher likelihood of labor market mismatch. However, the recent increase in global youth unemployment is constrained by an economic slowdown and competition in the world economy, while the young workers need to find their first job overseas or look for apprenticeship in foreign countries which economies are booming (Martin (2012)).

In this respect, labor market issues observed in Spain have some similarities that we can find in the Korean economy after the crisis. For example, one of the major concerns in Korea is to adapt the labor market to its changing economy (Dao et al. (2014)). Since the export-driven strategic approach allowed the Korean economy to grow at a much more rapid rate, its open economy setting has undergone from the stage of fast economic development to a new stage characterized by ‘low growth’, ‘low inflation’, and ‘current account surplus’. There is no wonder that Korea is now facing challenges of slowing growth and aging population from which the society should transform the previous success of the fast economic development- so called ‘the Miracle of Han River’ - into a ‘creative economy’ (Connell (2013)).<sup>3</sup> On the one hand, the macroeconomic environment of low growth and low inflation put pressures on public spending and social cohesion, because there are significant demographic shifts, but the society is not ready to accommodate the changes. On the other hand, the Korean economy has enjoyed its export-driven growth by increasing its share of trade balance up to 100% of GDP. Although the economy experiences a continuous trade surplus, the macroeconomic account suggests that money is not effectively invested through innovation and business opportunities, while domestic absorption is often ineffective in bringing new vigor to the economy.

The remainder of the paper is structured as follows. In the next section we discuss the macroeconomic situation in both representative countries before and

---

<sup>3</sup>Facing the economic recession in the world, the Korean government has increased its spending to boost the domestic absorption, while the Bank of Korea dropped the standard interest rate to 2.25 percent in 2014. Since the general labor market is not flexible enough to accommodate the demand side of economy, however, the multiplier effect is likely to be smaller, especially in the case of a small open economy.

during the Great Recession period with special emphasis on youth unemployment. Next, we shed light on the business environment entrepreneurs have to deal with how the employment rate of young adults can be increased by start-up activities. In section 4 we develop solution strategies addressed to policy advisors with respect to macroeconomic measures to stimulate entrepreneurship along with job market intervention for young people. We conclude the paper in section 5.

## 2 Macroeconomic Developments in Spain and Korea

In this section we discuss significant changes of the macroeconomic environment in Spain and Korea over the last decade. In particular, we aim to examine the changes in the unemployment rate and the effects of labor institutions on aggregate demand. Indeed, the governments tend to adopt temporizing measure which can provide a short-term stimulus to weak aggregate demand. However, the long-run approach adopted by most classical economists emphasizes cross effects of labor institutions on unemployment in the economy (Nickell (2003)). In this study we discuss the reason why traditional stabilization policy was not enough to reduce youth unemployment in both countries, while examining the effect of a long-run adjustment process in the labor markets.

	GDP Growth Rate (annual %)	Inflation Rate (in %)	Short-Term Interest Rate (in %)	Trade Ratio (% of GDP)	C.A. Balance (% of GDP)	U. Rate (in %)	Youth U. Rate (in %)
2003	3.09	3.04	2.33	55.01	-3.50	11.3	22.7
2004	3.26	3.04	2.11	55.87	-5.20	11.0	22.0
2005	3.58	3.37	2.19	56.60	-7.37	9.2	19.7
2006	4.08	3.52	3.08	58.94	-8.97	8.5	17.9
2007	3.48	2.79	4.28	60.53	-10.0	8.3	18.2
2008	0.89	4.08	4.63	58.81	-9.70	11.3	24.6
2009	-3.83	-0.29	1.22	49.76	-4.80	18.0	37.9
2010	-0.20	1.80	0.81	56.88	-4.51	20.1	41.6
2011	0.05	3.20	1.39	62.74	-3.79	21.6	46.4
2012	-1.64	2.45	0.57	64.55	-1.14	25.0	53.2
2013	-1.22	1.41	0.22	65.84	0.80	24.5	56.1

**Table 1:** Macroeconomic Patterns and Trade Balance in *Spain* over the Period 2003-2012 (Source: World Bank World Development Indicators)

*Note:* The Inflation rate is given in terms of the Consumer Price Index (CPI). The abbreviations ‘C.A.’ and ‘U.’ denote ‘Current Account’ and ‘Unemployment’, respectively. All data is retrieved from <http://www.allthatstats.com>.

Table 1 shows the development of the main economic indicators for *Spain* over the period 2003–2013. In the pre-crisis period from 2003 to 2007, Spain exhibits a moderate growth in GDP on an annual basis along with an inflation rate around 3%, which turns out to be higher than the ECB inflation target of (below but close to) 2%. Although the short-time nominal interest rate (expressed through ECB’s instrument for main refinancing operations) remains almost unchanged on a high level, the boom in the construction sector with respect to real estates has caused an acceleration in housing prices within this period (IMF (2011)). The massive investment in real estates is mimicked by the sharp decrease in the current account balances for the years 2005 to 2007. During these years the degree of openness expressed by the trade ratio given in percentage of GDP increases slightly. Given the latter observation along with high annual GDP growth, the total unemployment rate shrank by 3%. However, while it seems that labor market policy was successfully established in the pre-crisis period, this development might be heavily grounded on the boom in the construction sector. While a decrease of 4.5% in the youth unemployment rate indicates that the situation on the labor market segment for young adults between 15 and 24 becomes more relaxed compared to the total number of unemployed people, it can be seen that this specific unemployment rate is around 10% larger. Furthermore, despite that positive labor market development, the both unemployment rates differ significantly from a value of 4%, which can be commonly interpreted as a situation of full employment. It goes without saying that this situation is more severe for young unemployed people.

A reason behind this dire situation on the Spanish labor market can be found in the existence of downward nominal wage rigidity as an evidence for structural labor market failures. Indeed, Schmitt-Grohé and Uribe (2013) report a monotonic increase in the nominal hourly wages for Cyprus, Greece, Ireland and Spain up to 2011 based on Eurostat data. With special emphasize on Korea, this observation is confirmed by the increase in the ratio of average annual wages to current prices in the Korean Won provided by the OECD from 2003 to 2012. The same holds for Spain based on the same data set. In their study, Schmitt-Grohé and Uribe (2013) suggest that for the countries of the European periphery a overall temporality inflation around 4% in the Euro Area could help to reduce downward real wage rigidity. Whether this is a recommendable policy advise also with respect to youth unemployment (in Korea) we will discuss in Section 4.

However, downward nominal wage rigidity does not account for the high rate of youth unemployment alone. One of the major characteristics of the Spanish labor market is given by the amount of temporary jobs for young unemployed people.<sup>4</sup> In 2008, this rate for young Spanish working on a temporary contract is about 59% in comparison to fixed-term employees. For example, average time to find a fixed term position is about six years. It has been widely

---

<sup>4</sup>The description of the Spanish labor market in this section is primarily adopted from Balaram (2014) if not being stated otherwise.

reported that the rate of temporary contracts was already higher than 40% in the recession periods from 1984 until 1987 and 1993/94. According to the young-adult unemployment ratio, the lower bound of this value is around 2% over the past 25 years. Hence, it can be seen that youth unemployment is a common phenomena of the Spanish labor market.

Overall, long-term youth unemployment has been tripled since the burst of the housing bubble in 2007 (Sánchez (2012)). The reasons for this observation are manifold. This economic upward movement accounts for one third of the total amount of jobs created in the EU (Corujo (2013)). However, after the bubble burst, 66% of the jobs for young employees in the construction, manufacturing and sales sectors became lost between 2008 and 2012. No recovery of these (primarily) temporary jobs could be observed over this period as reported in Sánchez (2012). The author states that those job contracts, which prevailed during the crisis, had been adjusted with respect to the change in the working time. This development in the number of temporary contracts is explained by structural issues. First, employers face a minimum wage for a 19-year old workers of around 1009 US Dollar per month, according to the World Bank project ‘Doing Business’. A maximum length of a single fixed-term contract is 36 months depending on the type of a particular task.<sup>5</sup> Along with a high degree of firing costs, the limitation of the fixed-contract length can be interpreted as market barriers for young unemployed people since it is commonly associated with a high degree of job turnovers. Hence, employers will expect to lose experienced (and thus productive) workers after the contract lengths had been expired and there is no need or possibility to transfer the job into a permanent one.

Although reforms on temporal contract regulations (including the installment of a maximum temporary contract length) had been undertaken in Spain with respect to dismissal procedures and the likelihood of ‘chaining’ temporary contracts, these reforms are judged to be only modest (Balaram (2014)). With respect to business fluctuations, Corujo (2013) claims that an 1% increase in the growth rate of GDP is required for a positive stimulus on job creation in Spain. However, Table 1 shows that this level of growth is not obtained from 2008 until 2013, i.e. within the crisis period. In fact, the GDP growth rate had been negative for almost the entire time period. In conclusion, without economic recovery as a main target of fiscal (and monetary) policy, labor market reforms will blow out.

Keeping these characteristics of the Spanish labor market in mind, from 2008 until 2013 — we call this simply the ‘after-crisis’ period — the country suffers from an incredible and massive increase in the rate of unemployment up to 24.5% in 2013. From the last column of Table 1 it can be seen clearly for the same year that the situation on the labor market for the youth is becoming

---

<sup>5</sup>The interested reader might check on <http://www.doingbusiness.org/data/exploretopics/employing-workers> for further information.

dramatic by observing an value of 56.1% for this specific unemployment rate. After the real estate bubble had burst in 2007, foreign financial investment decreases rapidly according to the changes in the current account balance. In total, the GDP growth rate became negative for most of after-crisis period, while this severe downward movement had been dampened by the increase in the trade ratio, as well as a decrease in the short-term nominal interest rate is observed. The latter observation stands for a quite expansionary monetary policy impulse coming from the ECB. However, several studies show that the transmission channel of monetary policy is hindered due to the unwillingness of private institutions to lend money (see Ciccarelli et al. (2013) as well as Al-Eyd and Berkmen (2013) among others). While private investment dried up, the Spanish government follows the plan of the Troika in order to consolidate government debt. Hence, in the absence of fiscal and monetary policy stimuli, empirical data shows that private consumption expenditure had dropped within the after-crisis period (according to the World Bank World Development Indicators; not shown in the Table).

	GDP Growth Rate (annual %)	Inflation Rate (in %)	Short-Term Interest Rate (in %)	Trade Ratio (% of GDP)	C.A. Balance (% of GDP)	U. Rate (in %)	Youth U. Rate (in %)
2003	2.93	3.51	4.00	63.39	2.40	3.6	10.1
2004	4.90	3.59	3.65	72.76	4.50	3.7	10.5
2005	3.92	2.75	3.33	71.18	2.07	3.7	10.2
2006	5.18	2.24	4.19	73.55	1.39	3.5	10.0
2007	5.46	2.53	4.77	77.24	1.94	3.2	8.8
2008	2.83	4.67	4.78	99.93	0.32	3.2	9.3
2009	0.71	2.76	1.98	90.41	3.64	3.6	9.8
2010	6.50	2.96	2.16	95.65	2.69	3.7	9.8
2011	3.68	4.00	3.09	110.00	2.17	3.4	9.6
2012	2.29	2.19	3.08	109.89	3.54	3.2	9.0
2013	2.97	1.31	2.59	102.79	4.30	3.1	7.5

**Table 2:** Macroeconomic Patterns and Trade Balance in *Korea* over the Period 2003-2012 (Source: World Bank World Development Indicators)

*Note:* The Inflation rate is given in terms of the Consumer Price Index (CPI). The abbreviations ‘C.A.’ and ‘U.’ denote ‘Current Account’ and ‘Unemployment’, respectively. All data is retrieved from <http://www.allthatstats.com>.

Table 2 shows the development of the main economic indicators for *Korea* over the period 2003-2013. In 1990s, the unemployment rate was low in 1990s with its fast economic development before the Korean economy was hit by the Asian financial crisis. After the crisis, there was a sharp increase in the unem-

ployment rate and its rate has reached a level around 3.5%.<sup>6</sup> The recent trend of changes in the unemployment is evidenced by a general macroeconomic condition in Korea. After the global economic crisis of 2007, the Bank of Korea decided to loosen the monetary policy, while the share of trade to GDP has shot up to around 100%. In this respect, Korea was successful to recover from the economic recession, but the domestic absorption returned quickly to the slowing growth with low inflation.

The youth unemployment in Korea has been high throughout the 1980s and 1990s. The general level of unemployment was kept low, but there is an increasing tendency of high youth unemployment rate over the last five years. Since the vulnerabilities in labor markets have been exacerbated by the global economic crisis, the group most affected by the slowing economic growth was youth and unskilled labor force. However, compared to the case of Spain, the policies which stimulate domestic economy were successful to make the economy recover from the recessions during the post-crisis period. This suggests that the tendency of high youth unemployment in Korea — with a very low level of 7.5 % for the latter in 2013 — seems to be rather moderate compared to countries which had been strongly affected by the global economic crisis.

Nonetheless, there could be some statistical issues where many young workers are not included in the statistics for finding a job. In Korea, young people often decide to go to graduate schools after receiving the bachelor degree, while postponing their job search activity. In addition, most male youths are required to complete two years of military service in their 20's. Hence, we might underestimate the significant problems of high youth unemployment in Korea based on statistical numbers where the definition of this age group by the United Nation is used. In other words, the recovery of the Korean economy from its recession can be influenced by structural issues in the economic system and labor markets.

For example, the labor market entry in Korea depends on the level of the countries' minimum wage. As again reported by the World Bank project 'Doing Business', a 19-year Korean faces a lower bound of its salary by around 727 US Dollar per month, while a maximum length of a single fixed-term contract of 24 months depending on a particular task is observed. Both values are one third lower than in the Spanish case. This observation implies that a lower degree of job turnovers due to the contract length can be expected by employers. Hence, the likelihood of holding experienced (productive) employees after the contract lengths had been expired is higher in Korea, while the labor market barrier of a minimum wage is lower. Taken both together, we end up with a more harmless situation in Korea compared to Spain when it comes to job creation of young unemployed workers.

---

<sup>6</sup>In Korea, the natural rate of unemployment has varied over the last two decades. For example, average unemployment rate were 2.46%, 4.26% and 3.42% for the periods of 1988-97, 1998-2007, and 2008-2012, respectively.

To sum up, without (successful) Keynesian-type policy interventions at hand, the increase in both unemployment rate could not be prohibited. Moreover, with respect to downward nominal wage rigidity, the relatively high inflation rate might prevent a much higher increase in unemployment.

### **3 Consequences and Business Environment for Entrepreneurial Activity**

Entrepreneurship is often regarded as a challenging, resource-demanding, and risky activity which are undertaken by young members of the work force. The instability and riskiness have high probabilities of causing harms to young people. However, we claim that as a business is successfully established, it gains fruitful employment possibilities.

A promising attempt would be a start-up activity in future-oriented business sectors such as biotechnology, as well as telecommunication and information technology, with special emphasis on internet products. This field exhibits enormous growth rates over the last two decades due to new information processing and technology shocks in general. For example, an increase in the employment of young high-skilled workers can be realized from overall strong development in the service sector. A cornerstone can be identified by job possibilities in research and development activities, while the latter is, of course, not limited to the service sector and start-ups. Low-skilled members of the group of (young) unemployed people might profit by entrepreneurship as the establishment of a business goes along with jobs being created, which do not require higher educational training. Based on a traditional new-classical view, given a minimum wage (like in Spain), the real wage exceeds the marginal product of labor for low-skilled workers due to their low productivity.

While we cannot rule out this overcompensation problem for high-skilled workers, the long-run labor market entry for young unemployed people could be hindered by the situation of temporary working contracts in Spain and Korea. Again, the minimum wage amounts to around 728 US Dollar per month. Compared to Spain, the risk for involuntary work from nominal wage rigidities is relatively moderate, but the ratio of the minimum wage to the value added per worker is one of the highest among the OECD countries (0.28; with an almost identical value in the Spanish case of 0.27 as discussed above). This suggests that working conditions and job stability will remain important in both countries for improving labor mobility. We will discuss related policy implications in the next section.

As we turn to an investigation of the business environment for entrepreneurs, the focus is on the investment in start-ups and the associated costs. To begin with, we consider the total amount of venture capital and number of companies, which receive venture capital at the seed, start-up and later stages. For the latter, the ‘seed’, ‘start-up’ and ‘later’ stages define the periods ‘before’,

Number of Companies which received venture capital at the <i>start-up</i> stage						
	2007	2008	2009	2010	2011	2012
Spain	61	72	55	44	71	69
Germany	360	432	469	481	468	473
EU	1587	1863	1808	1775	1700	1789

  

Number of Companies which received venture capital at the <i>seed, start-up</i> and <i>later</i> stages						
	2007	2008	2009	2010	2011	2012
Spain	132	169	120	86	123	95
Germany	961	1137	1011	1042	975	832
EU	3410	3762	3315	3147	3063	2945

  

<i>Total venture capital</i> at the <i>seed, start-up</i> and <i>later</i> stage venture in % of GDP						
	2007	2008	2009	2010	2011	2012
Spain	0.035	0.046	0.013	0.010	0.012	0.009
Germany	0.036	0.041	0.030	0.030	0.030	0.021
EU	0.048	0.050	0.034	0.031	0.030	0.025

**Table 3:** European Total Investment on Entrepreneurship over the Period 2007-2012 (Source: European Union)

*Note:* The ‘seed’, ‘start-up’ and ‘later’ stages define the periods ‘before’, ‘at time of’ and ‘after’ the establishment of the start-up, respectively. The ‘start-up’ period covers the time required to start a business (in days; see also Table 4). All data is retrieved from <http://www.allthatstats.com>.

‘at time of’ and ‘after’ the establishment of the start-up, respectively. The ‘start-up’ period covers the time required to start a business (in days). The corresponding numbers are given in Table 3 for the Euro Area only. Here we compare the economical situation of Spanish entrepreneurs to Germany (as the most powerful economy in the European Union) and the average numbers for all countries in the European Union (EU). The amount of Spanish companies, which had managed to gather start-up capital, is distinctively less in relation to new firms in the same situation across the EU, where the number of German new firms is 6 to 8 times higher over the whole period 2007-2012.

Summarizing all three stages of entrepreneurial activity, for all economic regions the amount is nearly doubled. This observation indicates that the process of starting a company has been terminated throughout the stages, in which

either entrepreneurial projects are not enough to boost the market entry (after the seed stage) or they are substantially less successful (after the start-up stage). Under consideration of the economic size of these regions — e.g. the German population is roughly two times larger than the Spanish one — we argue that entrepreneurs in Spain have to deal with a tense situation as it comes to market entry. This can be probably explained by the decrease in total venture capital in the percentage of GDP received on all three stages over the whole period for all regions, but on a higher level for Spain (lower panel of Table 3). While the percentage is indeed quite low for Spain, it must be emphasized that numbers in the range of 0.001 to 0.050 account for a tightness in private financial investment capacity with respect to start-ups in all economic regions.

Now we turn to the description of the outgoings related to entrepreneurship in Korea and East Asia. Table 4 contains the four important indices related to start-up activity from 2003 until 2013.<sup>7</sup> At the top of the table, the cost of procedures are reported, where the latter is defined as any interaction of the company founders with external parties (for example government agencies, lawyers, auditors or notaries). We observe a reversal of the development in Spain compared to the European case: the costs exceed the one on average for all EU countries until 2010, while after then the costs fell sharply. In East Asia the situation had been in favor of Korea, where the costs had been significantly lower relative to the average of this region. These numbers indicate that the implementation of steps in order to start a company becomes less costly, especially in Europe (Spain) in comparison to East Asia (Korea).

Along with a decrease in the financial burden of new firms, it takes much less of time until a start-up is established. With respect to the EU, this development is worth mentioning, where around 30 days less are required under consideration of a 10 years period. For Spain as being our representative country for Europe, the erosion is even more remarkable. The much fastest legal establishment of a new firm can be achieved in Korea, where it takes only 5.5 days in 2013, a number significantly below the average one for East Asia (over the whole time period). The reason for this could be found in the amount of procedures needed to register a start-up, where this number had been cut by 50% in the Korean case, while for Spain the amount did not change over time. A positive development can be also observed for the EU and East Asia.

All numbers in Table 4 allow for making a positive statement about a successful establishment of start-ups — at least from a legal point of view. It seems that policy makers implement large improvements in the administrative procedures related to entrepreneurship. As one claims that this might lead to a reduction in youth employment, i.e. that new firms support job creation for

---

<sup>7</sup>The numbers are again provided by the World Bank project ‘Doing Business’, where the definitions in the remainder of this section are directly taken from. The interested reader may visit <http://www.doingbusiness.org> in order to get detailed information on the underlying assumption and overall methodology. The theoretical basements for the installment of these indices can be found in Djankov et al. (2002, 2007).

<i>Cost of business start-up procedures (in % of GNI per capita)</i>											
	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Spain	16.8	17.0	16.5	16.2	15.1	14.9	15.0	15.1	4.7	4.7	4.7
EU	11.6	10.4	9.1	7.9	7.3	6.3	5.7	5.8	5.4	5.1	4.4
Korea	18.4	15.7	15.7	18.2	17.1	16.9	14.7	14.7	14.6	14.6	14.6
East Asia	54.9	55.8	44.7	37.3	32.0	29.3	23.8	23.6	21.3	25.8	26.5
<i>Time required to start a business (in days)</i>											
	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Spain	114	114	47	47	47	47	47	47	28	28	23
EU	40.2	34.8	27.4	23.4	19.9	17.0	15.2	14.1	14.1	13.6	12.9
Korea	17.0	17.0	17.0	17.0	17.0	17.0	14.0	14.0	5.5	5.5	5.5
East Asia	43.6	47.0	46.7	45.8	44.0	42.2	39.6	36.6	33.3	33.7	33.7
<i>Procedures of a start-up to register a business (number)</i>											
	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Spain	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
EU	7.9	7.6	7.5	7.1	6.9	6.1	5.9	5.8	5.8	5.8	5.3
Korea	10.0	10.0	10.0	10.0	10.0	10.0	8.0	8.0	5.0	5.0	5.0
East Asia	8.0	8.0	8.1	8.4	8.3	8.3	7.9	7.6	7.0	7.1	7.0
<i>Strength of legal rights index (from 0 = weak to 10 = strong)</i>											
	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Spain	–	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
EU	–	6.6	6.9	6.7	6.8	6.8	6.9	6.9	6.8	6.8	6.8
Korea	–	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0
East Asia	–	6.0	5.6	5.7	5.9	6.4	6.4	6.8	6.8	6.8	7.0

**Table 4:** Important Indices related to Entrepreneurship over the Period 2003-2013 (Source: World Bank World Development Indicators)

*Note:* The methodology is explained in Djankov et al. (2002, 2007) as well as on <http://www.doingbusiness.org>. All data is retrieved from <http://www.allthatstats.com>. The information on East Asia also include the Pacific region. Numbers for the ‘Strength of legal rights index’ are not available before 2004.

young adults (in the service sector), we see that the positive stimuli can be hindered by the low expenditure of total venture capital as seen in Table 3. An explanation of the latter observation can be found in the stagnation of the strength of legal right index. The latter measures the degree to which collateral and bankruptcy laws protect the rights of borrowers and lenders and thus facilitate lending. According to Table 4 this index varies from moderate (Spain/EU)

to strong (Korea/East Asia) values. In other words, there is a room for improvements regarding collateral and bankruptcy laws being better designed to expand access to credit. We address this issue together with institutional and macroeconomic policy advisories in the next section.

## 4 Policy Implications for Job Creation via Entrepreneurship

Throughout this paper we seek to tie up a relationship between entrepreneurship, job creation and youth unemployment. Based on our analysis we claim that entrepreneurship will help to reduce high levels of youth unemployment if the following policy advises are considered. Therefore, we put our emphasis on connections along the dimensions of macroeconomic conditions, labor market barriers and the market entry for entrepreneurs.

*Macroeconomic conditions:* Here we combine entrepreneurship with the effect of macroeconomic conditions on youth unemployment. It goes without saying that newly founded and successful firms can enhance the opportunities of job creation. In fact, Haltiwanger et al. (2013) show for the US that 3 % of new job are created by start-ups per year.<sup>8</sup> However, start-ups as sources of job creation are inherently volatile with a high exit rate. Haltiwanger et al. (2013) report that about 40 % of the jobs initially created by start-ups between 1992 to 2005 have been eliminated by exit. On the contrary, the authors claim that those early firms, which survive in turbulent times, can grow more rapidly than older ones. In this respect, the government should provide support for start-ups, as well as small and medium-sized firms, in order to increase their life span. Hence, we claim that the following approaches are recommendable.

First, from a macroeconomic point of view, plain vanilla fiscal and monetary policy measurements must be mentioned. Sustainable and long-lasting economic growth and stability might help start-ups to navigate trough time of business fluctuations. This approach is, of course, not straight forward by keeping in mind the ongoing unstable but slight economic recovery in the countries of the European periphery. From a Keynesian perspective, the German car scrappage scheme ('Abwrackprämie') represents a prominent and successful fiscal policy measurement with respect to private consumption stimulation during the crisis. Furthermore, with focus of our representative countries in this study the impact of monetary policy depends on the fact if the countries are the member of a monetary union (Spain) or not (Korea). This policy advise seems to be obvious but nevertheless represents also the cornerstone of a positive stimulus on job creation undertaken by entrepreneurs from our point of view.

---

<sup>8</sup>See also Awogbenle and Iwuamadi (2010) as well as Salami (2011) for a discussion on developing countries.

Second, if a high youth unemployment rate is closely correlated with low level of entrepreneurial spirit, then policy measures are necessary to create incentive structure for conservative and old firms which do not absorb high number of young people. Indeed, the conservative behavior of old firms are to some extent based on pessimistic prospects of the future economy after both Spain and Korea are hit by the global crisis.

Third, after the global economic crisis we observe a decreasing trend in total factor productivity (at least in Korea). While this leads to low economic growth, the main reasons behind this is given by the aging population together with a weak investment behaviour. The latter has its origin most likely in the low pay-off from research and development investments undertaken in Korea over the previous years.<sup>9</sup> Its adverse situation will have implications for labor institutions, as our starting point is that weak aggregate demand after the crisis is temporary and counteracted by the monetary policy in Spain and Korea. Then the main concern is the way to look at the interaction between shocks and institutions in the long-run process. This aspect can be taken into account when we provide support on tackling youth unemployment with entrepreneurship.

*Labor market barriers:* Since there is a high barrier for young workers to be integrated into the labor market, we need to reduce the ‘experience gap’ between education and work. Indeed, Spain and Korea do not have well-developed apprenticeship to smooth the school-to-work transition process. For example, the registration rate for being at an university in Korea is high up to 70% which can create a risk for a mismatch between job seekers and firms. Although one of the main task of an university is to ensure productivity in the society, there have been wide criticism with respect to the education system and exams in Korea which is known as ‘one-shot society’ (Economist (2011)). Since the degree of elasticity of the wage with respect to education is often large between rich and poor, the subsidies for education should be given lower-class household, while the scope of vocational training should be widened and deepened.

Spain is lack of institutional characteristics for apprenticeship, which ensure a smooth transition from school to work. In other words, this part of the Spanish educational system is not connected to the countries’ labor market like for example the successful workplace training-on-the-job scheme as been implemented for e.g. in Germany (Ryan (2011)). On both the local and global levels, respectively, policy makers had been already aware of these shortcomings. The Spanish government initiated several laws in order to target the transition of young people from temporary to permanent contracts (Royal-Decree Law 10/2010), the promotion of vocational training under the provision of the education system (Royal-Decree Law 1529/2012) and the stimulation of employers

---

<sup>9</sup>In recent years, Korea has increased its spending on research and development, which amount of money is one of the biggest among the OECD countries, but they are not paid off to create a strong link between innovation and the designated industry.

for job creation with respect to young unemployed people simply by associated financial incentives (Royal-Decree Law 4/2013; Balaram (2014)). However, the measurements (while promising from our point of view) turned out to be less successful due to more severe structural issues on the Spanish labor market (see below). This respect, we claim that the recent so-called ‘Youth Guarantee’ programme by the European Commission might help to reduce high youth unemployment rates by the implementation of apprentice systems, offering wage subsidies and support to start-ups (see also the associated policy advises below).<sup>10</sup>

Nevertheless, in the case of Spain, we would like to motivate an intensive discussion of the level of the minimum wage, which can be seen as a direct barrier to labor market entry for young unemployed Spanish people. The existence of a minimum wage is closely related to the phenomena of downward wage rigidity. Here, we claim that a temporally increase in the inflation rate by 4%, which is suggested by Schmitt-Grohé and Uribe (2013), is not relevant for the Euro Area. Instead we suggest that the establishment of such a high value of the interest rate might lead to disturbances in the economic transmission channels across all EU member states, where different rates are observed. This heterogeneity in the inflation rates becomes more important to be considered as the temporally increase will be cut back to the common level of around 2 % after some period of time as suggested by Schmitt-Grohé and Uribe (2013). For Spain we suggest to reduce the minimum wage instead along with a reform of the temporary contract regulations in order to stimulate employer’s incentive to hire young unemployed people. The both latter points do not apply in that complexity to Korea due to a low level of the minimum wage.

*Market entry for entrepreneurs:* As mentioned in the end of the previous section, the strength of legal right index accounts for an important characteristic of the business environment. Given a more institutional approach, the government must ensure a sufficient degree of collateral and bankruptcy laws in order to protect the rights of borrowers and lenders. This institutional policy measurement might help to break down the tightness in private investment capacity expressed through the low level of venture capital spent on start-ups (at least in the case of Spain). This step to be undertaken becomes much more appealing as we consider a decrease in the development of the costs associated with firm creation, where the latter we observed empirically in this paper. With respect to Spain and, again, in the spirit of the ‘Youth Guarantee’ project, the European Commission (2012) seeks to improve the access to finance and guidance based on courses and support services. As a core measure the cooperation between employment services, business support and providers of (micro)finance should be boosted up. As we turn to Korea, we judge this policy measurement being fruitful to be adopted in order to overcome the problems associated to

---

<sup>10</sup>The initiative “calls on member states to ensure that all young people under 25 receive a good quality offer of employment, continued education, an apprenticeship or a traineeship within four months of leaving formal education or becoming unemployed” (European Commission (2012)).

entrepreneurship.

	2003	2004	2005	2006	2007	2008	2009
Spain	0.050	0.040	0.060	0.080	0.090	0.110	0.100
Korea	0.006	0.008	0.006	0.004	0.002	0.001	0.001
OECD	0.764	0.797	0.515	0.547	0.577	0.629	0.608

**Table 5:** Active Labour Market Programmes: Expenditure on Start-Up Incentives (in % of GDP) over the Period 2003-2009 (Source: OECD)

*Note:* All data is retrieved from <http://www.allthatstats.com>.

Table 5 shows the expenditure of active labour market programmes on start-up incentives in the percentage of GDP in Spain and Korea. Compared to the average level of OECD, both countries have lower level of expenditure for the program with opposite signs in the growth rates, i.e. Spain had expanded active labour market measures, while a fall of its expenditure is observed for Korea. This indicates that the gap between permanent and temporary workers cannot be reduced in practice because of a lack of social mobility. Even though the active labour market programmes in Germany succeeded to stimulate labour market integration, the spending did not have positive impact on the job creation for low-educated young people (Caliendo et al. (2011)). Hence, we see that the structural problems in the labor market should be remedied by the society where people are encouraged to keep a working discipline with long-term goals.

## 5 Conclusion

The high youth unemployment has surged in Europe and Asia after the global economic crisis. In this paper we focused on the cases of Spain and Korea in which labor market barriers for young workers are one of the most important issues. Both economies possess similarities of a high amount of people working on a temporary contract in the absence of training-on-the-job schemes, where the latter can prevent young people from participating in stable school-to-work transition processes. In the case of Spain, a minimum wage law (in terms of a decrease in this threshold) may create an increase in the youth unemployment under consideration of young workers' low productivity. In contrast, the problem of downward nominal wage rigidity seems to be less severe in Korea, where the minimum wage appears to be around one third lower and its macroeconomic prospects look better than Spain. In this respect, we suggest that the macroeconomic stability is one of the most important determinant which can increase the life span of firms and ensure job creation in the economy. Hence, more favorable business conditions are evidenced by a high degree of the strength in legal rights in Korea. However, the cost of business start-up procedures in

Korea is three time higher than Spain. This may point to the fact that investment in entrepreneurs should be supported by appropriate funding. As an overall conclusion, the focus of policy makers must be on structural labor market policy in the case of Spain, while for Korea the efficiency in the expenditure on research and development must be increased in order to tackle a decreasing trend in total factor productivity. For both countries, associated measurements which help newly founded companies to navigate through difficult times can be seen as preferable policy steps in the medium- and long-run.

## References

- AL-EYD, A. AND BERKMEN, S.P. (2013): *Fragmentation and monetary policy in the euro area*. Working Paper No. 13/208, International Monetary Fund. URL: <https://www.imf.org/external/pubs/ft/wp/2013/wp13208.pdf>
- AWOGBENLE, A. C. AND IWUAMADI, C. K. (2010): Youth unemployment: entrepreneurship development programme as an intervention mechanism. *African Journal of Business Management*, Vol. 4(6), pp. 831-835.
- BALARAM, B. (2014): The case of Spain. In: TOLPHIN, T. (Ed.) (2014): *States of transition. Youth unemployment, education and labor market policy in Europe and the US*. Working Paper, Institute for Public Policy Research, London. URL: <http://www.ippr.org>
- CALIENDO, M., KÜNN, S., SCHMIDL, R. (2011): *Fighting youth unemployment: the effects of active labor market policies*. Discussion Paper No. 6222, Institute for the Study of Labor. URL: <http://ftp.iza.org/dp6222.pdf>
- CICCARELLI, M., MADDALONI, A. AND PEYDRÓ, J.-L. (2013): Heterogeneous transmission mechanism: monetary policy and financial fragility in the eurozone. *Economic Policy*, Vol. 28(75), pp. 459-512.
- CLARK, K., AND SUMMERS, L. (1982): The dynamics of youth unemployment. In: FREEMAN, R.B. AND WISE, D.A. (Eds.) (1982): *The youth labor market problem: its nature, causes, and consequences*. University of Chicago Press, pp. 199-234. URL: <http://www.nber.org/chapters/c7875.pdf>
- CONNEL, S. (2013): *Building a creative economy in South Korea: analyzing the plans and possibilities for new economic growth*. Academic Paper Series, Korea Economic Institute of America. URL: [http://www.keia.org/sites/default/files/publications/kei\\_creative\\_economy.pdf](http://www.keia.org/sites/default/files/publications/kei_creative_economy.pdf)
- CORUJO, B. (2013): *Crisis and labour market in Spain*. Labour Law Research Network Inaugural Conference Paper, University of Pompeu Fabra Barcelona. URL: [http://www.upf.edu/gredtiss/\\_pdf/2013-LLRNConf\\_Suarez.pdf](http://www.upf.edu/gredtiss/_pdf/2013-LLRNConf_Suarez.pdf)
- DAO, M., FURCERI, D., HWANG, J., AND KIM, M. (2014): *Strategies for reforming Korea's labor market to foster growth*. Working Paper No. 14/37, International Monetary Fund. URL: <http://www.imf.org/external/pubs/ft/wp/2014/wp14137.pdf>
- DJANKOV, S., MCLIESH, C. AND SHLEIFER, A. (2007): Private credit in 129 countries. *Journal of Financial Economics*, Vol. 84(2), pp. 299-329.
- DJANKOV, S., LA PORTA, R., LOPEZ-DE-SILANES, F. AND SHLEIFER, A. (2002): The regulation Of entry. *The Quarterly Journal of Economics*, Vol.

117(1), pp. 1-37.

ECONOMIST (2011): *Exams in South Korea: the one-shot society*. December 17th 2011. URL: <http://www.economist.com/node/21541713>.

EUROPEAN COMMISSION (2012): *EU measures to tackle youth unemployment*. URL: [http://www.eesc.europa.eu/resources/docs/youth\\_unemployment\\_leaflet\\_en.pdf](http://www.eesc.europa.eu/resources/docs/youth_unemployment_leaflet_en.pdf)

FACCINI, R., AND BONDIBENE, C. (2012): *Labour market institutions and unemployment volatility: evidence from OECD countries*. Working Paper No. 461, Bank of England. URL: <http://www.bankofengland.co.uk/research/Documents/workingpapers/2012/wp461.pdf>

GÖRLICH, D., STEPANOK, I. AND AL-HUSSAMI, F. (2012): *Tackling youth unemployment*. Background Paper for the session on ‘Tackling Youth Unemployment’ at the Global Economic Symposium Conference 2012, Kiel Institute for the World Economy. URL: <http://www.global-economic-symposium.org>

HALTIWANGER, J., JARMIN, R., AND MIRANDA, J. (2013): Who creates jobs? Small versus large versus young. *The Review of Economics and Statistics*, Vol. 95(2), pp. 347-361.

IMF (2011): *Spain: selected issues*. IMF Country Report No. 11/216, International Monetary Fund. URL: <http://www.imf.org/external/pubs/ft/scr/2011/cr11216.pdf>

ILO (2013): *Global employment trends for youth 2013: a generation at risk, international labor organization*. International Labor Organisation. URL: <http://www.ilo.org>

MARTIN, P.M. (2012): *The European Union tackling youth unemployment in times of crisis*, Berlin: Friedrich-Ebert-Stiftung International Policy Analysis. URL: [http://storage.globalcitizen.net/data/topic/knowledge/uploads/201305171497618361\\_09516.pdf](http://storage.globalcitizen.net/data/topic/knowledge/uploads/201305171497618361_09516.pdf)

NICKELL, S. (2003): *Labour market institutions and unemployment in OECD countries*. CESifo DICE Report No. 2/2003, Center of Economic Studies at Ifo Munich, pp. 13-26. URL: <http://www.cesifo-group.de>

OECD (2014): *OECD economic surveys—Korea*. Organisation for Economic Co-operation and Development. URL: [http://www.oecd.org/eco/surveys/Overview\\_Korea\\_2014.pdf](http://www.oecd.org/eco/surveys/Overview_Korea_2014.pdf)

RYAN P. (2011): *Apprenticeship: between theory and practice, school and workplace*. Working paper No. 64, Swiss Leading House on Economics of Education, University of Zurich. URL: <http://repec.business.uzh.ch/RePEc/>

iso/leadinghouse/0064\_lhwpaper.pdf

SALEMI, C.G.E. (2011): Entrepreneurial interventionism and challenges of youth unemployment in Nigeria. *Global Journal of Management and Business Research*, Vol. 11(7).

SÁNCHEZ, F. R. (2012): *Youth unemployment in Spain: situation and policy recommendations*. Working Paper, Friedrich-Ebert-Stiftung. URL: <http://library.fes.de/pdf-files/id/09469.pdf>

SCHMITT-GROHÉ, S. AND URIBE, M. (2013): Downward nominal wage rigidity and the case for temporary inflation in the eurozone. *Journal of Economic Perspectives*, Vol. 27(3), pp. 193-212.