Simon Gemen

1st year SS2 International Business (Master's degree)

Youth unemployment in Spain: an analysis of cost-effctive policy tools to mitigate the youth unemployment problem in Spain

Introduction

Youth unemployment is one of the major challenges for Spain as the financial and economic crisis scaled up enormously youth unemployment to anyway high and persisting unemployment rates among young people. Youth unemployment is a social, political and economic problem which affects different stakeholders such as the unemployed individual, society, the government and other EU member states and trade partners. It is also important to recognize that the negative effects of youth unemployment on each stakeholder are interdependent and reinforce each other. The youth is considered to be one of the most vulnerable groups in the labor market, with adult unemployment rates about two times lower than youth unemployment rates. This paper will try to contribute to the mitigation of the Spanish youth unemployment problem since Spain, together with Greece, exhibits by far the highest youth unemployment rates in the European Union[1]. In fact, high and persistent youth unemployment rates in Spain indicate that its youth unemployment problem is of structural nature even though the impact of the crisis is clearly visible too.

The outline of this paper is as follows: Chapter one will explain the methodology before chapter two will present and discuss the results of the analysis of factors of youth unemployment from 1999–2012. Based on the results of this analysis, chapter three will provide the policy recommendation to mitigate the youth unemployment in Spain. Afterwards, the findings of this research project will be summarized.

---

[1] Eurostat (2013). *Unemployment rate by age group*. Retrieved from http://epp.eurostat.ec. europa.eu/tgm/table.do?tab=table&plugin=1&language=en&pcode=tsdec460.

1. Methodology

The main objective of this research project is to propose a policy measure to Spain which will cost-effectively tackle its youth unemployment problem. To this end, the following research question has been formulated: "Which policy measure can most cost-effectively mitigate the youth unemployment rate in Spain?" This research question is a remedy question which includes a conclusive identification of the major determinant(s) of youth unemployment in Spain as well as a subsequent policy recommendation to mitigate the youth unemployment problem. Remedy questions fall under the category of applied research[2]. By applying existing knowledge of youth unemployment and the economic theory encompassing it, this paper seeks to alleviate the problem of youth unemployment in Spain.

The research question will be answered using a two-tiered approach. Firstly, factors of youth unemployment in Spain from 1999–2012 will be analyzed by means of a single group trend study - a special type of longitudinal study, for which data of a given characteristic of some population are observed over time[3]. This timeframe has been chosen for reasons of data availability and since Spain's former currency peseta had been replaced with the euro in 1999, effectively eliminating sovereign monetary policy in Spain. Moreover, the chosen timeframe shows that the youth unemployment problem of Spain is to a large degree of structural nature, too.

The analysis is based on a causal model (fig. 1), which shows the relationships between twelve selected independent variables (factors of youth unemployment) and youth unemployment as dependent variable. The variables and relationships have been identified based on well-established labor economic theory according to Borjas (2012)[4] and Ehrenberg & Smith (2005)[5]. The model also indicates the expected direction of relationships between youth unemployment and each of the twelve selected independent variables. In order to identify which variables have been most influential factors of youth unemployment in Spain from 1999–2012, analytical tools and the program SPSS have been used. All variables and corresponding sources are listed in table 1.

Due to the lack of a control group, this research design brings along threats like history and maturation[6] and these anticipated potential problems can, unfortunately, not be eliminated or ultimately ruled out. That being said, any research design has its strengths and weaknesses and the longitudinal design has been identified as most appropriate choice for this study in terms of validity and relia-

---

[2]   E. Babbie, *The Practice of Social Research*, 3 ed., Wadsworth 2010, s. 25–26.

[3]   *Ibidem*, s. 107.

[4]   G. Borjas, *Labor Economics*, 6 ed., New York 2012.

[5]   R. Ehrenberg, R. Smith, *Modern Labor Economics: Theory and Public Policy*, 9 ed., Boston 2005.

[6]   *Ibidem*, s. 240.

bility. Both concepts refer to the quality of a measurement and are essential when investigating causal relationships.
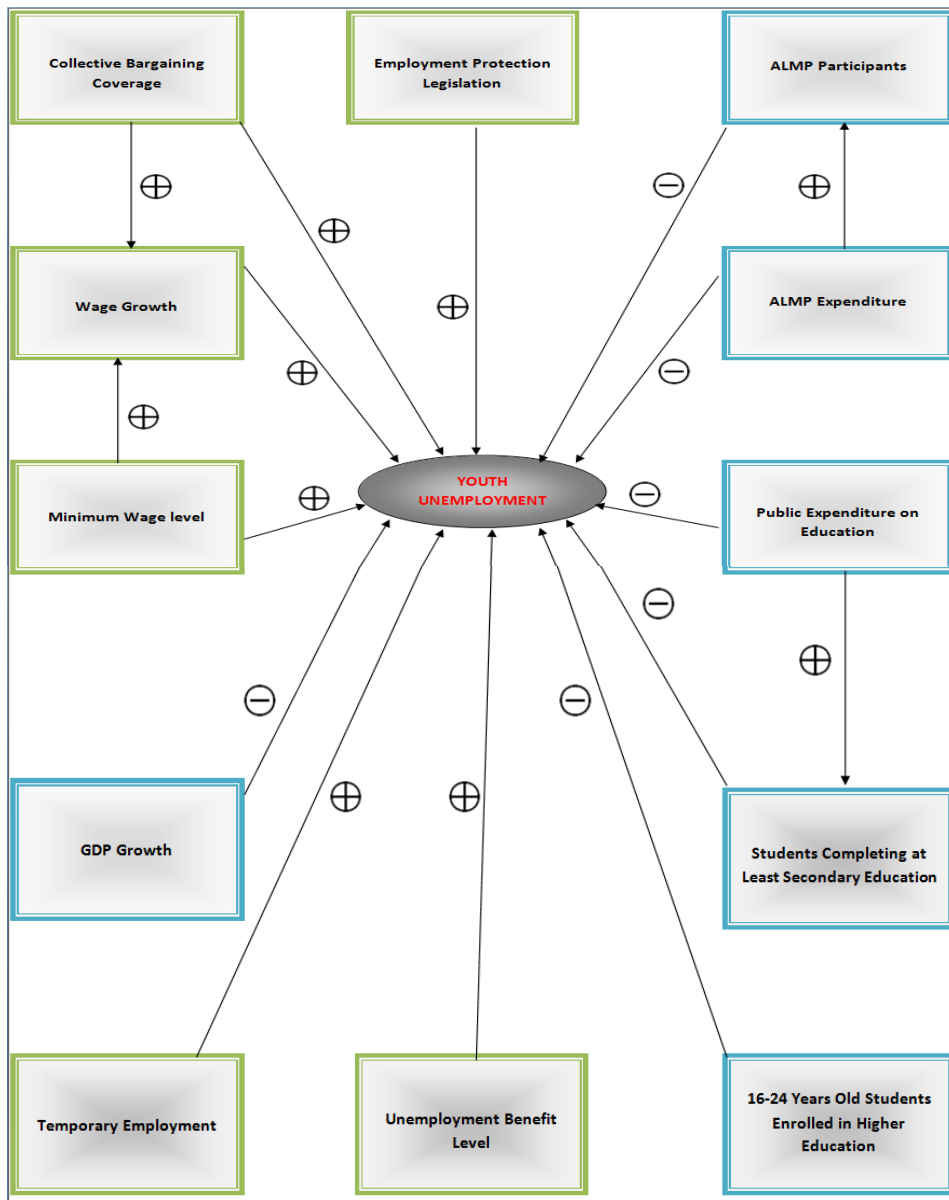

Figure 1. Causal model

Table 1. List of variables

Independent variable	Unit	Source
Youth unemployment	% of labor force	Eurostat
Level of unemployment benefits	Absolute numbers, EUR	Eurostat
Minimum wage level	Gross wages, power purchasing standard)	Eurostat
Employment protection legislation	OECD index	OECD
Collective bargaining coverage	% of employees covered by collective bargaining agreements	Amsterdam Institute for Advanced Labour Studies
16-24 years old students in higher education	Absolute numbers	Eurostat
ALMP participants	Absolute numbers	Eurostat
ALMP expenditure	% of GDP	Eurostat
GDP growth	% change on previous year	Eurostat
Public expenditure on education	% of GDP	Eurostat
Students completing at least upper secondary education	Absolute numbers	Eurostat
Wage growth	Percentage increase of the real average wage rate	OECD
Temporary employment	% of total employment	OECD

Source: Own elaboration.

The second step of the two-tiered approach is providing a policy measure based on the results of the analysis. In this context, criteria such as cost-effectiveness, efficiency and feasibility will be taken into account. This also means that the policy recommendation will not necessarily be based on the variable which correlates strongest with youth unemployment, for instance if the variable could not be manipulated or if a corresponding policy measure would be too costly, inefficient or ineffective.

2. Factors of Spanish Youth unemployment from 1999–2012

The main goal of the analysis is to ascertain to which extent youth unemployment correlates with each variable of the causal model. After having conducted the analysis und having created scatterplots of each relationship with SPSS, it became

apparent that some relationships are not reasonably linear which means that the 'straight enough condition' is not met[7]. Interpreting the correlation using the correlation coefficient Pearson's r is therefore not advisable and this analysis has used Spearman's rho instead. Spearman's rho is a nonparametric method which does not require any model and has the advantage that it is not sensitive to either outliers or bends in the data since it "replaces the original data values with their ranks within each variable"[8]. Table 2 shows the calculated Spearman's rho values.

The first striking finding is that only seven out of twelve variables correlate with youth unemployment as expected by theory. One can argue that this low rate is due to the complexity of youth unemployment. In other words, many factors influence youth unemployment but depending on the general framework of the labor market, some factors will be more and some will be less influential. Variables which did not behave as expected will not be considered for the policy recommendation. Variables which behaved as expected by theory will be presented now. Spearman's rho between GDP growth and youth unemployment has been found to be -0.940 which represents a very strong and negative relationship. This relationship is significant at the 0.01 level (two-tailed) and confirms the relevance of the business cycle for youth unemployment.

Table 2. Calculated Spearman's rho between youth unemployment and each independent variable

Independent variables	Spearman's rho
Level of unemployment benefits	0.255
Minimum wage	-0.456
Employment protection legislation	0.059
Collective bargaining coverage	0.291
people in higher education	0.478
ALMP participants	-0.538
ALMP expenditure	-0.063
GDP growth	-0.940**
Public expenditure on education	0.392
Upper secondary education	0.109
Wage growth	0.331
Temporary employment	-0.615*
** Correlation is significant at the 0.01 level (2-tailed)	
* Correlation is significant at the 0.05 level (2-tailed)	

Source: Own calculation

[7]   D. Bock, P. Velleman, R. De Veaux, *Stats: Data and Models*, 3 ed., Boston 2012, s. 157.
[8]   *Ibidem*, s. 163.

Unfortunately, it is very unlikely that a single policy measure in the labor market will substantially influence the business cycle. Rather, the business cycle, if at all, can be altered by a number of composite measures. Given the fact that this variable cannot be manipulated easily by means of a policy measure, GDP growth will not be considered for the policy recommendation.

The variable correlating second-strongest with youth unemployment has been found to be ALMP participants (-0.538), followed by wage growth (0.331), collective bargaining coverage (0.291) and the unemployment benefit level (0.255). The direction of the relationships between youth unemployment and ALMP expenditure (-0.063), and between youth unemployment and employment protection legislation (0.059), are as expected, but weak.

Based on the analysis, the number of ALMP participants has been identified as important factor of youth unemployment in Spain. Importantly, this variable can relatively easy be manipulated in order to lower the youth unemployment rate. At the same time, ALMP expenditure seems to have little impact on the youth unemployment rate. This finding suggests two things: Firstly, ALMP is an appropriate basis for a policy measure to decrease the youth unemployment problem and a policy recommendation within this field is therefore reasonable. Secondly, it can be assumed that no additional ALMP expenditure is required. Instead, the type of ALMP and its proper implementation appears to be more relevant.

3. Cost-effectiveness analysis of the proposed policy measure

This chapter will present a three-step policy recommendation which is a direct result of the preceding analysis. Importantly, the policy recommendation this paper will provide is based on the rationality assumption, that is, it is expected to have a larger net benefit than any other policy measure from the pool of possible policies. At this point, it is important to recognize that there are different types of ALMP which use different ideas and approaches to mitigate unemployment.

The first step of the policy reform is the redistribution of the current composition of the ALMP budget in favor of 'employment incentives', the type of ALMP which has been found to be most effective. In particular, this paper suggests withdrawing financial resources from the ALMP type 'direct job creation' because direct job creation often results in crowding out of private sector jobs and attaches a stigma to participants which may reduce their employability. Moreover, direct job creation is extremely expensive[9] and an expansion of the program would

---

[9] J. Martin, *What works among active labour market policies: Evidence from OECD countries' experiences*, „OECD Economic Studies" 2000, nr 30, s. 98.

mean a substantial decrease in the amount of beneficiaries which stands in contrast to what this paper recommends based on the executed analysis. Perhaps even more important is that scholars have found direct job creation to have no positive employment effects for young people in the medium- and long-run and does therefore not sustainably mitigate the youth unemployment problem[10]. Secondly, this paper argues for cutting expenditure from the ALMP type 'temporary employment' in favour of employment incentives since temporary employment is extensively used in Spain but has not contributed to the mitigation of the youth unemployment problem. The last type of ALMP from which this paper recommends to withdraw financial resources in favour of employment incentvies is 'start-up incentives'. The strongest case for this move is provided by OECD statistics which show that start-ups in Spain are substainalliy underperforming in comparison with other EU countries[11].

Having presented the first step of the policy reform, it is now vital to recognise that the second and third step take place within 'employment incentives', the ALMP type for which more resources are availabe after the redistribution of the ALMP budget.

As second step of the policy reform, this paper suggests implementing policies whose focus is on the labour demand side rather than on the labour supply side, that is, replacing social security rebates for employees with wage subsidies for employers who hire young people. Currently, Spanish ALMP expenditure focuses heavily on social security rebates within the frame of employment incentives. Not only does this stand in stark contrast to practices in most other EU member states, it seems to fail to address the source of the problem too, because labor demand in Spain is more elastic than labor supply[12]. In other words, current ALMP policies in Spain treat labor supply as bottleneck although labor demand appears to be the limiting factor.

The third step of the suggested policy reform consists of shifting the focus of ALMP to young people to a greater extent. There is little doubt that young people are one of the most disadvantaged group in the labour market and the Spanish case represents this pattern in a dramatic way. Nonetheless, there is a lack of subsidised employment programmes specifically targeted at the youth[13]. Instead, programmes are mainly directed at long-term unemployed persons[14]. It is

---

[10] M. Caliendo, S. Künn, R. Schmidl, *Fighting youth unemployment: The effects of active labor market policies*, „IZA Discussion Paper" 2011, nr. 6222, s. 22.

[11] http://www.oecd.org/industry/businessstats/businessstart-upratesdivergingacrossoecdeconomies. htm.

[12] European Commission, *Subsidies job schemes with young low-skilled workers: is it a proper combination?*, „Mutual Learning Programme: Peer Country Comments paper -Spain" 2014, s. 3.

[13] *Ibidem*, s. 5.

[14] *Ibidem*, s. 5.

absolutely vital that the Spanish government starts deviating from this policy path and supports young people to a greater extent. Since the youth is not only a particularly vulnerable group but also large in numbers, new policies need to disproportionally address and benefit young people.

The composite of the three steps constitutes the policy reform this paper suggests to mitigate the youth unemployment rate in Spain. This paper anticipates some criticism with respect to the nature of the policy reform. The following will discuss the anticipated points of critique seperately and suggest how the new policy reform will deal with and circumvent possible downsides. One anticipated criticism is that a substitution effect might occur. This describes a sitution in which young persons currently employed are simply being replaced with new young persons by employers, so they become eligible for wage subsidies. However, this can easily be avoided by either paying the wages subsidy for already employed young persons too, or by denying by the wage subsidy if young workers have been laid-off or fired in a given preceding time period. Secondly, this paper is confident that there is no displacing effect caused by distorted competition. Rather, the suggested policy reform will increase competition in the Spanish labour market since disproportionally disadvantaged young people will be given a chance to compete with more experienced workers.

Thirdly, a possible deadweight loss is expected to be marginal at most. Of course, it cannot ultimately be ruled out that some proporation of young people would find employment without this programme in the same time or even quicker. However, taking into account the singularity and persistence of the Spanish youth unemplyoment problem, this paper would like to stress that many young people in Spain currently find themselves in a situation with little hope of finding a job any time soon. The positive effect on youth unemployment, which also spills over to other stakholders, certainly justifies deadweight loss that is possible but of marginal nature at most. The fourth critique this paper anticipates is that the policy measure will decrease labour supply.

The suggested policy shift from labour supply stimulaltion to labour demand stimulation means that social security rebates for employees will be cut which effectively results in a lower wage for employees. For some individuals, the new net wage will be below the reservation wage which means that these individuals will decide to quit the labour force or at least quit the current job if their wages will not be raised. That being said, this paper has stressed earlier that the source of the youth unemployment problem and bottleneck for employment is on the labour demand rather than on the labour supply side.

This finding justifies and in fact requires a policy shift from labour supply stimulation to labour demand stimulation. All in all, this paper acknowledgdes that the proposed policy reform might bring along some inevitable drawbacks. However, it is worth reiterating that the positive effects are expected to outweigh

negative effects by far and the suggested policy recommendation is consistent with conclusions that can be drawn from the preceding analysis. Consequently, this paper is confident that the provided policy recommendation will mitigate the structural youth unemployment problem in Spain. The policy reform this paper suggests has been formulated after extensive investigation of available research and literature and is moreover based on a thorough quantitative and qualitative analysis which has been conducted in the frame of this research project. That being said, the cost-effectiveness and feasibility of alternative policy recommendations has been examined, too, but will not be discussed in detail here due to the scope of this research project. Importantly, this paper has refrained from conducting a fully-fledged cost-benefit analysis due to the limited scope and resources. Instead, the focus of this paper was to provide the direction of the policy measure. The exact amount of money to be withdrawn from different types of ALMP in order to lower the youth unemployment problem most cost-effectively, for instance, will need to be examined by future research.

Conclusions

This research project has discussed youth unemployment in Spain which is one of this country's major challenges and represents a social, political and economic problem. To answer the research question, a two-tiered approach has been taken: Firstly, a causal model has been established which is based on the theoretical framework of youth unemployment. By analyzing data from 1999–2012, this paper has identified which variables have been major factors of youth unemployment in Spain in the time period under consideration. Secondly, and based on the findings of the analysis, a policy recommendation to mitigate the youth unemployment rate in Spain has been provided.

Youth unemployment is an extremely complex topic and subject to lively discourse. Disagreement among economists results from both this complexity and the fact that each domestic and even regional labor market is unique and has distinctive features. This makes generalizations difficult and exporting policies to other countries dangerous. Whilst there is much literature on youth unemployment in general and in Spain, this paper has added to the existing body of literature an analysis which looked at the whole picture of youth unemployment in Spain by taking into account political and economic variables which economic theory predicts to influence youth unemployment.

The analysis has yielded meaningful results and shown which factors influenced youth unemployment to which extent. It has been shown that a policy measure can best be introduced within the field of ALMP although the strong influence of the business cycle on youth unemployment was confirmed. The sug-

gested policy reform is cost-effective, based on changeable factors, and politically and economically feasible. Importantly, the decision to use ALMP as basis for the policy measure has been made after balancing pros and cons of introducing a policy measure based on other variables of the causal model. Based on the analysis, this paper has suggested a three-step policy reform: Firstly, it has been suggested to redistribute the ALMP budget in favor of employment incentives. Secondly, this paper has argued that a shift from supply side stimulating (social security rebates) to demand side stimulating (wage subsidies) programs is required. Thirdly, it has been reasoned that programs targeted exclusively at young people need to be implemented. The comprehensive quantitative and qualitative analysis in combination with the research design itself have allowed for providing a persuasive policy reform which is expected to substantially mitigate the youth unemployment problem in Spain. Importantly, and in line with the results of the analysis, the suggested policy reform will address a large number of people. This research project has provided valuable insight into the factors of youth unemployment in Spain and the Spanish labor market. Further research in this area will be able to draw on the findings of this paper in order to further illuminate the Spanish labor market, its structures and peculiarities.

References

Babbie E., *The Practice of Social Research*, 12 ed., Wadsworth 2010.

Bock D., De Veaux R., Velleman P., *Stats: Data and Models*, 3 ed., London 2012.

Borjas G., *Labor Economics*, 6 ed., New York 2012.

Caliendo M., Künn S., Schmidl R., *Fighting youth unemployment: The effects of active labor market policies*, „IZA Discussion Papers" 2011, nr 6222.

Ehrenberg R., Smith R., *Modern Labor Economics. Theory and Public Policy*, 9 ed., Boston 2006.

Entrepreneurship and business statistics. Business start-up rates diverging across OECD economies. OECD 2012, http://www.oecd.org/industry/businessstats/businessstart-upratesdivergingacrossoecdeconomies.htm.

Martin J., *What works among active labour market policies: Evidence from OECD countries*. „OECD Economic Studies" 2000, nr 30.

Subsidised job schemes with young low-skilled workers: is that a proper combination?, Europan Commission, „Mutual Learning Programme: Peer Country Comments paper – Spain", Paris 2014.

Unemployment rate by age group, Eurostat 2013, http://epp.eurostat.ec.europa.eu/tgm/table.do?tab=table&plugin=1&language=en&pcode=tsdec460.

Summary

This paper investigates major factors of youth unemployment in Spain from 1999–2012 and suggests a policy reform in order to mitigate its structural youth unemployment problem. Previous work in the research area of youth unemployment in Spain has largely focused on the impact of the economic crisis on youth unemployment but failed to identify causes for the structural nature of the problem when providing policy recommendations. In the frame of this research project, a causal model consisting of twelve variables has been established and used in order to disclose which factors have been determining youth unemployment the most in Spain from 1999-2012. The relationships between each of the twelve (independent) variables and youth unemployment (dependent variable) is analyzed using SPSS. Based on the findings of this analysis, a policy recommendation to substantially decrease the youth unemployment rate in Spain is provided. This paper finds that active labor market policies (ALMP) are the key to solving the youth unemployment problem and suggests a three-step policy reform to mitigate the youth unemployment rate in Spain.

Keywords: youth unemployment, Spain, cost-effective policy tools, factors of youth unemployment, active labour market policies

BEZROBOCIE MŁODYCH LUDZI W HISZPANII: MIARY EFEKTYWNEJ KOSZTOWO POLITYKI ZMNIEJSZANIA PROBLEMU BEZROBOCIA NA PODSTAWIE ANALIZY PRZYCZYN BEZROBOCIA MŁODZIEŻY

Streszczenie

W artykule badane są przyczyny bezrobocia wśród młodzieży w Hiszpanii w latach 1999–2012. Badanie zawiera propozycję reformy polityki rynku pracy, której celem jest zmniejszenie bezrobocia strukturalnego wśród tej grupy wiekowej. Dotychczasowe publikacje w tym zakresie skupiają się na problemie bezrobocia wśród młodzieży w kontekście kryzysu, pomijając problematykę strukturalną propozycji reform. W ramach pracy powstał kauzalny model składający się z dwunastu zmiennych. Model ten sprawdzał, które z przyczyn bezrobocia wśród młodzieży w Hiszpanii w latach 1999–2012 najmocniej się do tego przyczyniły. Związek kauzalny między tymi niezależnymi dwunastoma zmiennymi a bezrobociem wśród młodzieży (zależna przyczyna) został przeanalizowany przy pomocy programu statystycznego SPSS. Na podstawie tej analizy została zaproponowana reforma, której celem jest amortyzacja problemu bezrobocia wśród młodzieży. Pokreślono też, że aktywna polityka rynku pracy (ALMP) jest kluczem do rozwiązania problemu bezrobocia wśród młodzieży w Hiszpanii. Istotne jest przede wszystkim, iż proponowana reforma nie wpływa na podwyższenie wydatków związanych z aktywną polityką rynku pracy a na redystrybucji budżetu, zmianie z podaży na popyt na siłę roboczą oraz na tworzeniu nowych programów skierowanych stricte do młodzieży.