# *University of Twente*

***Bachelor Thesis***

# *Youth unemployment in Spain*

*A cost-effective policy measure to mitigate the youth unemployment problem in Spain based on an analysis of its underlying factors*


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# Abstract

This paper investigates major factors of youth unemployment in Spain from 1999-2012 and suggests a policy reform in order to mitigate the structural youth unemployment problem in Spain. The main research question this paper will be answering is: "Which policy measure can most cost-effectively mitigate the youth unemployment rate in Spain?" 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 will be 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) will be analysed using SPSS. Based on the findings of this analysis, a policy recommendation to substantially decrease the youth unemployment rate in Spain will be provided. This paper finds that active labour market policies (ALMP) are the key to solving the youth unemployment problem. In this context, ALMP programmes exclusively targeted at young people need to be introduced at a broad scale and a policy shift from supply side stimulation to demand side stimulation is necessary. Importantly, the suggested policy reform does not require raising the ALMP budget which is an essential component during times of austerity measures.

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# 1. 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. As this paper will be highlighting, youth unemployment is a social, political and economic problem. The introductory chapter of this paper will give a brief overview over youth unemployment in the Spain, present the stakeholders and introduce the research question and research design.

## 1.1 Background

The youth is considered to be one of the most vulnerable groups in the labour market, with adult unemployment rates about two times lower than youth unemployment rates as table 1 exemplary for Spain, the eurozone and the European Union shows.

Table 1: Youth unemployment and adult unemployment in Spain, the eurozone and EU-27, 2013 (Eurostat, 2013)

| | Adult unemployment | Youth unemployment |
|---|---|---|
| **EU-27** | 9.4% | 23.3% |
| **Eurozone (€-17)** | 10.7% | 24.0% |
| **Spain** | 23.8% | 55.7% |

In particular, young men and women who are to contribute to a country's economic growth for the next 40 years are most endangered to precarious, short-time and low-paid employment situations. According to labour market theory (Borjas, 2012; Ehrenberg & Smith, 2011; Dietrich, 2012), this vulnerability is a result of low human capital, little practical experience, low productivity of the youth compared to more experienced employees and a mismatch of skills between what is learnt during education and what is required by employers. Moreover, legal regulations often dictate an 'equal pay for equal work' doctrine which means, that young people cannot work for lower wages even though they are put in a disadvantaged position by the aforementioned characteristics and have to compete with more experienced workers. Instead of being paid less, they might be disregarded by employers and become unemployed. Consequently, the transition from education to work can be considered a crucial phase in the life of young people with respect to future employment. In addition to this, empirical evidence suggests that the youth unemployment rate is also more sensitive to business cycle fluctuations than adult unemployment.

This paper will try to contribute to the mitigation of the youth unemployment problem in Spain since Spain, together with Greece, exhibits by far the highest youth unemployment rates in the European Union. In fact, high and persistent youth unemployment rates in Spain indicate that its youth unemployment problem is of structural nature and have caused youth unemployment to be one of the most debated topics in recent years. Related to this, the concept of 'frictional unemployment' is worth discussing. Frictional unemployment refers to unemployment that occurs due to job-search and skill matching problems and results in flows of workers since firms lay off and hire workers and because workers quit in search of better opportunities (Blanchard & Katz, 1996, p. 52). Due to these flows of workers, some unemployment is considered to be natural. However, empirical evidence suggests that this 'efficient level of unemployment' (Blanchard & Katz, 1996, p. 52) is very unlikely to be generated due to unemployment benefits, taxes on labour income, wages above the equilibrium

level and poor labour market opportunities for some people who cannot compete with other workers (Blanchard & Katz, 1996, p. 53).

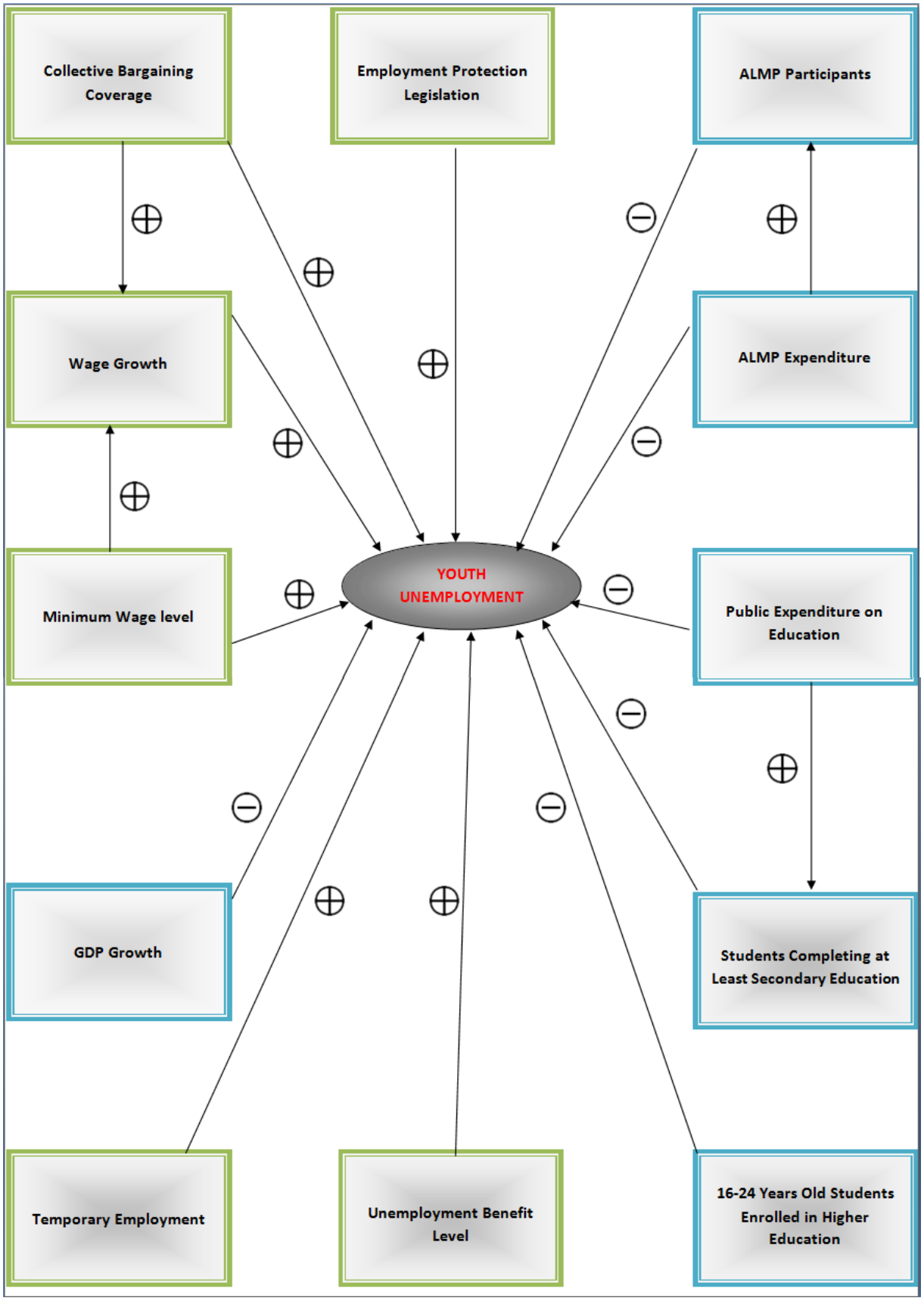
Generally speaking, youth unemployment rates in Spain differ substantially between industries. The Spanish construction and manufacturing sector has exhibited the highest increase in youth unemployment in the light of the economic crisis which can partly be explained by the job creation during the housing boom in the previous years (Wölf & Mora-Sanguinetti, 2011, p. 5). Whilst this particular and extreme development can be attributed to the economic crisis, the differences between sectors have been present from 1999-2012, the time period this research project examines. Similarly, youth unemployment rates differ substantially between regions within Spain which is epitomised by the fact that youth unemployment rates ranged from 40.6% in the Spanish region Comunidad Foral de Navarra to 70.6% in the autonomous enclave Ceuta. Apart from the on African soil located Ceuta and Spanish islands, Andalusia (Andalucía) is the region with the highest youth unemployment rate in Spain (62.3%) (Eurostat, 2014). The difference between regions can partly be explained by the specialisation of regions in different sectors. Andalusia, for instance, is characterised by a large construction sector (Wölfl & Mora-Sanguinetti, 2011, p. 5) which, as written above, exhibited the highest increase in youth unemployment in recent years. Against the background of these extreme figures, a range of different and far reaching policy measures have been adopted in Spain at the national and regional level which, however, were not able to lower the youth unemployment rate.

This paper has established a causal model which illustrates causal relationships between youth unemployment and twelve independent variables which labour economic theory assumes to be causally related to youth unemployment. Figure 1 presents the causal model which is the basis of the analysis which will be conducted to examine which variables have determined youth unemployment the most in Spain. Importantly, causes of youth unemployment are diverse and even include factors that cannot be manipulated by policy measures, like the cultural background, for instance. As a consequence, this research project will focus exclusively on factors of youth unemployment that can be politically manipulated and will analyse these from an economic perspective. Statistical tools and correlation measurements will be used to identify which variables of the causal model have influenced youth unemployment the most in Spain from 1999-2012. Based on these findings, a policy recommendation aimed at mitigating the youth unemployment problem in Spain will be provided. In this context, it is vital to acknowledge the responsibility of the Spanish government. Unlike policies concerning the customs union, monetary policy, consumer protection, transport and energy, youth unemployment is neither exclusive nor shared competence of the European Union. Instead, the European Union shall only “have competence to carry out actions to support, coordinate or supplement the actions of the Member States” (Treaty on the Functioning of the European Union, 2007, Article 6(e)) when it comes to education, vocational training, youth and sport. This legal provision requires that any policy measure needs to be introduced by Spanish authorities even though tools like the ‘Mutual Learning Programme’ offer platforms to exchange knowledge, information and good practices in the field of employment (Treaty on the Functioning of the European Union, 2007, Article 149).

It is vital to acknowledge that there are different stakeholders in the context of youth unemployment: Firstly, the individual is often affected psychologically (depression) and economically (lower purchasing power) by youth unemployment. Secondly, society is affected by youth unemployment since inequality increases and human capital is unused. Thirdly, the government will receive less (income) tax revenue and has to increase its welfare spending if youth unemployment

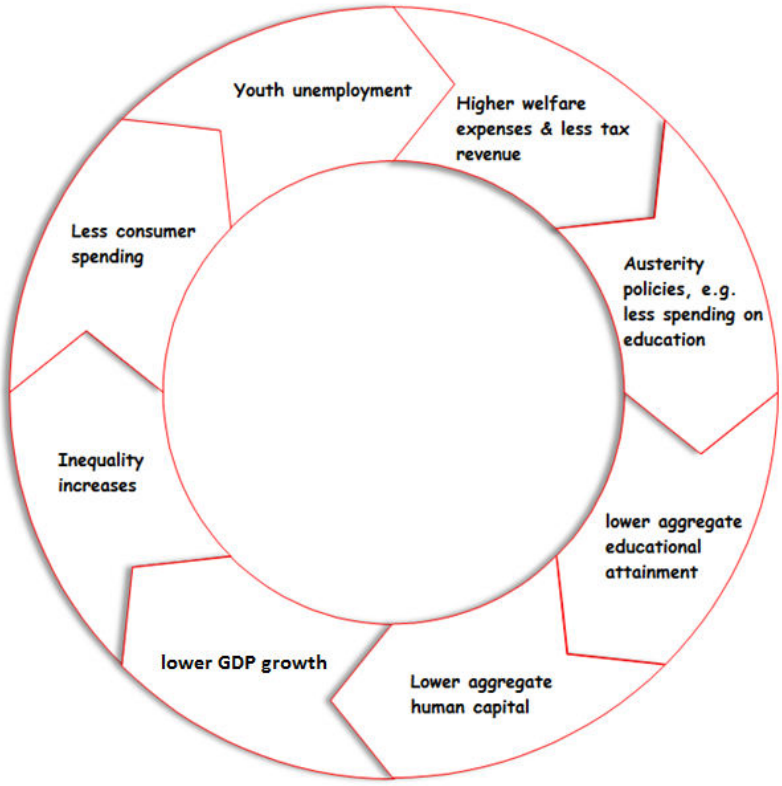
increases. Fourthly, European Union member states as economically and politically highly interdependent countries are also affected by youth unemployment. Importantly, this paper will provide a policy recommendation but refrain from conducting a fully-fledged cost-benefit analysis

Figure 1: Causal model



due to the limited scope and resources. For such a cost-benefit analysis, a comprehensive stakeholder analysis would be absolutely imperative. For the purpose of this paper, however, a less extensive overview of the different stakeholders listed above is sufficient and is offered in Appendix 1. At this point it is only important to recognise that the negative effects of youth unemployment on each stakeholder are interdependent and reinforce each other. Figure 2 aims to summarise this section and stakeholder presentation by showing potential spillovers between different levels. Needless to say the picture is more complex in reality. As this chapter has shown, youth unemployment is a problem of social, political and economic nature. It has moreover been demonstrated that negative consequences of youth unemployment are not limited to the unemployed persons themselves but consequences for young people actually spill over to other stakeholders, too. The vicious negative consequences on each stakeholder can be observed in the real world and are based on a well-established theoretical framework surrounding the concept of youth unemployment.

Figure 2: Vicious circle of youth unemployment: effects and spillovers




Having presented the stakeholders, the following will first of all introduce the research question and subsequently discuss the research design, case selection and data collection method. In addition to that, a close look at each variable of the causal model will be taken.

## 1.2 The research question

The main objective of this research is to propose a policy recommendation 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*?"

The following will conceptualise the different parts of the research question. The concept of *youth unemployment* is harmonised across the European Union and "includes all the youth (i.e. people

between the ages of 15 and 24, inclusive) who are unemployed" (Eurostat, 2013b). The *youth unemployment rate* is "the percentage of the unemployed in the age group 15 to 24 old compared to the total labour force (both employed and unemployed) in that age group" (Eurostat, 2013b). A person not working is only defined as unemployed if she has been looking for work within the last four weeks and is able to start working within two weeks (Eurostat, 2014b). In other words, if a person is not actively searching for a job, she is considered to be out of the labour force and is thus not included in the concept of unemployment. Thanks to this harmonised definition, the threat of conceptually biased results in this context is effectively eliminated.
The main 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 recommendation for a policy measure to mitigate the youth unemployment problem. A remedy question generally falls under the category of applied research (Babbie, 2010, pp. 25-26). 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 by establishing a causal model in the context of youth unemployment in Spain which is based on a theoretical framework and this research project will make extensive use of previous quantitative as well as qualitative research.
Supplementing to the main research question, the following sub-questions have been formulated:

- "Which variables potentially determine youth unemployment according to labour economic theory?"
- "Which factors have been major factors of youth unemployment in Spain between 1999 and 2012?"
- "On which variable of the causal model can the policy measure most cost-effectively be based and how can the variable best be used and translated into a policy measure to mitigate the youth unemployment problem in Spain?"

The first sub-question asks for the theoretical framework this research project and its causal model is based on.
The second sub-question relates to the analysis of factors of youth unemployment in the time period under consideration. This question has been added because each country has a very distinct labour market and factors of youth unemployment may vary substantially from one country to another. Consequently, it is necessary to unfold major factors of youth unemployment in Spain before giving a policy recommendation.
The third sub-question refers to the final part of this research project in which a policy recommendation will be given based on the findings of the preceding analysis. In short, the third sub-question asks for an inventory of policy measures which are cost-effective.
All sub-questions are of substantive nature and include relevant aspects of the main research question to which they lead up to and help answering.

## 1.3 The research design

To conduct the analysis, a single group design study will be executed. Single group designs are relatively easy to implement, yet, they are a very powerful tool to demonstrate and unfold causal relationships. In this frame, a trend study - a special type of longitudinal study, for which data of a given characteristic of some population and over time are observed (Babbie, 2010, p. 107) - has been chosen to answer the research question. The given characteristics under observation of this study are the youth unemployment rate as dependent variable as well as all independent variables which

supposedly influence youth unemployment. The chosen research design, unfortunately, brings along some threats: Firstly, there is no control group which means that problems of history and maturation may arise. 'History' relates to factors, events and developments outside the study which could influence the dependent variable although the gathered data seem to suggest that the change has been caused by an independent variable in the model of this study (Babbie, 2010, p. 240). On the other hand, maturation refers to the possibility that Spain could simply have changed in the time for which data have been collected (Babbie, 2010, p. 240). For history and maturation alike, potential changes in the dependent variable are due to third factors rather than due to a change in an independent variable. Obviously, this would bias the results of the analysis. The anticipated potential problems can, unfortunately, not ultimately be eliminated or 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 reliability. Both concepts refer to the quality of a measurement and are essential when investigating causal relationships. To begin with, validity can be subcategorised in internal and external validity. Internal validity, in turn, can be subcategorised in content and construct validity. Content validity of this research project is likely to be very high which means that the list of (independent) variables includes all relevant political and economic variables that actually do influence youth unemployment in Spain. This confidence is based on the exhaustive and well-established theoretical framework which has been used for this study and which will extensively be discussed in chapter two. Related to this, construct validity, which refers to the question of whether the variables relate to each other as one would expect within a system of theoretical relationships (Babbie, 2010, p. 154), can be assumed to be very high, too. On the other hand, external validity of this study is rather low. This means that independent variables that will be found to be major factors of youth unemployment in Spain do not necessarily need to have the same influence on youth unemployment in other countries. This is with reference to the uniqueness and specifics of each country's labour market, even within a rather harmonised group of countries such as the European Union or the eurozone. However, exporting the policy recommendation of this study to other countries is explicitly not an aim of this research project. Instead, this paper exclusively focuses on youth unemployment in Spain. Consequently, the low external validity is not problematic for conducting the analysis and will not undermine its meaningfulness. Reliability of the data refers to "the quality of measurement method that suggests that the same data would have been collected each time in repeated observations" (Babbie, 2010, p. 150). In the frame of this research project, reliability can be expected to be high since databases provided by Eurostat and OECD have been used. These sources and databases are widely accepted, appreciated and used by researchers around the world and for many different research topics.

Another possible research design which could have been applied would be a cross-country analysis between countries which are economically and politically similar to Spain (like Italy, Greece and Portugal, for instance). Whilst this approach would provide more data in general, it is questionable whether any of the results could actually be used to give a valid policy recommendation to Spain. Due to the distinctness of each country's labour market, it is dangerous to propose policy measures to Spain based on a cross-country analysis. The case selection and sampling is a crucial factor for the success of any research since inappropriately selected cases are likely to cause biased results without any scientifically meaningful message. Since the youth unemployment problem in Spain is particularly severe in the European Union and for reasons of internal validity of the study, the analysis will exclusively focus on Spain. One can think of this as a trade-off between the amount of data and the applicability of data for providing a policy recommendation. Analysing factors of youth unemployment in Spain forestalls biased results one could get if the policy recommendation would

be even partly predicated by data from any country other than Spain. That being said, it might still be useful to look at how economically and politically similar countries perform with regard to the variables under consideration. By looking at the employment protection legislation (EPL) score of other countries in the eurozone, for instance, it is possible to identify whether Spain has in comparison rather strict or relaxed labour market regulations. Such a finding could be helpful for giving a valuable policy recommendation to Spain to the extent that a better overview of whether there is a frame, beyond which a proper functioning of the labour market is endangered, can be obtained.
In order to answer the research question, a two-tiered approach will be taken: Firstly, this paper will disclose which variables of the causal model have influenced youth unemployment in Spain to which extent from 1999-2012. Secondly, and based on the findings of the preceding analysis, a policy recommendation will be provided to mitigate youth unemployment in Spain.

The first step of the research project is the analysis of major factors of youth unemployment in Spain. With regard to the timeframe of the analysis, the period from 1999-2012 has been chosen for three reasons: Firstly, the euro as an accounting currency was introduced in 1999 and national currencies' exchange rates had ultimately been fixed vis-à-vis the euro. In essence, this means that Spain had not been able to execute an independent monetary policy from this point in time which in turn can substantially affect a country's economy and hence the labour market, too. Secondly, this time period has been chosen for reasons of data availability. For some of the variables which economic theory assumes to influence youth unemployment, data were difficult to gather for pre-1999 years. Similarly, data for 2013 and 2014 were often still lacking. Whilst missing values could not fully be avoided, the time frame under consideration offered the most comprehensive dataset for this research project. Thirdly, by looking at youth unemployment data over the period of 13 years, it becomes clear that the youth unemployment problem in Spain is to a great deal of structural nature and not purely caused by the recent economic crisis. At the same time though, this paper acknowledges the apparent impact of the economic crisis on youth unemployment. The first step of this research project is necessary because it is imperative to know which variables were most influential as to the youth unemployment rate. By this, it will become clearer where exactly the problem needs to be tackled. To this end, the focus will be on the following twelve variables which, according to labour market theory, do have an impact on youth unemployment and which together constitute the causal model of this study:
The **minimum wage** is the lowest amount employers can legally pay their employees and was expected to be positively related to youth unemployment according to labour economic theory. One can speak of minimum wages as price floors for the labour 'service' of workers. The data used for this study are provided by Eurostat, referred to January 1$^{st}$ of each year and represented monthly rates. It is important to recognise that the data referred to gross wages, that is, before taxes and other dues like social security contributions (Eurostat, 2014c). For apprentices, the minimum wage level can be 60% or 75%, respectively for the first and second year (ILO, 2013). Since young people often complete apprenticeships, these data have been used in the analysisNext to this, the data which are being used for this research project are given in absolute values and in the artificial reference currency 'purchasing power standard' (PPS) which is used by Eurostat to eliminate the difference in price levels between countries.
Data on the **wage growth** variable are provided by OECD and show the average percentage change in wages from the previous year within Spain. Wage growth is expected to be positively related to youth unemployment, too. It is worth noting that the data represent the real change in the average wage rate which means that the data are adjusted for differences in price levels.

The **collective bargaining coverage** represents the percentage of "employees covered by collective (wage) bargaining agreements as a proportion of all wage and salary earners" (Amsterdam Institute for Advanced Labour Studies, 2013, p. 23). This variable, too, is expected by theory to be positively related to youth unemployment. The data are provided by the Amsterdam Institute for Advanced labour Studies and are adjusted "for the possibility that some sectors or occupations are excluded from the right to bargain" (Amsterdam Institute for Advanced Labour Studies, 2013, p. 23). These groups have been removed before calculating the collective bargaining coverage.

The **employment protection legislation (EPL)** index is a scale from 0-6 where high values represent stricter rules for employers as to dismissal and regulations for contracts. The final value is "compiled from 21 items covering different aspects of employment protection regulations as they were in force on January 1st of each year" (OECD, 2014). The final values are calculated using weights. A full methodology on the EPL calculation can be found at the OECD website (OECD, 2013). EPL is expected to be positively related to youth unemployment.

**Temporary employment** is work under a fixed-term contract. Next to the conceptual differentiation between temporary and permanent employment contracts, it is important to acknowledge that temporary employment often "entails a different set of legal obligations on behalf of employers" (OECD, 2014b) as some aspects of EPL do not apply in these cases. Therefore, temporary employment provides some flexibility for employers. For this analysis, the values show which percentage of total employment was accounted for temporary employment. As will be shown in the theory chapter, the direction of the relationship between temporary employment and youth unemployment depends on whether one looks at the short-run (negative) or long-run (positive). Therefore, temporary employment to some extent represents a special case in the frame of this research project. Of course, the policy recommendation this paper will give is intended to mitigate the youth unemployment rate in the long-run. As a consequence, the relationship between youth unemployment and temporary employment is indicated to be positive. However, a very close look at the results of the analysis of this variable will be taken.

The **unemployment benefits level** refers to how much money people receive by the government if they are unemployed and fulfill a certain set of criteria such as having worked for a particular time period prior to unemployment. The relationship between youth unemployment and unemployment benefits is expected to be positive and the data were presented in absolute values. Related to unemployment benefits, an option would be to include the level of the minimum income guarantee/scheme into the causal model. In order to be eligible for minimum income schemes, usually fewer requirements need to be fulfilled. However, Spaniards are only eligible to minimum income schemes from 25 years only (Riba, Ballart & Blasco, 2011, p. 8). Given the definition of youth unemployment, including this variable would not make any sense.

**ALMP expenditure** in this analysis describes the percentage of GDP which is spent on active labour market policies. In a similar vein, the variable **ALMP participants**, represented in absolute values, shows how many people actually participate in ALMP programmes. Obviously, it is expected that ALMP expenditure and the number of participants in ALMP programmes correlates strongly and positively. However, there are many different types of ALMP which require different resources and which yield different results. Therefore, it will be possible to draw conclusions about how well different programmes have reached the people. Both ALMP expenditure and ALMP participants are expected to be negatively related to youth unemployment.

**Public expenditure on education** is measured as percentage of GDP which is spent by the public sector on education "either by bearing directly the current and capital expenses of educational

institutions or by supporting students and their families" (Eurostat, 2014d). For this variable, a negative relationship is expected, too.
As economic theory assumes educational attainment to be a determinant of youth unemployment, the variable **students completing at least secondary education** has been included in the causal model, refers to the age group 20-24 and shows which percentage of all people in this age group have completed at least upper secondary education which typically begins at the end of full time compulsory education (Eurostat, 2014e) and is designed "in preparation for tertiary education, or to provide skills relevant to employment, or both" (United Nations Educational, Scientific and Cultural Organization (UNESCO), 2011, p. 84). Since education is assumed to increase employment prospects, this variable is expected to be negatively related to youth unemployment.
**GDP growth** in this analysis shows the percentage change in GDP at market prices on the previous year (Eurostat, 2013c) and allows "comparisons of the dynamics of economic development" (Eurostat, 2014f). GDP growth and youth unemployment are expected to correlate negatively.
The variable **16-24 years old students in higher education** is included against the background of the very definition of youth unemployment and represents the absolute numbers of participants in this age group in higher education (Eurostat, 2014g). The relationship to youth unemployment is expected to be negative.

All these twelve independent variables are included in the causal model. The dependent variable of the casual model is **youth unemployment** and has been conceptualised earlier in this chapter.

The theoretical framework of this study is built around and closely linked to these variables and provides the basis for the causal model. Importantly, the aim of this research is not testing the model but rather using it to see to which extent each variable influenced youth unemployment in Spain from 1999-2012. The causal model, which is compiled from the list of variables, illustrates the relationships between all independent variables and youth unemployment as well as relationships among the independent variables as they to some extent influence and reinforce each other. In addition to the illustration of the direction of the relationships and based on labour economic theory, the causal model indicates whether the relationship is expected to be positive or negative.

At the first stage of this research, a secondary analysis of quantitative data from 1999-2012 will be conducted. Each year studied represents the units of analysis whilst the variables under investigation represent the units of observation. Table 2 shows the sources which have been used for each variable. The gathered data have proven to be very valuable for the purpose of this research and supplied the necessary empirical evidence to conduct the first stage of this research. The analysis of these data will actually be a means to the ultimate research goal, namely providing a policy recommendation, rather than an end itself. By analysing the influencing potential of each variable on youth unemployment, it will be possible to identify which factors predominantly determined youth unemployment in Spain. This knowledge is vital in order to provide an appropriate policy recommendation. The data will be analysed by means of correlation tables using SPSS. For this data analysis, one of the anticipated problems is that the quantitative data have all been of different nature: Sometimes the data are given in percentage changes on the previous year (GDP growth, e.g.), sometimes only absolute numbers are available (ALMP participants, e.g.) and sometimes data are provided in form of an index (EPL, e.g.). This conflict will be solved by calculating the percentage change on the previous year for every value. In this way, a uniform system which increased the validity and meaningfulness of the data will be applied for the calculation of correlations. Another anticipated challenge in the context of this research is the potential time delay of an effect of a change in an independent variable on youth unemployment, the dependent variable. This problem

will be solved by executing a time-lagged analysis for some of the independent variables for which a time delay in the response of youth unemployment is anticipated. One variable for which this approach seemed to be reasonable is the "public expenditure on education" since most of the beneficiaries of higher public expenditure on education will most likely be in school for some time before they enter the labour market and labour force.

Table 2: List of variables and sources

| *Variable* | *Nature of the variable* | *Source* |
|---|---|---|
| **Youth unemployment rate** | Dependent | Eurostat |
| **Students completing at least secondary education** | Independent | Eurostat |
| **Expenditure on education (% of GDP)** | Independent | Eurostat |
| **GPD growth (% on previous year)** | Independent | Eurostat |
| **Temporary employment** | Independent | OECD |
| **Wage growth (% on previous year)** | Independent | OECD |
| **ALMP participants** | Independent | Eurostat |
| **ALMP expenditure (% of GDP)** | Independent | Eurostat |
| **16-24 years old students in higher education** | Independent | Eurostat |
| **Collective bargaining coverage** | Independent | Amsterdam Institute for Advanced Labour Studies |
| **Employment protection legislation (EPL) (OECD index)** | Independent | OECD |
| **Minimum wage level (power purchasing standard)** | Independent | Eurostat |
| **Unemployment benefit levels** | Independent | Eurostat |

The second step of the two-tiered research approach will be providing a policy recommendation to Spain based on the quantitative findings of the first part of the analysis as well as on qualitative data from existing literature. In order to provide a valuable recommendation to Spain, it will be investigated which variable correlates the strongest with youth unemployment in the time-period under consideration. Ideally, the focus will then be on a policy reform which adjusts the variable which influences youth unemployment the most. For the policy measure, the strength of the relationship between youth unemployment and each independent variable will provide the basis. Moreover, it will be crucial to investigate whether the variable on which the policy measure is planned to be based is actually manipulable. Next to that, any policy measure needs to be feasible and reasonable in the context of the Spanish labour market. While 'feasible' relates to the political and economic possibilities which are predetermined for Spain as well as to the assessment of whether a variable can be manipulated by a policy, 'reasonable' refers to efficiency and effectiveness but also to the omnipresent costs-benefits trade-off. In other words, even if there appears to be a policy measure which is effective and efficient, it needs to be verified that its costs will not exceed its benefits as to variables other than the youth unemployment rate itself. As a consequence, the most influential variable is not necessarily be the one on which the policy recommendation will be based on. Moreover, in order to understand which policy option is expected to be most rewarding in terms of lower costs and a lower youth unemployment rate in Spain, different policy alternatives will be weighed against each other and discussed in order to provide a thorough overview over the pool of policy alternatives and to investigate which measure is most cost-effective. Given the limited

resources and scope, this paper will refrain from executing a fully-fledged cost-benefit-analysis in the traditional sense. However, a policy recommendation will be provided which will take into account the status-quo and political and economic conditions currently prevailing in Spain. Importantly, chapter four will not discuss the effects of the policy recommendation on all stakeholders in detail and will shy away from indicating by how much exactly the youth unemployment rate will decrease if the suggested policy reform was implemented.

Taking into account all pros and cons, this chapter has demonstrated why the chosen research design is the most appropriate choice for the purpose of this research project. On top of that, the research question and the variables of the causal model have been introduced and conceptualised.

## 1.4 Outline of the paper

This paper is organised in line with the execution of research and analysis. Chapter one has introduced the reader to the difficulty and complexity of the youth unemployment problem in Spain by providing a stakeholder analysis. Next to that, the research question and the research design have been presented and discussed. Chapter two will answer the first sub-question and elaborates on this paper's theoretical framework which can be directly linked to the causal model. Chapter three is written with regard to the second sub-question and will present the results of the analysis of major factors of youth unemployment in Spain from 1999-2012. Moreover, it will discuss on which variable the policy recommendation will be based. The three-step policy recommendation to mitigate the youth unemployment problem in Spain will be presented in detail in chapter four which therefore refers to the third sub-qestion. Moreover, this chapter will present alternative policy measures in order to increase confidence that the previously suggested policy measure is indeed the most cost-effective one. Finally, chapter five will synthesise the main findings of this research project and provide concluding remarks.

# 2. Theory

This research project is based on a theoretical framework which in turn can be directly linked to the causal model that has been created. The theory chapter will provide an overview of the theoretical framework thereby supporting the incorporation of each variable into the causal model. Each variable and its underlying theory will be discussed separately after having given a general introduction to the role of youth unemployment in the frame of labour economic theory.

## 2.1 Labour economic theory – an overview

The discussion on youth unemployment is located in the frame of labour economics which describes and explains how labour is allocated to occupations, firms, industries and regions. The term 'labour market' is to be used with caution because it differs a lot from 'ordinary' markets like the goods and services or even the financial market. The labour market, where employers (buyers) and employees (sellers) interact, is special for a number of reasons. One distinct feature is that an employee and the product (i.e. the work he executes) cannot be separated from each other and employers are thus renting the workers' services rather than actually buying it. The wage can thus be seen as the rental price of labour. Furthermore, buyers and sellers are engaged in (long) lasting relationships. Like all other markets, the labour market is also characterised by demand and supply which together determine the price and the number of units 'sold'. Whilst the wage an employee receives can be considered as the price of labour, one has to recognise that legal regulations and trade union activities represent additional costs to employers in pecuniary and non-pecuniary terms. These additional costs may arise due to safety requirements, regulations or restrictions on hiring and firing workers or severance pays, for instance, and generally lower the demand for labour. The demand of labour describes how many units of labour an employer is willing to 'buy' at any given price. On the other hand, the quantity supplied depends on pecuniary (wages, premiums, e.g.) as well as non-pecuniary costs (working environment, risk of injury and death, health concerns, colleagues, flexibility of working hours, e.g.). Generally speaking, fundamental economic concepts and principles like the supply-and-demand model apply to labour markets just as they apply to 'normal markets' and can explain outcomes of interactions between buyers and sellers, between the price and the quantities supplied and demanded. The interesting question thus is why unemployment actually arises. In other words, why does the labour market fail to clear at some equilibrium level? In the supply-and-demand model a competitive market will always clear: While buyers prefer to pay as little as possible and sellers would like to charge as much as possible, they will ultimately agree on a quantity that will be supplied and a price that will be charged. One important aspect is that labour markets are far more regulated than most other markets, predominantly because employees, human beings, need to be protected against being exploited. Due to the amount and severity of regulations, labour markets virtually never clear. In short, this paper argues that essential assumptions and fundamentals of the supply-and-demand model simply do not apply in reality: Labour markets are at least to some extent subject to rules and regulations set by the government. Most of these regulations aim to protect workers from being exploited: Minimum wage regulations hinder employers to exploit workers financially while regulations on overtime hours and safety requirements, for instance, shall ensure that employees can work under acceptable and dignified conditions. Minimum wages work like price floors and cause excess supply (youth unemployment) if they are set above the equilibrium price level. Safety requirements, on the other hand, increase costs for employer since she has to buy new machines or pay for the inspection of the company's

machinery, for instance. Higher costs equal lower profits which results in lower output and lower employment, subsequently, if wages cannot adjust freely. A more detailed discussion on this is offered by Borjas (2012, p. 218-224). Closely related to this is the concept of 'sticky wages' which describes a situation in which nominal prices cannot adjust freely but are resistant to changes. Often this stickiness exists, because employers and employees engage in long-lasting contracts in which the level of the salary is predetermined. If demand for labour decreases in a recession, for instance, but supply remains stable, the classical supply-and-demand model would predict the price of labour (the wage) to fall. If provisions in the employment contracts prevent wages from decreasing, the labour market does not clear.
Having given a brief introduction to the role of youth unemployment in labour market theory, the remainder of the theory chapter will discuss the theoretical framework this paper is based on in detail.

## 2.2 The business cycle

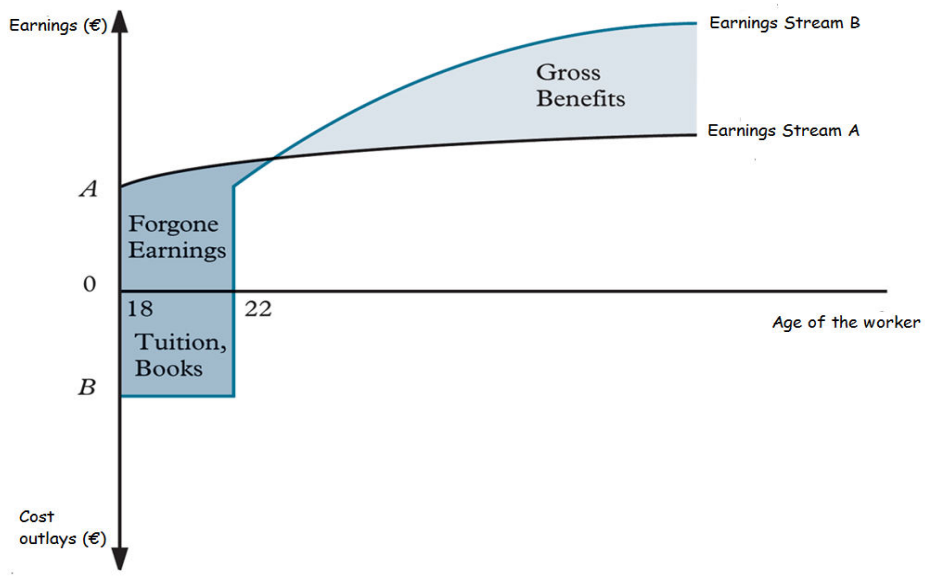
The business cycle is often considered to be the most important determinant of youth unemployment and youth unemployment rates tend to disproportionally increase in recessions relative to adult unemployment. In this discussion, it is worth distinguishing between business cycle effects on labour supply and labour demand. One the one hand, demand fluctuates significantly with the business-cycle with employers demanding much less labour in recessions than in booms. To understand why, it is important to recall that the demand for labour is a derived demand, that is, it depends on the demand for the final good or service the worker is producing (Ehrenberg & Smith, 2006, pp. 96-106). For an employer, hiring workers is thus a means to produce a particular good or service rather than an end itself. If people demand less goods and services like in a recession, the means to produce the goods and services, namely the worker herself, is not only expandable but causes costs as productivity is below the wage level. As a consequence, employers have an incentive to cut employment if wages are downward sticky since this will reduce costs and make the firm more profitable. Decreasing labour demand means that young people, one of the most vulnerable groups in the labour market anyway, then compete for fewer vacancies and are most endangered to being laid off. This again is based on the assumption that wages are sticky and cannot adjust freely. If wages could adjust downwards, there would still be fewer vacancies but also fewer people willing to work for that wage. This argument relates to the concept of the 'reservation wage', which describes the minimum wage level that would make a person indifferent between remaining out of the labour force and starting to work (Borjas, 2012, p. 41). By contrast to a recession, consumers' demand for goods and services during booms increases and firms can sell more output. Therefore, employers are likely to hire more workers. Interestingly, the supply of labour remains relatively stable and appears to be rather independent from the business-cycle because people depend on a (stable) income in order to be able to purchase food, clothes and other goods and services for themselves and their families. To work is not an end itself but rather a means to ensure survival and a decent standard of living. At the supply side, the added worker effect and the discouraged worker effect work against each other. The former hypothesis is based on the idea that during recession the main provider of income in a household might become unemployed which causes people currently not in the labour force to seek employment in order to make up the loss in income. Thereby, the labour force participation rate will increase during recessions (Borjas, 2012, p. 71). The discouraged worker effect hypothesis argues that people give up searching for a job after some time if they cannot find one. Evidence suggests that the discouraged worker effect dominates (Mincer, 1966). Therefore, labour supply is expected to fall in response to a decrease in GDP. To conclude this discussion, it is worth

stressing that there is a discourse about the elasticity of labour supply relative to the elasticity of labour demand. While it can be reasonably argued that by tendency labour demand is more elastic (Borjas, 2012, pp. 45-47; Borjas, 2012, pp. 103-105), this is not representing a universal answer since it depends on many factors like gender, age, the wage rate, non-labour income and whether the husband/wife works, to mention a few.

## 2.3 Education

Next to the business cycle, the concept of education is of great interest in the frame of this research project. The International Standard Classification of Education (ISCED) is "a framework which allows for the standardised reporting of a wide range of policy-relevant education statistics" (UNESCO, 2011, p. 1) and is also applied within the European Union. The ISCED distinguishes between nine levels of education, from 'early childhood education' (level 0) to 'doctoral or equivalent' (level 8). For the purpose of this paper, however, it is sufficient to distinguish between secondary and tertiary education. Secondary education offers students "more varied, specialised and in-depth" (UNESO, 2011, p. 29) instructions and serves as preparation for tertiary education. Tertiary education "builds on secondary education, providing activities in specialised fields of education" (UNESCO, 2011, p. 45) and in the European context refers to education at the bachelor, master and doctoral level. The reason why people seek education beyond what is mandatory by law is that better educated people have better employment prospects since each occupation requires a very specific set of abilities and acquired skills, so-called human capital. Human capital includes accumulated experience as well as investments in activities such as education and training. Generally speaking, the greater a person's human capital the greater her employment prospects. However, investments in human capital are costly and each individual therefore decides on her own whether at all, and if yes, how much to invest. If people decide to invest in their human capital, they hope to recoup expenses at a later point in time and to be eventually better off than without that investment. In this context, 'better off' may refer to an employment situation with a higher pay-check, lower risk of injury or more diversified tasks, to mention a few examples. What is important though is that it takes time, most likely several years, until an investment is recouped. Cost of investment in human capital may refer to direct costs such as tuition fees and books and indirect costs, i.e. opportunity costs in terms of forgone earnings. If a person decides to seek additional and voluntary education, she will not be able to work full-time in the labour market. Some students work part-time, but even in this case the opportunity costs are enormous. Moreover, there are psychic costs connected with studying because it can be difficult and tedious. As written above, education can be considered to be an investment into the future and the initial costs are hoped to be recouped after some time, for instance through a higher payer pay-check compared to persons with a lower educational attainment level. In this context, graph 1 illustrates the downsides and benefits of investments in education by means of earning streams of two individuals with different educational attainment levels.

Graph 1: Two different earning streams (Ehrenberg & Smith, 2006, p. 282)




Stream A refers to a person who has completed secondary education and decides to become active in the labour market immediately afterwards. Her earning stream is positive from the very beginning, that is, she starts to earn money directly after finishing secondary education. However, this person's earning stream is rather flat. On the other hand, earning stream B represents a person who has decided to complete tertiary education. During the first three years after having completed secondary education, this person makes human capital investments and therefore has to bear the associated costs. If a person decides to complete tertiary education, she hopes to recoup these initial losses at a later point in time by having a steeper earning stream than person A. In other words, the gross benefits or returns to investment are hoped to exceed initial expenses. That being said, figure 2 assumes that both persons are actually employed. To reiterate what has been written earlier though, person A is less likely to find a job at all according to labour economic theory and evidence confirms this for industrialised countries, at least. However there are two different perceptions of why exactly education is likely to put young people in an advantage position: Some claim that it is the acquired human capital and thereby higher productivity whilst others object and quote that receiving a university diploma serves as a signal to employers that this person is able to achieve her goals and to successfully finish her projects. Proponents of the signaling theory argue that employers can never be sure about a person's actual productivity because this is only observable after a considerable amount of time the employee has worked. By contrast, a university degree is something observable and assumed to be positively correlated with productivity. The university diploma signals the employer that the potential employee is adapted for the required work. Contradictors of the idea of the dominance of the signaling model argue that students learn all the time they study and persons who have studied for, say, five years have obviously learnt more than persons who dropped out after one year. Moreover, earning differentials between university and secondary school graduates grow with age. If schooling was only a signal, this widening would not occur. Weiss (1995) and Bedard (2001) offer a deeper discussion in this context.

Generally speaking, the number of people seeking tertiary education varies considerably between countries. Scarpetta, Sonnet & Manfredi (2010) found that in Spain in 2009 more than 30% of the youth have quit school with at most secondary education which indicates that the young people in Spain estimate their returns to schooling as being very low (p. 21). To put that number in perspective, the EU-15 average of school leavers with at most secondary education in 2009 was

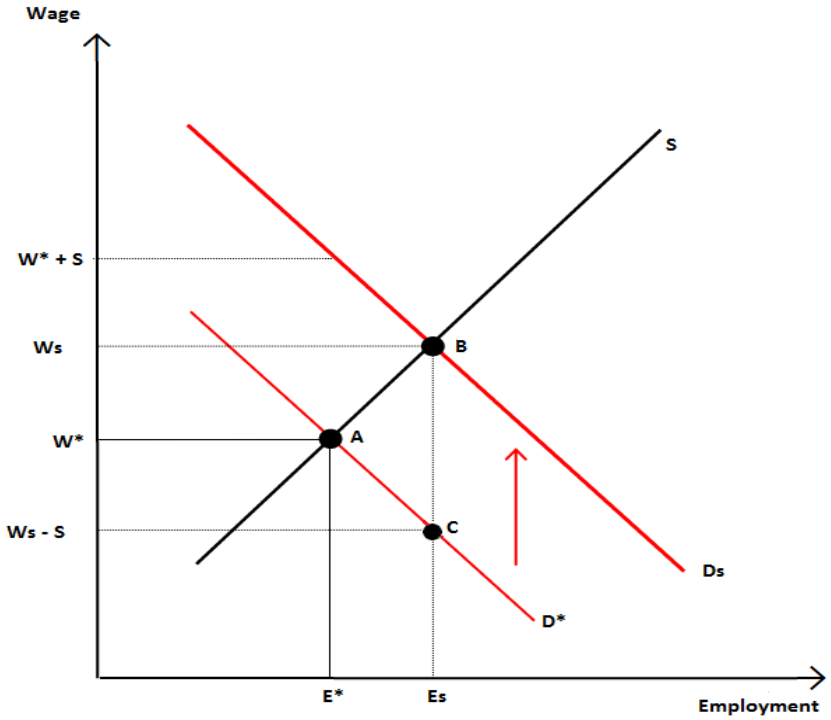
about 15% (Scarpetta et al., 2010, p. 21). It is likely that this difference is caused by a difference in demand for education. Demand for voluntary education increases if the (direct and indirect) costs of education are lower and if the gap between wages for persons with low and high educational attainment widens (Ehrenberg & Smith, 2006, pp. 282-283). Bearing this in mind, the government often tries to provide incentives for people to continue education, for instance by subsidising education. A common measure of how much a government invests in education is the proportion of GDP which is spent on education.

## 2.4 Labour market policies

Generally speaking, labour market policies can be divided into active measures and passive supports (Eurostat, 2014h). Firstly, this paper will discuss active measures.

In order to combat youth unemployment, the government plays a crucial role in the context of active labour market policies (ALMP). ALMP can take a variety of forms and their impact on youth unemployment is worth investigating in the frame of this research, especially since ALMP may also include youth-specific goals like increasing educational attainment and increasing employment possibilities by providing training and employment schemes for young people. The following will discuss employment schemes, which too can take a variety of forms but usually refer to wage subsidies, hiring subsides and social security rebates. Graph 2 illustrates the effects of a wage subsidy that is paid to employers if they hire new workers. Firstly, the demand curve shifts upward from D* to Ds. Next to that, the wage that worker receive rises from W* to Ws. The wage that employers actually have to pay is depicted by Ws-S. The wage subsidy lowers the costs of employment to employers and represents an incentive to increase employment. Moreover, in this scenario workers and employers share the benefit of the subsidy: The wage level rises (benefit for workers) and the wage employers pay falls (benefit for employers). Moreover, it is important to recognise that employment increased as a result of the wage subsidy. In contrast to these benefits for both employers and employees, society exhibits a deadweight loss as depicted by triangle ABC in graph 2.

Graph 2: Effects of a wage subsidy for the employer for hiring a worker



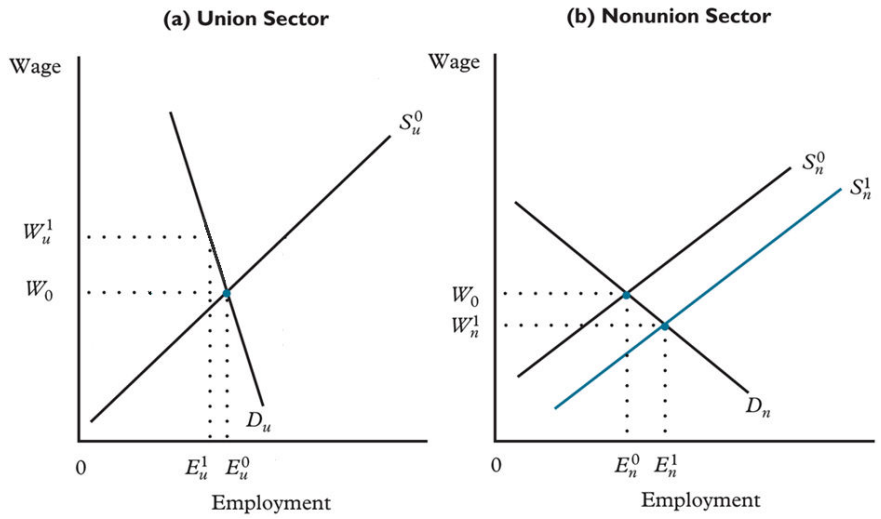
An alternative scenario to graph 3 is one where the employment subsidy woud be paid to emloyees (social security rebates, e.g.). In such a case, the labour supply curve would shift to the right/outward. Again, a deadweight loss could be observed.
Youth-specific ALMP measures are implemented to ease young peoples' transition from school to work thereby reducing both duration and frequency of youth unemployment spells (Dietrich, 2012, p. 31). From the theoretical point of view, the rationale behind ALMP measures like training is that it increases a person's human capital which in turn increases her employment prospects. This can be linked to the discussion on education earlier in this chapter. On the other hand, the rationale behind subsidies and rebates is to increase the incentive to supply or demand labour by reducing costs of employment.
Public expenditure on ALMP as percentage of GDP is a common indicator to measure to which extent ALMP are implemented. Unfortunately, the evaluation of these programmes encompasses a wide range of conceptual uncertainties (Borjas, 2012, p. 279). A common approach is to compare the before-and-after earnings of the participants in order to assess the effectiveness of these programmes. However, this brings along two major pitfalls: Firstly, the problem of self-selection arises as only "those who have the most gain from the program and are most committed to 'self-improvement' are likely to enrol" (Borjas, 2012, p. 279). Secondly, the net gain in earnings is likely to be caused by other factors than the ALMP alone. Examples for outside factors include aging and changes in aggregate economic conditions, for instance (Borjas, 2012, p. 281). While the theoretical frame surrounding ALMP is straight forward, the evaluation of the programmes appears to bring along some problems. As a consequence, the analysis and causal model of this paper will not only include ALMP expenditure as percentage of GDP but also the absolute numbers of ALMP participants of each year. Whilst this does not solve the conceptual uncertainties, it allows for a better estimation of the effectiveness of ALMP in Spain.
Next to ALMP, the government also uses passive supports such as unemployment benefits or minimum income guarantees. Rather than actively promoting employment, passive supports can be considered a means of last resort to financially support people who are unemployed and therefore stand in contrast to ALMP. Importantly, theory assumes social benefits to be a disincentive to work. To understand why, it is essential to recognise that people want to maximise their utility and that utility in a simply labour economic model is a function of income and leisure. Income is largely generated by earnings but social benefits can serve as substitutes for earnings if a person is not working. If the amount of money social benefits generate is large enough, the gap between the income generated by earnings and the income received via social benefits decreases. Consequently, a person who values leisure a lot might agree to relinquish some of her income and increase the amount of leisure substantially by not working at all in order to maximise her utility.

## 2.5 The wage level

Another determinant of labour demand and supply is the wage level which can be considered to be the rental price of labour the employer has to pay. Interestingly, one can often observe wages above the market clearing level. This section will explain the underlying factors of this phenomenon since wage levels above the market clearing price are assumed to cause unemployment. In detail, this paper will be focusing on labour unions and collectively agreed wages and the minimum wage system and discuss both separately.
Labour unions are organisations which aim to improve employment conditions of their members and agreements usually are bargained between employers, employees and the trade unions themselves. The field of action is very broad and labour unions' goals can be categorised in non-pecuniary goals

(safety standards, working-hours limits and giving workers a say in company boards, e.g.) and pecuniary goals (wage level and overtime premium, e.g.). It is crucial to recognise, that both categories influence labour demand and supply. This is because even the adjustment of non-pecuniary conditions represents additional (indirect) costs to the employer. All other things equal, this causes output and employment levels to decrease. With regard to the analysis, this paper will be focusing on the proportion of workers and salary earners who are subject to collectively agreed wages. In such a situation, labour costs which the employer will have to pay may increase enormously as wages are artificially pushed above the equilibrium level and prevent the market from clearing. Labour unions can operate in a variety of ways, for instance covering whole industries or only single firms. This often leads to a 'patchwork rug' situation in which there are some covered and some uncovered sectors in an economy. Some of the previously employed persons in the covered sector or firm become unemployed because labour demand decreases. Graphically, this development would be represented by an inward shift of demand curve. Persons who were laid off are unable to find employment in the covered sector and thus try to find a job in an uncovered sector. The increased number of people seeking employment in the uncovered sector shifts the supply curve to the right thereby creating downward pressure on the wage level. As a consequence, people previously employed in the covered sector who got fired due to labour union bargaining are very likely to be worse off afterwards: Either they are unemployed or they receive lower wages than initially in the covered sector. This development, subsequent to the inward shift of the demand curve, is illustrated in graph 3 which demonstrates effects of unionisation in one sector on the covered as well as on the uncovered sector. Obviously, the underlying idea is the same if there are covered and uncovered firms instead of sectors.

Graph 3: Spillover effects of unionisation in one sector on another (Ehrenberg & Smith, 2006, p. 467)

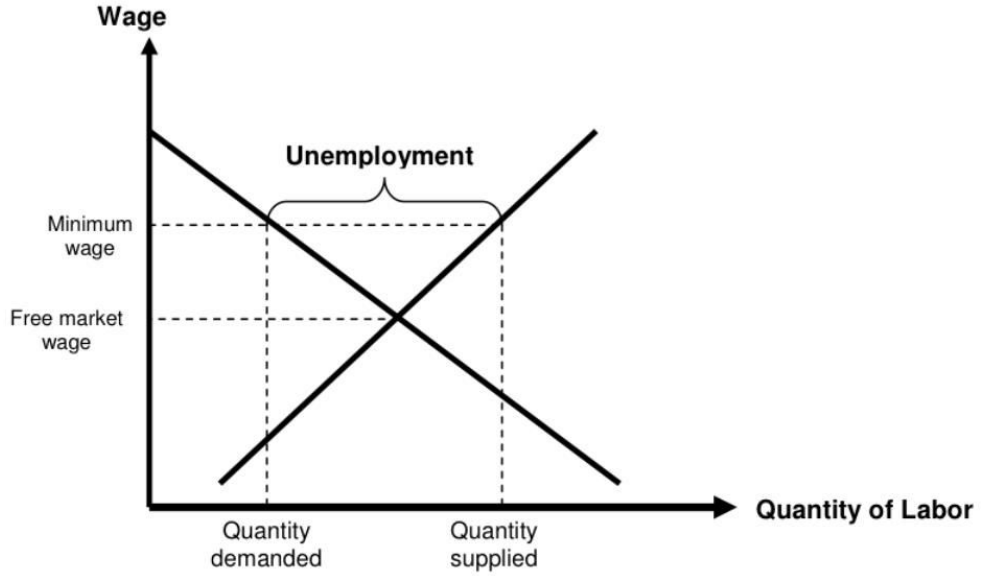



The discussion above unfolds an important feature of labour union activity which labour unions tend to disregard: Because some people are laid off as a result of the higher costs to employers, some people will actually be worse off either by becoming unemployed or by receiving a lower wage than before. It is largely ignored by labour unions that there is competition among workers. If a worker was sick or unemployed for a longer period, for instance, his human capital and productivity is decreased. Anticipating that, this worker might be willing to accept lower wages than his experienced and inwrought colleagues receive; however, that is impossible if there are collective wage agreements in place which, based on the 'equal pay for equal work' principle, have established a price floor above the employment seeking person's productivity level. The inevitable outcome is that

employed persons (insider) can exploit their position at the expenses of unemployed persons (outsider). This is what economists call 'insider-outsider' problem. The insider-outsider theory "analyses the behaviour of economic agents in markets where some participants have more privileged positions than others" and where "incumbent workers (insiders) enjoy more favourable employment opportunities than others (outsiders) (Lindbeck & Snower, 2001, p. 1). Lindbeck (1992, p. 211) argues that the insider-outsider theory is a sophisticated and more specific version of the traditional labour union model, because unlike traditional labour union models it also explains the source of the workers' market power to push wages above the market clearing level.
The preceding discussion has shown how labour unions may cause unemployment; however, it is sometimes argued that labour unions still increase overall welfare. Proponents of labour unions argue that labour unions are able to increase social welfare, especially if basic assumptions such as perfect competition and perfect mobility of workers do not apply. In particular, if mobility costs are high people may be trapped in occupations with dangerous working conditions but without a wage compensating for this (Ehrenberg & Smith, 2006, p. 476). In such a situation, labour unions may be able to bargain for a wage which compensates for bad working conditions. Critics of labour unions claim that labour unions reduce overall society's welfare because they only take a stand for their members' interests. Moreover, due to inflexible wages and differences in wages for equally productive workers in covered and uncovered sectors, labour resources are allocated imperfectly. On top of that, strikes by workers cause production losses and the use of excess workers resulting from bargaining successes on the level of employment, for instance, also allocates resources imperfectly (Ehrenberg & Smith, 2006, p. 477). Whether or not labour unions reduce or increase social welfare therefore very much depends on the specific market conditions and a number of other endogenous factors and this paper will neither investigate this issue in detail, nor will it provide an universal answer. That being said, there is little doubt that wages above the equilibrium level are responsible for some unemployment.

Having discussed the role of labour unions and the effects of collective wage agreements on youth unemployment, this paper will now elaborate on minimum wages. Many countries, among them Spain, have introduced minimum wages which can be considered legal price floors on wages. These price floors differ a lot between countries in terms of their levels, but also in terms of how they are organised as this paper will demonstrate in a moment. That being said, price floors generally have in common that they are assumed by classical economic theory to provoke youth unemployment, provided that the price floor is higher than the market-clearing price level since supply would then exceed demand. This unemployment is caused by two separate factors: Firstly, some previously employed persons will lose their jobs because employers will decrease employment as a result of higher costs of labour (quantity demanded decreases). Secondly, some people may have previously decided not to work because the competitive market wage was below their reservation wage. With the minimum wage in place, however, some will become active in the labour market because the minimum wage is above their reservation wage (quantity supplied increases). Graph 4 depicts and summarises these two effects.

Graph 4: Effects of a minimum wage (Policy Note, 2009).




In a competitive market, young people receive lower wages than their more experienced and more productive counterparts. Therefore, any minimum wage level will be more binding for young people and makes them even more vulnerable in the labour market. According to economic theory, the actual effect of a minimum wage predominantly depends on the level of the price floor and elasticities of labour demand and supply. However, recent literature is in disagreement about whether a minimum wage - if well designed - decreases employment. While some studies find negative employment effects (Neumark & Wascher, 2006) others do not find any significant effect (Stewart, 2004) and some scholars even report positive employment effects of a minimum wage (Card & Krueger, 2000). In fact, a theoretical frame has been built which helps explaining why minimum wages could also have positive employment effects (Borjas, 2012, pp. 191-192). In short, positive employment effects may be observed when minimum wages are introduced in a monopsonistic market given that the minimum wage level is below the actual wage level of the monopsonistic market and closer to the competitive wage level. In monopsonistic markets, there is only one buyer (one company, for instance) of labour. This buyer has some market power and the possibility to exploit this position. As a consequence, competition in monopsonisitic markets is restrained. In the monopsonistic market scenario just described, introducing a minimum wage could therefore reduce market power of the monopsonist and therefore yield positive employment effects. Importantly, disagreement on the effects of minimum wages remains even if one analyses youth unemployment in particular (Ghellab, 1998). Which effect a minimum wage will have, appears to be highly dependent on a vast range of outside factors, after all.

As written above, minimum wage systems differ a lot between countries. Rycx & Kampelmann (2012, p. 6) distinguish between two types of minimum wage systems to grasp their diversity within the European Union. The first system is called ‘clean-cut system’ and refers to a minimum wage which applies to most employees in all sectors and is normally bargained and determined at the national level. The second type is called ‘complex system’ and refers to a situation in which the minimum wage can vary between regions, sectors and demographic groups of people (Rycx & Kamplemann, 2012, p. 6). The authors categorise Spain as being part of the clean-cut system. At the moment of writing, the minimum wage in Spain amounted to € 752.85 per month (Eurostat, 2014i). When adjusting for purchasing power parities (ppp), the minimum wage level increases to about € 800 (Eurostat, 2014j). Both numbers refer to gross amounts, that is, before tax and deduction of other

social security contributions. The Spanish minimum wage level (ppp) is slightly above the median of European Union members states which have a legal minimum wage due to comparatively low minimum wage levels in Eastern European Union member states.
To sum up the discussion on the different factors of the wage level, it is worth stressing that both minimum wages and collectively agreed wages cause wage levels above the market clearing level and therefore contribute to the overall wage growth. These higher wage levels can be seen as artificially created, disconnected from economic causes and likely to cause youth unemployment.

## 2.6 Institutional framework (EPL)

Another major factor of youth unemployment is the institutional frame of the labour market and mainly refers to the number and intensity of regulations implemented to protect workers. Generally speaking, it can be said that there is a constant trade-off between flexibility and security. In flexible labour markets, regulations are not very pronounced. However, most European Union countries have implemented far-reaching regulations in the labour market in order to protect workers against health threats, dumping-wages and income insecurity and dismissal. The type and degree of regulations varies considerably between countries and much effort has been made to measure the level of protection safeguarded by labour market regulations. In spite of some limitations (European Commission, n.d., pp. 2-3), the Employment Protection Legislation (EPL) index offers one of the best assessments of the level of protection of employees. The EPL index has been established by OECD and refers exclusively to regulations on dismissals. The comprehensive overview over the methodology of the indicators and the index provides insight into how indicators are compiled and weighted (OECD, 2013). Broadly speaking, EPL indicators can be categorised into three main groups (OECD, 2014). The first group covers individual dismissals in the context of regular employment and incorporates procedural inconveniences such as notification periods, consultation requirements and a severance pay. The second group summarises all costs which are incurred in addition to those of individual dismissal, that is, if employers wish to dismiss a larger number of employees at the same time (collective dismissal)´, and the third group covers regulations on temporary contracts, i.e. to which extent regulations for regular contracts also apply to temporary ones. That being said, for the purpose of this paper it more important to recognise that EPL data are “converted into a score measured on a 0-6 scale, with higher values representing stricter regulation” (OECD, 2013). The following paragraph will elaborate on the theoretical background of temporary employment in the context of youth unemployment in more detail.

## 2.7 Temporary employment

The extent to which temporary employment is applied in a labour market largely depends on the strictness of rules encompassing it. In particular, it depends on the strictness of the regulations of the third group of the EPL. If people are employed on a temporary basis, their productivity is lower than the productivity of employees who have been working for a particular firm for a long time because the new worker usually lacks firm-specific knowledge, like how to operate the machines. This is usually accompanied by lower productivity of the employee supervising him, too. Furthermore, turnovers and recruitment of new workers is costly and time consuming. It requires resources which otherwise could have been used to increase profits, for instance by increasing productivity of employed persons. Theories such as the segmentation theory (Amuedo-Dorantes, 1999) or the human capital theory (Becker, 1993) suggest that “temporary workers are considered peripheral workers in whom employers are unlikely to invest” (De Cuyper et al., 2008). Resulting from this, aggregate accumulation of human capital can be assumed to decrease which, as discussed earlier,

lowers employment prospects of individuals. In the long run, temporary employment is thus expected to raise youth unemployment. However, in the short run, temporary employment can help decreasing youth unemployment as vacant positions can quickly be filled. Due to this ambiguity, the temporary employment variable represents a special case and will be treated with caution in the analysis and in the context of the subsequent policy recommendation.

The theoretical framework is an important component of this research project since the causal model will be built closely around the knowledge of how we expect youth unemployment to change if particular independent variables are changed. Similarly, the theoretical framework will be used to support the policy recommendation this paper will provide. The next chapter will present the findings of the analysis of factors of youth unemployment and show to which extent each independent variable has influenced youth unemployment in Spain from 1999-2012.

# 3. Factors of Spanish youth unemployment from 1999-2012

In order to identify which variables have been most influential factors of youth unemployment in Spain from 1999-2012, analytical tools and the programme SPSS have been used. In this chapter, the results of the analysis will be presented. Next to that, it will be explained why the policy recommendation can best be introduced in the field of ALMP. The strength of the relationship between each variable and youth unemployment will be analysed by means of Spearman's rho.

## 3.1 Description of results

The main goal of the analysis was to ascertain to which extent youth unemployment correlates with each variable of the causal model. The correlation coefficient r (Pearson correlation) measures the strength of linear associations between two quantitative variables. By creating scatterplots with SPSS, however, it became apparent that some relationships are not reasonably linear which means that the 'straight enough condition' is not met (Bock, De Veux & Velleman, 2012, p. 157). Interpreting the correlation using Pearson's r is therefore not advisable. Instead, this analysis has used Spearman's rho to measure the strength of the relationship between youth unemployment and each independent variable. Spearman's rho, a nonparametric method which does not require any model, has the advantage that it is not very sensitive to either outliers or bends in the data since it "replaces the original data values with their ranks within each variable" (Bock et al., 2012, p. 163). The correlation table which has been created by using SPSS encompasses the relationships among all variables from the causal model and is shown by figure 3. The first striking finding is that only seven out of twelve independent variables correlate with youth unemployment as expected by theory. This finding reiterates and underpins that youth unemployment is a highly intertwined and multilayer issue. The policy recommendation this paper will provide will not be based on any variable that was found to be related to youth unemployment reversely to what was expected, even if the correlation is very strong. One could argue, that the mere fact that a variable correlates strongly with youth unemployment may justify approaching the mitigation of youth unemployment in this field even though the relationship is opposed to what was expected by theory. This paper, however, does not adhere to this perception since this would imply that the theory is void and needs to be reconsidered. Such an assertion requires enormous investigation and would thus go beyond the scope of this research. Rather, this paper assumes that some variables did not behave as expected due to the complexity of youth unemployment. In other words, many factors have the possibility to influence youth unemployment but depending on the general framework of the labour market, some will be more and some will be less influential. In the case of Spain, the following five factors were found to have a relationship opposed to what theory predicts: the minimum wage level (-0.456), the number of students in higher education (0.478), the percentage of students completing at least secondary education (0.109), temporary employment (-0.615) and the public expenditure on education (0.392). Importantly, the positive relationship between public expenditure on education and youth unemployment remains even if a time-lagged analysis is conducted.
Next to that, the relationship between temporary employment and youth unemployment is worth discussing in detail due to the previously described ambiguity between its expected effects in the short- and long-run.

Figure 3: Correlation table

**Correlations**

| | | | YUE | unempl_benefit | Wmin_yue | EPL | coll_barg_coverage | People_higher_edu | ALMP_participants | ALMP_exp_GDP | GDP_growth | public_exp_edu | upper_sec_edu | wage_growth | temporary_empl |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Spearman's rho | YUE | Correlation Coefficient | 1,000 | ,255 | -,456 | ,059 | ,291 | ,478 | -,538 | -,063 | -,940** | ,392 | ,109 | ,331 | -,615* |
| | | Sig. (2-tailed) | . | ,450 | ,117 | ,847 | ,385 | ,098 | ,071 | ,846 | ,000 | ,207 | ,737 | ,270 | ,025 |
| | | N | 13 | 11 | 13 | 13 | 11 | 13 | 12 | 12 | 13 | 12 | 12 | 13 | 13 |
| | unempl_benefit | Correlation Coefficient | ,255 | 1,000 | -,045 | ,266 | ,733* | ,018 | ,188 | ,103 | -,136 | ,875** | ,196 | ,392 | -,609* |
| | | Sig. (2-tailed) | ,450 | . | ,894 | ,429 | ,025 | ,958 | ,603 | ,777 | ,689 | ,001 | ,564 | ,233 | ,047 |
| | | N | 11 | 11 | 11 | 11 | 9 | 11 | 10 | 10 | 11 | 10 | 11 | 11 | 11 |
| | Wmin_yue | Correlation Coefficient | -,456 | -,045 | 1,000 | -,011 | ,209 | -,324 | ,566 | ,273 | ,478 | ,126 | ,193 | ,303 | ,077 |
| | | Sig. (2-tailed) | ,117 | ,894 | . | ,971 | ,537 | ,280 | ,055 | ,391 | ,098 | ,696 | ,549 | ,314 | ,803 |
| | | N | 13 | 11 | 13 | 13 | 11 | 13 | 12 | 12 | 13 | 12 | 12 | 13 | 13 |
| | EPL | Correlation Coefficient | ,059 | ,266 | -,011 | 1,000 | -,300 | ,223 | -,022 | ,145 | -,141 | ,178 | ,299 | -,265 | -,104 |
| | | Sig. (2-tailed) | ,847 | ,429 | ,971 | . | ,370 | ,464 | ,947 | ,653 | ,645 | ,581 | ,345 | ,382 | ,735 |
| | | N | 13 | 11 | 13 | 13 | 11 | 13 | 12 | 12 | 13 | 12 | 12 | 13 | 13 |
| | coll_barg_coverage | Correlation Coefficient | ,291 | ,733* | ,209 | -,300 | 1,000 | -,245 | -,045 | -,055 | -,173 | ,802** | ,146 | ,712* | -,355 |
| | | Sig. (2-tailed) | ,385 | ,025 | ,537 | ,370 | . | ,467 | ,894 | ,873 | ,612 | ,003 | ,688 | ,014 | ,285 |
| | | N | 11 | 9 | 11 | 11 | 11 | 11 | 11 | 11 | 11 | 11 | 10 | 11 | 11 |
| | People_higher_edu | Correlation Coefficient | ,478 | ,018 | -,324 | ,223 | -,245 | 1,000 | -,587* | ,063 | -,495 | -,336 | ,235 | -,300 | -,593* |
| | | Sig. (2-tailed) | ,098 | ,958 | ,280 | ,464 | ,467 | . | ,045 | ,846 | ,086 | ,285 | ,463 | ,319 | ,033 |
| | | N | 13 | 11 | 13 | 13 | 11 | 13 | 12 | 12 | 13 | 12 | 12 | 13 | 13 |
| | ALMP_participants | Correlation Coefficient | -,538 | ,188 | ,566 | -,022 | -,045 | -,587* | 1,000 | ,434 | ,427 | ,165 | ,200 | ,046 | ,392 |
| | | Sig. (2-tailed) | ,071 | ,603 | ,055 | ,947 | ,894 | ,045 | . | ,159 | ,167 | ,609 | ,555 | ,888 | ,208 |
| | | N | 12 | 10 | 12 | 12 | 11 | 12 | 12 | 12 | 12 | 12 | 11 | 12 | 12 |
| | ALMP_exp_GDP | Correlation Coefficient | -,063 | ,103 | ,273 | ,145 | -,055 | ,063 | ,434 | 1,000 | -,098 | ,196 | ,446 | ,295 | -,126 |
| | | Sig. (2-tailed) | ,846 | ,777 | ,391 | ,653 | ,873 | ,846 | ,159 | . | ,762 | ,541 | ,169 | ,352 | ,697 |
| | | N | 12 | 10 | 12 | 12 | 11 | 12 | 12 | 12 | 12 | 12 | 11 | 12 | 12 |
| | GDP_growth | Correlation Coefficient | -,940** | -,136 | ,478 | -,141 | -,173 | -,495 | ,427 | -,098 | 1,000 | -,263 | -,322 | -,234 | ,478 |
| | | Sig. (2-tailed) | ,000 | ,689 | ,098 | ,645 | ,612 | ,086 | ,167 | ,762 | . | ,409 | ,307 | ,441 | ,098 |
| | | N | 13 | 11 | 13 | 13 | 11 | 13 | 12 | 12 | 13 | 12 | 12 | 13 | 13 |
| | public_exp_edu | Correlation Coefficient | ,392 | ,875** | ,126 | ,178 | ,802** | -,336 | ,165 | ,196 | -,263 | 1,000 | -,009 | ,772** | -,438 |
| | | Sig. (2-tailed) | ,207 | ,001 | ,696 | ,581 | ,003 | ,285 | ,609 | ,541 | ,409 | . | ,979 | ,003 | ,155 |
| | | N | 12 | 10 | 12 | 12 | 11 | 12 | 12 | 12 | 12 | 12 | 11 | 12 | 12 |
| | upper_sec_edu | Correlation Coefficient | ,109 | ,196 | ,193 | ,299 | ,146 | ,235 | ,200 | ,446 | -,322 | -,009 | 1,000 | ,100 | -,245 |
| | | Sig. (2-tailed) | ,737 | ,564 | ,549 | ,345 | ,688 | ,463 | ,555 | ,169 | ,307 | ,979 | . | ,757 | ,442 |
| | | N | 12 | 11 | 12 | 12 | 10 | 12 | 11 | 11 | 12 | 11 | 12 | 12 | 12 |
| | wage_growth | Correlation Coefficient | ,331 | ,392 | ,303 | -,265 | ,712* | -,300 | ,046 | ,295 | -,234 | ,772** | ,100 | 1,000 | -,399 |
| | | Sig. (2-tailed) | ,270 | ,233 | ,314 | ,382 | ,014 | ,319 | ,888 | ,352 | ,441 | ,003 | ,757 | . | ,176 |
| | | N | 13 | 11 | 13 | 13 | 11 | 13 | 12 | 12 | 13 | 12 | 12 | 13 | 13 |
| | temporary_empl | Correlation Coefficient | -,615* | -,609* | ,077 | -,104 | -,355 | -,593* | ,392 | -,126 | ,478 | -,438 | -,245 | -,399 | 1,000 |
| | | Sig. (2-tailed) | ,025 | ,047 | ,803 | ,735 | ,285 | ,033 | ,208 | ,697 | ,098 | ,155 | ,442 | ,176 | . |
| | | N | 13 | 11 | 13 | 13 | 11 | 13 | 12 | 12 | 13 | 12 | 12 | 13 | 13 |

**. Correlation is significant at the 0.01 level (2-tailed).

*. Correlation is significant at the 0.05 level (2-tailed).

Temporary employment correlates strongly with youth unemployment in the analysis of this paper. The following will elaborate on temporary employment and shed light on the status quo. Firstly, a close look at the EPL with regard to temporary contracts has been taken. Table 3 shows that Spain has rather strict protection mechanisms for temporary workers and it could be assumed that lowering the employment protection level for temporary jobs allows for more flexibility and therefore reduces unemployment. If wages are downward sticky, employers tend to prefer experienced workers for permanent contracts because these persons' skills and competences are easier to assess and generally more advanced. Furthermore, temporary contracts are supposed to facilitate the labour market entry for young workers since employers do not need to bind themselves by contract to long lasting relationships. This is why temporary employment is often thought of as stepping stone to permanent employment and why temporary employment can, under particular circumstances, help decreasing the youth unemployment rate. However, when taking a closer look at Spain, it appears that temporary employment is already applied more than twice as often as on average in OECD countries. Moreover, this paper has previously stressed that temporary employment also brings along higher costs to the employer. If costs outweigh the benefits, promoting temporary employment would not serve the purpose of this paper since these costs represent an incentive for employers to reduce employment. As a consequence, it is imperative that temporary employment actually serves as a stepping stone to permanent employment if it is meant to reduce youth unemployment. Scarpetta et al. (2010) estimate that a young person in Spain had a chance of 5% to be offered a permanent contract if she was unemployed during the previous year, and a chance of 25% to be offered a permanent contract if she was on a temporary contract during the previous year (p. 18). Whilst the difference is obvious and seems to be encouraging, the numbers are actually at the lower end of the spectrum if compared to other European Union member states (Scarpetta et al., 2010, p. 18). The rather low stepping-stone effect in Spain implies

that young people with temporary contracts find themselves in situations of low job and income security which in turn has a negative impact on overall welfare.

Table 3: EPL on temporary contracts in selected European Union member states, 1999-2012 (OECD, 2013b).

| | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Spain** | 3.3 | 3.3 | 3.3 | 3.3 | 3.3 | 3.3 | 3.3 | 3.3 | 3.0 | 3.3 | 3.0 | 3.0 | 2.6 | 2.7 |
| **Italy** | 3.6 | 3.3 | 3.3 | 2.4 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 |
| **Greece** | 4.8 | 4.8 | 4.8 | 4.8 | 4.8 | 2.8 | 2.8 | 2.8 | 2.8 | 2.8 | 2.8 | 2.8 | 2.5 | 2.3 |
| **Portugal** | 2.8 | 2.8 | 2.8 | 2.8 | 2.8 | 2.6 | 2.6 | 2.6 | 2.6 | 1.9 | 1.9 | 1.9 | 1.9 | 1.9 |
| **France** | 3.6 | 3.6 | 3.6 | 3.6 | 3.6 | 3.6 | 3.6 | 3.6 | 3.6 | 3.6 | 3.6 | 3.6 | 3.6 | 3.6 |
| **Germany** | 2.0 | 2.0 | 2.0 | 2.0 | 1.5 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 |
| **Austria** | 1.3 | 1.3 | 1.3 | 1.3 | 1.3 | 1.3 | 1.3 | 1.3 | 1.3 | 1.3 | 1.3 | 1.3 | 1.3 | 1.3 |
| **Netherlands** | 1.4 | 0.9 | 0.9 | 0.9 | 0.9 | 0.9 | 0.9 | 0.9 | 0.9 | 0.9 | 0.9 | 0.9 | 0.9 | 0.9 |
| **Poland** | 0.8 | 0.8 | 0.8 | 0.8 | 0.3 | 1.8 | 1.8 | 1.8 | 1.8 | 1.8 | 1.8 | 1.8 | 1.8 | 1.8 |
| **Sweden** | 1.4 | 1.4 | 1.4 | 1.4 | 1.4 | 1.4 | 1.4 | 1.4 | 1.4 | 1.4 | 0.8 | 0.8 | 0.8 | 0.8 |

This findings falls in line with the main conclusions made by Göbel and Verhofstadt (2008, p. 21) and Berton, Devicienti & Pacelli (2007, p. 15) who find a stepping stone effect which, however, is at best moderate and more pronounced for persons who completed training and apprenticeship programmes. Lastly, it appears that the Spanish law provides loopholes in the context of temporary employment which employers can easily exploit thereby lowering the stepping stone effect. To mention one example, redefining the job is legally sufficient to circumvent the time limit of 24 months, the maximum duration of temporary employment in Spain (Wölfl & Sanginetti, 2012, pp. 10-11). By this, old temporary contracts can simply be replaced by new ones and young people may become trapped in temporary employment. This discussion also refers back to the short- and long run ambiguity discussed earlier. Based on these circumstances, the policy recommendation this paper gives will not be based on temporary employment legislation reforms.

Another variable which requires a closer look is the minimum wage. Price floors on labour have a long tradition in Spain and exist since Francisco Franco Bahamonde introduced them back in 1963. The analysis of this paper has shown a negative relationship (-0.456) between the minimum wage level and youth unemployment which is opposed to what theory would predict. However, the analysis of this variable has some limitations in the frame of this research project. The level of the minimum wage changed only slightly in the time period under consideration and it might well be that these minor changes influenced youth unemployment so little, that other factors outweigh the influence of the change in the minimum wage. In spite of the result of the analysis of the relationship between youth unemployment and the minimum wage, this paper encourages future research to investigate to which extent a reform of the Spanish minimum wage legislation could mitigate the youth unemployment problem. As written earlier, the minimum wage legislation in Spain can be

conceptualised as clean-cut system which means that there is no grading in the minimum wage level for different groups in the labour market. The clean-cut system therefore has the implied allegation that it disadvantages young people disproportionally relative to young people in a complex minimum wage system in which special provisions for young people are legally enshrined in order to facilitate their labour market entry. Importantly, any minimum wage is more binding for young people since they are less productive than more experienced workers. Taking into account that labour demand has proven to be enormously elastic (European Commission, 2014, p. 3), a progressive minimum wage system could be helpful to mitigate the youth unemployment problem in Spain. In the frame of this research project it was, unfortunately, not possible to investigate which impact no minimum wage at all or at least a progressive minimum wage for young people could have on youth unemployment. Yet, this paper argues that a complex minimum wage system is very likely to mitigate youth unemployment. This assumption finds support in the fact that two closely related variables of the causal model, namely collective bargaining coverage and wage growth, correlated with youth unemployment as expected by theory. Just as for the minimum wage legislation, the wage level stands at the heart of these two variables which exhibited positive relationships with youth unemployment, namely 0.291 and 0.331, respectively.

Of course, reforming the minimum wage legislation helps little if the wages are maintained at even higher levels by labour unions and collective bargaining. Any further research in this field will therefore need to analyse the role of labour unions and collective bargaining coverage, too, since collectively agreed wages often accrue to the minimum wage. This assumption is backed by Rycx and Kamplemann (2012), who found that in 2007 only 3.8% of all Spaniards earned minimum wages (p. 7). This is an indication of the enormous influence of labour unions. The Kaitz index, "the ratio of the minimum wage to the average wage of the working population", is 39.3 (Rycx and Kamplemann, 2012, p. 7). This Kaitz index is a very low value in the European Union context and also points at the low share of Spaniards actually being paid the minimum wage level. These findings epitomise the artificiality of the Spanish labour market and demand and supply, which would bring the market closer to its equilibrium, are apparently factors with little impact in this context. Although the preceding discussion suggested that reforming the minimum wage system in Spain could help mitigating the youth unemployment problem in Spain, this paper will rely on the conducted analysis and therefore not consider the minimum wage system for the policy recommendation. However, as written above, this paper encourages further research to devote resources to this topic.

The remainder of the variables correlates as expected with youth unemployment. The Spearman's rho correlation coefficient between GDP growth and youth unemployment is -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. Unfortunately, it is not possible to give a policy recommendation that addresses the business cycle. The variable correlating second-strongest with youth unemployment is ALMP participants (-0.538), followed by wage growth (0.331), collective bargaining coverage (0.291) and the unemployment benefit level (0.255). As to unemployment benefits, a policy recommendation in this field would be unlikely to meaningfully mitigate the youth unemployment problem in Spain since persons who become unemployed involuntarily are entitled to unemployment benefits, only provided that they have been employed for at least twelve months over the previous 72-month period (Rebollo & García Pérez, 2014). Based on these criteria and given the definition of youth unemployment, one can reasonably argue that this correlation has been caused by a third variable and that it is therefore inappropriate to speak of a causal relationship between unemployment benefits and youth unemployment in this very specific context. The direction of the relationship between youth

unemployment and ALMP expenditure (-0.063) and the employment protection legislation (0.059), respectively, is as expected, but weak.

## 3.2 ALMP as basis for the policy recommendation

Based on the analysis, the number of ALMP participants seems to be an important determinant of youth unemployment in Spain. Spearman's rho for this relationship is -0.538. At the same time the ALMP expenditure seems to have little impact on the youth unemployment rate with Spearman's rho of -0.063. This finding suggests that the ALMP are important tools to mitigate the youth unemployment problem and that a policy recommendation in this field seems to be reasonable. Moreover, this finding suggests that no additional ALMP expenditure is required. Rather, the programmes within the budget will need to be altered. Against the background of limited financial leeway of the Spanish government in times dominated by far-reaching and large-scale austerity measures, this is an important component.

ALMP measures include a vast range of activities and, if well implemented, are considered to be strong tools to mitigate youth unemployment. Importantly, there are different means by which ALMP try to mitigate youth unemployment: Some programmes aim at labour market matching, some at stimulating labour demand and others at stimulating labour supply. Figure 4 summarises relevant instruments, targeted groups, and intended effects of ALMP.

That being said, ALMP measures sure have some limitations, too, which need to be anticipated and eliminated as much as possible. In this respect, three negative ancillary effects of ALMP are worth mentioning: Firstly, the 'deadweight loss' describes a situation in which people who participate in a programme are finally hired by firms but might have found employment even earlier without the programme. Secondly, the 'substitution effect' refers to a situation in which currently employed persons are simply replaced by unemployed ones which means that no net employment will be accomplished. Thirdly, the 'displacing effect' describes a situation in which employment increases in one firm but decreases in another due to distorted competition caused by the ALMP (Ballester, 2005, p. 9).

Evidence suggests that small-scale, well-targeted ALMP programmes yield the best results (Fay, 1996, p. 18); however, in order to substantially mitigate the Spanish youth unemployment, many young people across Spain need to be eligible. It is worth stressing, that this does not represent a contradiction because targeting the youth instead of long-term unemployed or otherwise disadvantaged groups already narrows down the target group sufficiently. Interestingly, ALMP measures in Spain have thus far largely neglected the youth (European Commission, 2014, p. 5). The policy recommendation this paper will provide therefore aims to reach a large number of people and simultaneously will be targeted at young people. The main goal is to raise future employment and earning prospects of young people. The policy will be directly beneficial for the participants as they profit from increased income and job security. Next to these economic advantages, psychological pressure will be lifted and human capital can be accumulated through gaining experience. In addition to that, the policy has a spillover effect as it will be indirectly beneficial for people not part of the programme, too. To understand why, the section discussing the stakeholders is worth recalling. Firstly, society benefits as inequality decreases and aggregate demand increases as resources are used more efficiently; secondly, the government will be able to decrease welfare expenses and will receive more (income) tax revenue; and thirdly, economic growth in Spain will spill over to other European Union member states.

Figure 4: Relevant instruments, target groups, and intended effects of ALMPs (Brown & Koettl, 2012).

| Target Area | Aim | Instruments | Targeted Workers | Intended Effects |
|---|---|---|---|---|
| Labor Demand | Provide Incentives for retaining employment | Work sharing and short work<br>Wage subsidies | Insiders | Reduce outflow from employment<br>Retain labor market attachment |
| | Provide Incentives for creating employment | Hiring subsidies<br>Business start-up support | Outsiders | Increase inflow into employment<br>Increase labor market attachment |
| Labor Supply | Provide incentives for seeking and keeping a job | In-work benefits, subsidies, tax credits | Insiders and Outsiders | Increase inflow into employment by strengthening work incentives<br>Reduce outflow from employment<br>Increase labor market attachment<br>Provide income support |
| | | Public works | Outsiders | Increase inflow into employment by strengthening work incentives<br>Increase labor market attachment<br>Provide income support |
| | | Activation and Workfare<br>Sanctions | Outsiders | Increase inflow into employment by strengthening work incentives |
| | Provide incentives for human capital enhancement | On-the-job training<br>Classroom training | Outsiders and Insiders | Increase inflow into employment<br>Increase productivity<br>Improve match quality |
| Labor Market Matching | Improved labor market matching | Job search assistance | Outsiders | Improve job search efficiency<br>Increase inflow into employment |
| | | Employer intermediation services | Outsider and insiders | Improve job search efficiency<br>Improve match quality<br>Increase inflow into employment |
| | | Counseling and monitoring | Outsider | Improve job search efficiency<br>Increase inflow into employment |

*Note*: "Insiders" refers to those who are currently employed, "outsiders" to the unemployed, long-term unemployed, discouraged, informal workers, and inactive.

*Source*: Authors.

This chapter has presented the results of the analysis and the strengths of the relationships between youth unemployment and each variable of the causal model. In order to ensure that the proposed policy measure will be rewarding, a wide range of criteria need to be fulfilled. Among others, it needs to be ensured that the policy measure is cost-effective, politically and economically feasible, and based on a variable that can be manipulated. As a consequence, the policy recommendation this paper will give is not based on GDP growth, the variable which was found to correlate the strongest with youth unemployment in the analysis. Instead, the analysis and the preceding discussion have shown that a policy recommendation can best be introduced in the field of ALMP and that it has to address a large number of people in order to substantially mitigate the youth unemployment problem in Spain.

# 4. Cost-effectiveness analysis of policy measures

This chapter will present the policy recommendation based on the preceding quantitative and qualitative analysis as well as on the discussion about the adequateness of variables for a policy recommendation. 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.
In short, this paper suggests a three-step policy reform:

1) Redistribution of the current composition of ALMP expenditure;
2) Shifts within employment incentives from supply stimulation to demand stimulation;
3) Creation of youth-specific ALMP.

The following will elaborate on each of these steps separately. At this point it is worth stressing, that the policy recommendation includes a sample calculation of how the budget could be redistributed. However, the exact numbers are provided mainly for illustrative purposes. More important than the exact numbers is the direction of the policy measure. As to the exact redistribution of the ALMP budget which will yield the most effective and efficient results, this paper argues that further research will need to be conducted. In a similar vein, the policy recommendation this paper provides will be describe in broad terms and not give details as to the question of eligibility, for instance. This reluctance is explained by the limited scope and resources of this research project.

## 4.1 Redistribution of the current composition of ALMP expenditure

To begin with, a closer look at the current distribution of ALMP expenditure among different types of ALMP will be taken. As stressed earlier, an important component of the new policy measure is that does not require additional expenses. Instead, the current ALMP budget will be redistributed. The latest data available represent ALMP expenditure in 2009. Table 4 shows how much the Spanish government has spent per head on different types of ALMP 2009 and reveals the focus areas of Spanish ALMP expenditure. Initially, the data have been provided in US$. This paper has used the average exchange rate in 2009 (US$ 1 = € 0.72) to convert the expenditure from US dollar into euro.

What is striking at first sight is the large proportion spent on employment incentives. Importantly, a closer look unfolds that a large proportion of this is spent on social security rebates. Social security rebates are measures to stimulate labour supply as they provide an incentive for people to keep and seek jobs (European Commission, 2014, p. 5). By contrast, “programmes which subsidise employment within local entities and their dependent bodies are relatively small in Spain” (European Commission, 2014, p. 5). This paper will elaborate on employment incentives and add a discussion on labour demand and labour supply stimulation in a moment since employment incentives this is the type of ALMP for which a policy reform will be suggested. Before that, however, this paper will investigate which types of ALMP expenditure are less efficient and effective and can be cut in order to make more resources available for employment incentives, which this paper considers to be the key to effective mitigation of the youth unemployment problem. Therefore, it will be suggested to cut expenditure for less promising types of ALMP in favour of employment incentives.

Table 4: Per head public expenditure on different types of ALMP in Spain, 2009 (OECD, 2013c).

| Type of ALMP | € (PPP), at current prices | % |
|---|---|---|
| **Direct job creation** | 23.54 | 11.79 |
| **Supported Employment and Rehabilitation** | 6.77 | 3.39 |
| **Employment Incentives** | 60.98 | 30.54 |
| **Job rotation and sharing** | 2.45 | 1.23 |
| **Training** | 43.7 | 21.89 |
| **Public Employment Services (PES) and Administration** | 38.23 | 19.16 |
| **Start-up incentives** | 23.98 | 12 |
| Total | **199.65** | **100** |

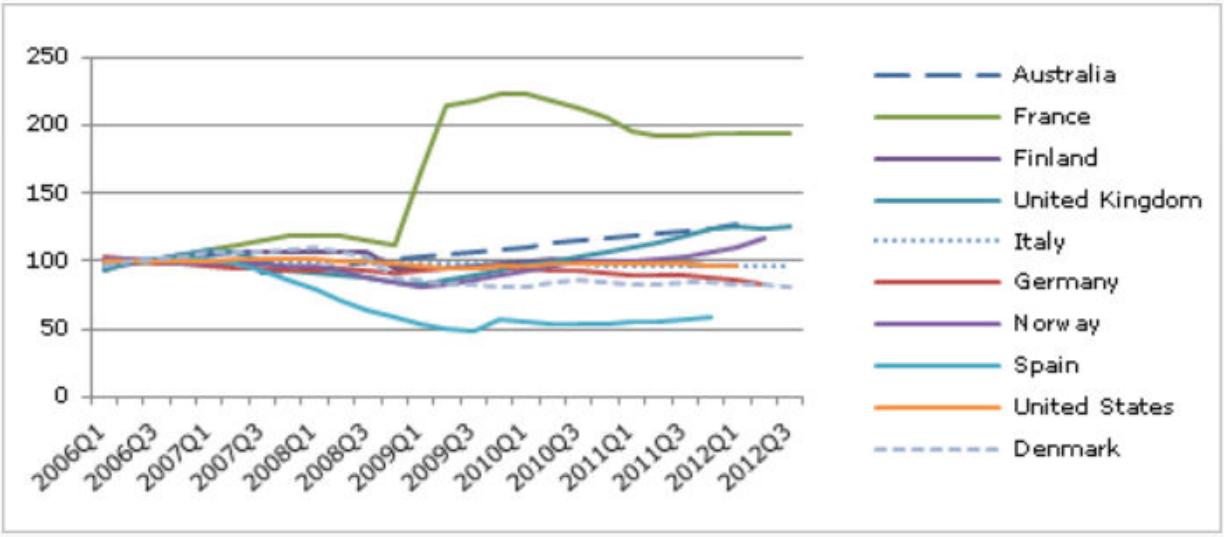
One interesting finding is that € 23.54 (11.79%) per head is spent on direct job creation. Direct job creation in this context refers to offering young people public work and community services to improve the infrastructure or environment, for instance. It is supposed to help disadvantaged persons to remain in contact with the labour market, however, direct job creation often result 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 and an expansion of the programme would 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 evidence has 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 (Caliendo, Künn, & Schmidl, 2011, p. 22; Martin, 2000, p. 92). As a consequence of these downsides, this paper suggests cutting back expenditure on direct job creation to € 10 per head. Admittedly, this is below European Union average but economically similar countries like Portugal (€ 9.1 per head), Italy (€ 1.37 per head) or Greece (€ 0 per head) spend even less (OECD, 2013c).

Next to direct job creation, € 2.45 per head is spent on job rotation and sharing. Whilst ALMP expenditure on this type represents only 1.23% of total expenditure on ALMP, it is worth recognising that this is still a lot in international context. Most European countries do not spend anything on this (OECD, 2013c). Moreover, as discussed above, temporary employment is extensively used in Spain but apparently does not represent at a solution to the youth unemployment problem. Rather than supporting job rotation and sharing, cutting back expenditure entirely in this field appears to be much more goal-oriented for mitigating the youth unemployment rate.

The next type of ALMP this paper would like to address is the expenditure on start-up incentives which amounted to 12% of the entire public expenditure on ALMP in 2009. Dismissing start-up incentives is an unpopular choice as start-ups are usually associated with entrepreneurship and economic growth. Wennekers and Thurik (1999) conlcude that the increased demand for entrepreneurship is a result of globalisation and the ICT-revolution (p. 51). Devoting a large part of ALMP expenditure to start-up incentives is consequently standing to reason. However, especially during times of austerity measures, the actual benefit that expenditure on start-ups brings along is worth investigating. In order to illuminate this issue, it is vital to recognise that start-ups call into existence a large number of self-employed persons. However, “self-employed can be considered a heterogeneous group, among which only a minorty of self-employed people contribute to job creation, economic growth and innovation” (Román, Congregado & Millán, 2013, p. 24). In this

context, these authors differentiate between 'true entrepreneurs' and 'last resort self-employed or 'dependent self-employed', respectively. Among 20 EU member states listed by OECD, Spain spends by far the most per head on start-up incentives (OECD, 2013c). At the same time, however, Spain features poor results, in this context. Graph 5 reveals that the number of newly created enterprises in Spain is actually lower than any other of the selected countries and has fallen disproportionally since 2008.

Graph 5: Number of new enterprises, 2006=100 (OECD, 2012).




Whilst denouncing start-up incentives is unpopular, the precedent discussion has shown that the benefits of incentives for start-ups are substandard. This paper therefore suggests to slash expenses on start-ups to € 10 per head which is reasonably close to the European Union average.

This paper acknowledges that the suggested cutbacks in selected types of ALMP programmes are fiercely. However, by using economically similar countries as well as selected European Union member states as reference, by finding support in scientific literature on the effectiveness of certain types of programmes, and by making the withdrawn amount available for employment incentives, this paper argues that suggested redistribution is reasonable and justified. Table 5 shows how the new expenditure distribution on different types of ALMP looks like if the suggested reforms are implemented. The suggested reforms have the effect that the financial means for employment incentives would increase by € 29.97 per head to € 90.95 per head. The remainder of the analysis will now focus on employment incentives.

Table 5: New distribution of public ALMP expenditure according to the suggested reforms; Per head public expenditure on different types of ALMP in Spain, 2009

| Type of ALMP | € per head (PPP), at current prices | % |
|---|---|---|
| **Direct job creation** | 10 | 5.01 |
| **Supported Employment and Rehabilitation** | 6.77 | 3.39 |
| **Employment Incentives** | 60.98 +13.98 + 2.45 + 13.54 = 90.95 | 45.55 |
| **Job rotation and sharing** | 0 | 0 |
| **Training** | 43.7 | 21.89 |
| **Public Employment Services (PES) and Administration** | 38.23 | 19.15 |
| **Start-up incentives** | 10 | 5.01 |
| **Total** | **199.65** | **100** |

## 4.2 Shifts within employment incentives from supply stimulation to demand stimulation

The following will show how employment incentives policies need to be altered in order to mitigate the Spanish youth unemployment problem.

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. Interestingly, 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 many other EU member states, it seems to fail to address the source of the problem too, because labour demand tends to be more elastic than labour supply. Evidence suggests that this is the case in the Spanish youth labour market, too (European Commission, 2014, p. 3). Therefore, labour demand represents a bottleneck for young people seeking employment. To be sure, labour supply in Spain fell by 31% from 2008-2013, a figure far above EU average. However, some of this is accounted for by the massive layoffs in the light of the crisis when 60% of all jobs for young people disappeared. As a consequence of the higher elasticity of labour demand relative to labour supply, this paper suggests shifting employment incentives from social security rebates for employees (supply side) to wage subsidies for employers (demand side). In order to avoid a substitution effect, two possible mechanism can be implemented: Either the wage subsidy must be available for employers who already employ young persons, too, or, the wage subsidy will only be paid if new young people are hired, given that no young person has been laid-off or fired in a given preceding time period, say 12 months, for instance. Such a measure would allow alleviate the artificially high wage levels which employers are forced to pay to young people due to the non-progressive minimum wage system and collectively bargained wages. The anticpated decrese in labour supply will be discussed in a moment, but is certainly expected to be outweighed by the overall positive effect on the labour demand side and employment.

## 4.3 Creation of youth-specific ALMP

As a third step, this paper suggests shifting the focus of ALMP on young people to a greater extent. There is little doubt that young people are one of the most disadvantaged group in the labour market in general. The Spanish case represents this pattern in a dramatic way, yet, there are no subsidised employment programmes specifically targeted at the youth (European Commission, 2014, p. 5). Instead, programmes are mainly directed at long-term unemployed persons (European Commission, 2014, p. 5). It is absolutely vital that the Spanish government starts deviating from this policy path and focuses more on young people who can be considered outsiders in this context. Since the youth is not only a particularly vulnerable group but also large in numbers, new policies need to disproportionally address and benefit the youth. Spain has a population of 47,371,000 and about 9.7% (4,594,987) are young people aged 15-24 years (Indexmundi, 2013). The most conservate approach would therefore mean to reserve 9.7% of ALMP expenditure for young people. However, taking into account the higher degree of vulnerability, it is reasonable to expand relative expenditure for young people substantially beyond 9.7%. Consequently, this paper suggest reserving one-fourth of the ALMP budget for young people.

The preceding sections have separately elaborated on the suggested policy reform and explained its characteristics in detail. The following will illustrate the effects of the suggested policy reform.

## 4.4 Synthesis of the policy measure

The working age population (15-64 years) in Spain represents 67.2% (31,833,000) of the entire population. 9.7% (4,594,987) of the Spanish population is aged 15-24. The status quo is that € 60.98 is spent per head on employment incentives. However, since there are no specific programmes targeted at young people, this amount is on average availibe for every person within the working age population. From this follows that each young person, just as all other persons, is on average entitled to € 5.08 per month (€ 60.98/12=€ 5.08). If, however, the suggested redistribution is implemented and one-fourth of the entire budget is reserved for wage subsidies for employers who have hired young persons, the average wage subsidy for every young persons amounts to €13.13 per month (€157.5 per year). This is a percentage increase of 158.46% without any additional expenditures for the Spanish government. Importantly, the net employment increase is expected to be further amplified by the focus on the demand side rather than on the supply side. On top of that, the actual amount of money available per head for every young person will be beyond € 157.5 per year for yet two other reasons: Firstly, there will always be some unemployment among young people. The concept of full employment is a rather theoretical state of the labour market and unrealistic goal, especially with regard to young people. Unemployed persons can obviously be disregarded as to the eligibility for wage subsidies. Secondly, in 2012, 26.16% (1,202,050) of all young people in Spain have been enrolled in higher education (Eurostat, 2014k) and can therefore be neglected in the context of this policy reform, too. Table 6 summarises the differences between the status quo and the suggested policy reform.

Table 6: Status quo and policy reform in contrast

| ***Status quo*** | ***Suggested policy reform*** |
|---|---|
| • **€ 60.98 per head per year (average for entire working age population)**<br>• € 5.08 **per head per month (average for entire working age population)** | • Redistribution of ALMP expenditure<br>• Shift focus from supply side to demand side<br>• Create programme exclusively for young people |
| **Working age population (15-64 years): 67.2% (31,833,000)** | |
| **Population aged 15-24: 9.7% (4,594,987)** | |
| | • € 90.95 per head per year (average for entire working age population)<br>• Total expenditure (on working age popluation: € 2,895,211,350<br>• ¼ will be reserved for the youth:<br>€ 2,895,211,350 / 4 = 723,802,838<br>• Available amount for every young person (per head, per year):<br>€ 723,802,838 / 4,594,987 = € 157.5<br>• Available amount for every young person (per head, per month):<br>€ 157.5 / 12 = **€ 13.13** |
| | • net gain = € 13.13-€ 5.08 = **€ 8.05**<br>(≙ 158.46% increase) |

This paper anticipates some criticism with respect to the nature of the policy reform. The following will summarise the anticipated points of critique and suggest how the new policy reform will deal

with and circumvent possible downsides. To this end, the peviously mentioned drawbacks of ALMP will be picked up again and discussed separately:
A substitution effect, a sitution in whichyoung persons currently employed are replaced by newly hired young persons, is not anticipated as a consequence of this policy reform. As written earlier, this is because the wage subsidy will either also be paid for already employed young persons or denied by a legal provision if young workers have been laid-off or fired in a given preceding time period.
Moreover, this paper is confident that there is no displacing effect caused by distorted competition. Rather, this 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.
The deadweight loss is expected to be marginal at most. Of course, it cannot ultimately be ruled out that some some of the young persons would have found 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 prospects of finding a job any time soon. The positive effect on youth unemployment, which spills over to all other stakholders, certainly justifies deadweight loss that is inevitable but of marginal nature.
Another 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 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 repeatedly that the source of the youth unemployment problem and bottleneck for employment is to be found 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, this paper would like to reiterate that the positive effects are expected to outweigh the negative effects by far. The suggested policy recommendation is consistent with conclusion that can be drawn from the preceding quantitative and qualitative analysis. Consequently, this paper is confident that the provided policy recommendation will mitigate the structural youth unemployment problem in Spain. That being said, potential policy alternatives are worth discussing in order to demonstrate that the recommended policy reform is indeed the most cost-effective one.

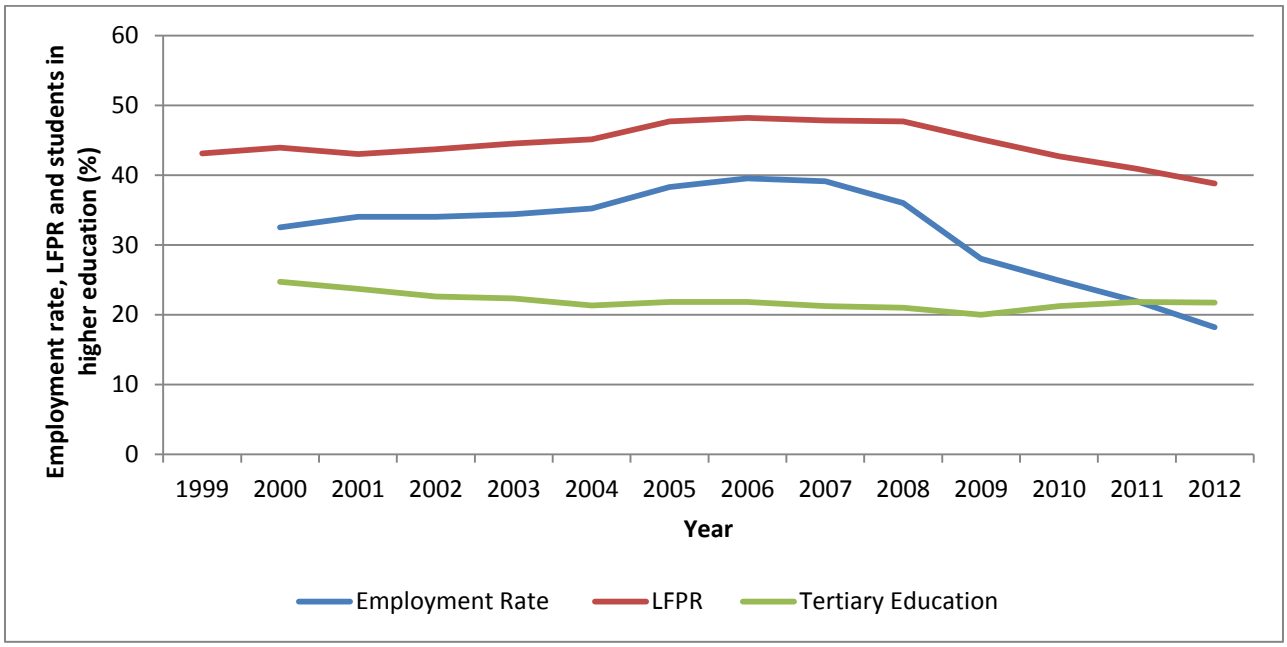
## 4.5 Policy alternatives

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. Of course, the cost-effectiveness and feasibility of alternative policy recommendations has been examined, too. The following will present four policy alternatives and contrast their costs and benefits to the suggested policy reform.

### 4.5.1 Alternative 1

Even if the budget is being redistributed in favour of employment incentives as suggested in this paper, keeping the focus on supply side stimulation such as social security rebates is still an option worth discussing, especially if labour supply is low or even decreasing. Graph 6 shows that while the employment rate and labour force participation rate (LFPR) in Spain increased from 1999-2006, both have been decreasing from 2006. Furthermore, the similar development of the LFPR and employment rate is noticeable. One explanation for the fall in labour supply could be that more people decided to acquire tertiary education because chances of finding employment during the crisis are lowered which in turn decreases the opportunity costs of education and makes human capital investment more attractive (Bell & Blanchflower, 2011, p. 8). This way of reasoning, however, seems to fail to explain the drop in employment and LFPR in Spain as one can see from the percentage of students in tertiary education which is depicted by the green line in Graph 7. To be sure, after having steadily declined from 1999-2009 the number of students in higher education increased slightly from 2009, which can be assumed to be a result of the worsening labour market prospects for young people during the economic crisis. However, the rise in this variable is too weak to explain the fall in the employment rate from 2006. From economic theory it can be recalled that the labour force consists of unemployed and employed persons and that people are only considered unemployed if they are actively looking for employment. The fall in the LFPR suggests that a number of people have simply given up looking for work. A policy measure to increase the employment rate could therefore be introduced or extended. Different types of ALMP such as (income) tax rebates, public sector job creation and start-up incentives aim at increasing labour supply.

Graph 6: Employment rate, LFPR, students in higher education (%), Spain, 1999-2012*, age group 15-24 (Eurostat, 2014l; Eurostat, 2014m; Eurostat, 2014n).




*lack of data for employment rate and tertiary education for 1999.

As written earlier, emphasis of Spanish employment incentives to date is on the labour supply side, especially on social security rebates. The reason why this paper does not recommend keeping the focus on the supply side or even expanding investments on labour supply stimulating measures is the repeatedly stressed higher elasticity of labour demand relative to labour supply. Moreover, the Spanish Evaluation Agency (AEVAL), which evaluates public policy programmes, has found that

existing supply side employment incentives have exhibited strong deadweight losses and displacement effects (AEVAL, 2010).

### 4.5.2 Alternative 2

The recommended policy reform redistributes the ALMP expenditure in favour of employment incentives. Moreover, it has been explained why this paper suggests to withdraw financial means from direct job creation, start-up incentives and job rotation and sharing within the ALMP budget whilst financial resources for training programmes have not been touched. This is due to some uncertainty in the effectiveness of training programmes in Spain. Of course, the status quo of training programmes and potential employment effects have been examined in the frame of this research project, too. This paper will therefore now discuss the benefits and costs of redistributing financial means in favour of training instead of employment incentives. A redistribution of the ALMP budget in favour of training is likely to be contemplated by economists and politicians alike since training programmes are the classical and most commonly used type of ALMP (Kluve, 2010, pp. 904-905). Generally speaking, training can refer to classroom training, on-the job-training and work experience. Furthermore, each measure can teach general or specific skills and training is expected to increase employability of participants by increasing their productivity. Indeed, Cueto & Mato (2009) found that training increases employment probabilities by 8-9% (p. 415). Similarly, Kluve (2010) concludes that training programmes have modestly positive effects (p. 904). In the context of government financed training, many different types of training exist and need to be weighed against each other as to their expected benefits and costs. Unfortunately, evaluations of ALMP in general and training programmes in particular are not sophisticated in Spain (Cueto & Mato, 2010, p. 416; Kluve et al., 2007, p. 3). This missing 'evaluation culture' is particularly fatal in the frame of training programmes since, as written above, the variety of training programmes in terms of the type of training programme but also in terms of target groups as well as eligibility and participation criteria requires careful analysis, selection and implementation. Against the background of very limited financial leeway of the Spanish government due to austerity policies, this paper argues that it is dangerous to increase spending on training if no proper evaluations of previous programmes have been conducted. Such a policy move would be too much of experimental nature and is therefore not advisable at the moment. By contrast, the Spanish Evaluation Agency (AEVAL) has "rigorously examined the complex effects of the employment incentives in force between 2005 and 2008" (European Commission, 2014). The policy recommendation this paper gives addresses employment incentives and has therefore been based on extensive evaluations of previous programmes.

### 4.5.3 Alternative 3

Another alternative would be to extend investment on employment incentives as opposed to a mere redistribution of the ALMP budget. This would have the advantage that no type of ALMP would be suffering from the withdrawal of financial resources. Admittedly, this paper's analysis of major factors of youth unemployment has found ALMP expenditure to have little influence. However, if the additional expenditure is used in a way that the number of ALMP participants will be increased substantially, raising the budget on employment incentives would be consistent with the results of the analysis. In other words, increasing ALMP expenditure can indirectly lower the youth unemployment rate. This is because the variables ALMP expenditure and ALMP participants are assumed to be causally related. This causal relationship is expected to be positive and has been included in the causal model, too. Indeed, Spearman's rho for these two variables was 0.434, which can be described as a moderately positive relationship. The biggest disadvantage of this policy in

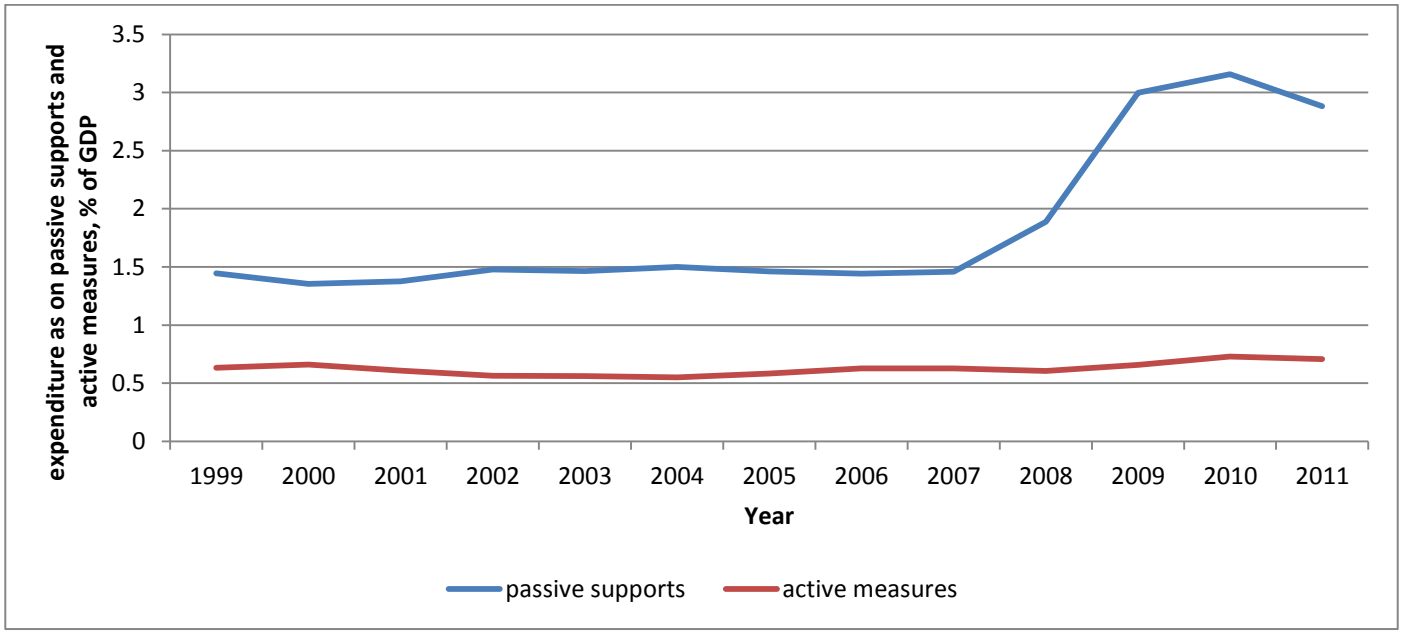
contrast to the one recommended by this paper is the very fact that ALMP expenditure needs to be raised. To be sure, this paper expects the net benefits to exceed the net costs if the ALMP budget would be raised since costs of unemployment are tremendous. The actual costs of unemployment can ultimately only be estimated and heavily depend on many factors such as demographics, industry structure and nature of jobs lost; however, Masur & Posner (2012) suggest that the costs to workers of unemployment could amount to as much as $100,000 per head (p. 583). Crucially, this figure does not even include indirect costs which will be borne by other parties affected by youth unemployment. Whilst it is difficult to ultimately monetise all direct and indirect costs, recalling the stakeholder analysis justifies assuming the costs to be way beyond $100,000 per person. Taking into account these high costs, even rather expensive ALMP programmes can yield a net benefit, if well implemented. Based on the preceding analysis of factors of youth unemployment, 'well-implemented' refers to reaching a large number of people. Consequently, raising the ALMP budget is likely to be a sustainable investment in the future for all stakeholders. At the same time, one has to realistically assess whether additional expenses in ALMP are possible or not. Spain had been hit hard by the economic crisis and austerity measures to reduce the budget deficit have been implemented from 2009. Spain has even been at risk of defaulting on its debts in the course of the crisis. As austerity policies are maintained at the time of writing, additional expenses are unlikely to represent a policy option, even if, as written, net benefits exceed net costs and if this investment is sustainable. Against the background of the current situation, this paper will refrain from suggesting to raise the ALMP budget in order to increase the number of people who can participate in employment incentive programmes to lower the youth unemployment rate. At the same time, this paper argues that raising the ALMP budget should only be removed from the agenda as long as external conditions do not allow for this move. Reassessing the effectiveness and efficiency of such a step seems appropriate as soon as austerity measures are relaxed and the political frame renders such a move possible.

### 4.5.4 Alternative 4

Related to alternative three, another potential policy reform which would require an 'advance payment' on active measures but would not increase spending on labour market policies in general is worth discussing. In Spain, relatively little is spent on active measures compared to passive supports, i.e. unemployment benefits and minimum income guarantees. As one can read from graph 7, the gap between expenditure on these two labour market polices has been persistent from 1999. In the light of the economic crisis, expenditure on passive measures increased quite a lot which can be explained by the increase in unemployment. By contrast, expenditure on active measures increased marginally at best. The little amount spent on ALMP relative to passive measures has often been brought forward to explain persistence of unemployment (Layard, Nickell & Jackman, 1991). Whilst this perception is supported by theory and also included in the causal model by the positive relationship between the unemployment benefit level and youth unemployment, it is still subject to regular discourse among scientists (Calmfors & Skedinger, 1995). This paper argues that disagreement is likely to be the result of different labour market frameworks. For instance, start-up incentives may yield large positive employment effects in one country but have even negative employment effects in another environment due to the structure of the industry, the macroeconomic environment and a variety of indicators of institutional characteristics of the labour market. An alternative to the policy measure this paper has suggested would be a substantial increase in ALMP expenditure. If a sufficiently high number of people can be reached by the programmes called into life, net expenditure will actually decrease as the government will face lower expenses on passive measures

like unemployment benefits, for instance. The rise in expenses on passive supports from 2007, as illustrated by the blue line in graph 7, demonstrates how expensive passive programmes are.

Graph 7: expenditure on passive and active labour market policies, 1999-2011, Spain, % of GDP , (Eurostat, 2014o).




To put these numbers in context, the year 2010 will exemplary be illuminated. In 2010, Spanish GDP amounted to about € 1045 billion, from which € 33 billion have been spent on passive supports while € 7.6 billion have been spent on active measures (Eurostat, 2014o). If more money is made available for active measures and if new programmes reach a large number of people, the amount spent on passive measures will decrease as less needs to be paid in form of passive supports. As clarified in the methodology of this paper, it is unlikely that a young Spaniard will receive unemployment benefits at all. However, if the ALMP budget is raised and unemployment decreases as a result, less money would need to be spent on passive supports. If the increase in the ALMP budget (costs) would be lower than what is saved by spending less on passive supports (benefits), additional financial means will be available. These, in turn, can be spent on youth specific ALMP. By this, youth unemployment can be tackled without actually increasing expenditure on labour market policies in general. At the same time, this paper acknowledges that such a policy shift would imply some 'advance payment' since investments in ALMP would be required before the measures will take effect (mitigation of the unemployment rate) and result in lower expenses for passive supports. Having taken all external political and economic conditions into account and similar to alternative three, this paper argues that such a move is unlikely during times of austerity policies. Consequently, this paper suggests reassessing alternative four as soon as austerity measures are relaxed.

# 5. Conclusion

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. This paper has provided a policy mesasure to mitigate the structural youth unemployment problem in Spain. To answer the research question, a two-tiered approach has been taken: Firstly, a causal model has been established which is closely linked to the theoretical framework of youth unemployment. By analysing 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.

The topic of youth unemployment is extremely complex and subject to lively discourse. Disagreement among economists results from both this complexity and the fact that each labour market is highly unique and has distinctive features. This makes generalizations from one country to another difficult and 'exporting policies' so 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. This in turn allowed introducing a policy recommendation which is cost-effective, based on changeable factors and politically and economically feasible. The analysis has confirmed the strong influence of the business cycle on youth unemployment and it has ultimately been decided to introduce a policy recommendation in the area of ALMP programmes. Importantly, this decision has been made after balancing pros and cons of introducing a policy measure based on variables which have correlated even stronger with youth unemployment in the time period under consideration. As to the policy recommendation, this paper has suggested a three-step reform with the steps being closely linked to and building on each other. Firstly, it has been suggested to redistribute the ALMP expenditure. Secondly, this paper has argued that a shift from supply side stimulating (social security rebates) to demand side stimulating (wage subsidies) programmes is required. Thirdly, it has been argued that programmes targeted exclusively at young people are required. 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. The number of participants has been identified as major determinant of youth unemployment. By means of this research project, a meaningful way to lower the youth unemployment rate in Spain has been offered. At the same time, valuable insight into the factors of youth unemployment in Spain and the Spanish labour market have been provided. Further research in this area will be able to heavily draw on the findings of this paper in order to further illuminate the Spanish labour market, its structures and peculiarities.

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# 7. Appendix

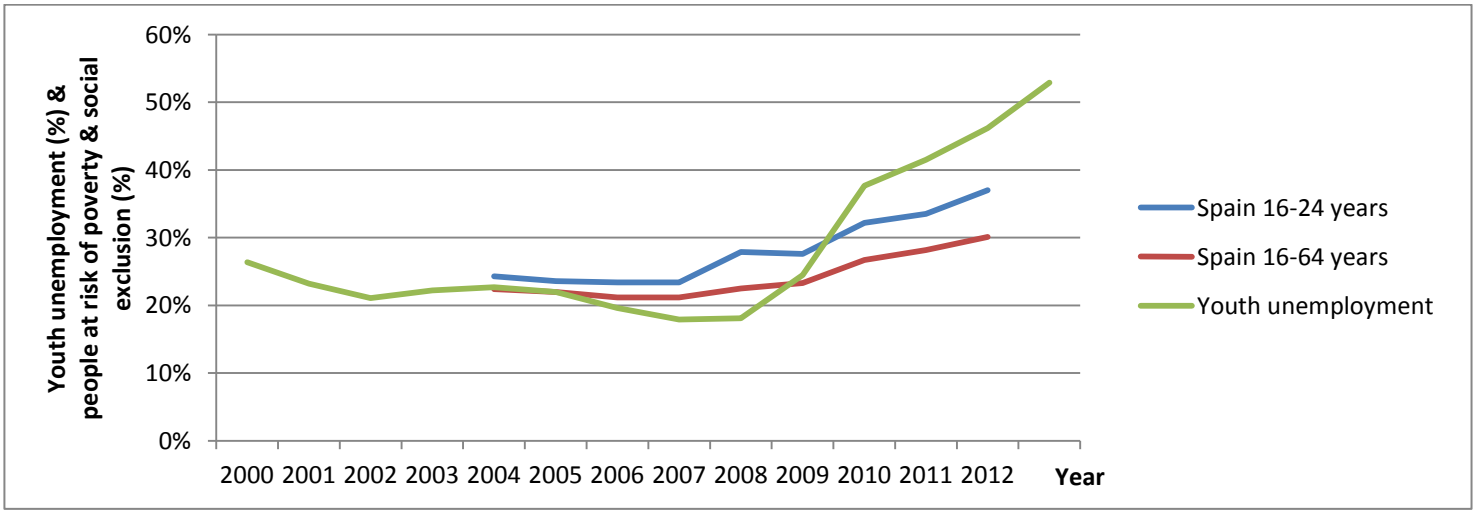
## 7.1 Appendix 1: Stakeholders

This section will present the stakeholders in the context of youth unemployment. To this end, impacts of youth unemployment on the individual, society, the government and other European Union member states will be discussed separately.

### 7.1.1 The individual

First of all, unemployment has severe consequences for the individual as it virtually always results in lower income and purchasing power. The concept of 'people at risk of poverty or social exclusion', also part of the Europe 2020 strategy, perhaps best illustrates the negative economic effects of an increased youth unemployment rate. Graph 8 contrasts the percentage of people aged 16-24 who are at risk of poverty or social exclusion with people aged 16-64 who are at risk of poverty or social exclusion. Unfortunately, data on people at risk of poverty or social exclusion are lacking for 1999-2003. Three striking observations can be made from graph 1: Firstly, it suggests that youth unemployment and being at risk of poverty are positively related. Secondly, it shows that young people are more likely to live at risk of poverty or social exclusion than elder counterparts. In fact, if one looks at figures for the age group 16-74 years, the line would be almost identical to the line that represents the age group 16-24 years, at least for pre-crisis years (Eurostat, 2014p). This indicates that poverty among elderly is a problem in Spain, too. This hypothesis is supported by evidence from Lelkes & Zólyomi (2008), who found that in 2006 poverty among elderly people was about eleven percentage points higher than for the total population (Lelkes & Zólyomi, 2008, p. 11). When looking at the entire population in 2012, 28.2% of all Spaniards fell within the group of people at risk of poverty or social exclusion (Eurostat, 2014p). Thirdly, the graph suggests that age becomes more determining in this context if economic conditions worsen such as during the economic crisis, for instance.

Graph 8: Youth unemployment and people at risk of poverty or social exclusion (Eurostat, 2014p; Eurostat, 2013).




A key problem for the individual is the depreciation of human capital. Instead of accumulating human capital through work, training or education, unemployment spells can be assumed to eat up human capital and one has to anticipate that "young people can suffer from a long-run 'scarring effect' (Matsumoto, Hengge & Islam, 2012, p. 1) if they fail to take root in the labour market. This

contention falls in line with the analysis by Bell and Benchflower (2010) who found that people who experience unemployment in early years are more likely to be unemployed when growing older, too. Mroz and Savage (2006), for instance, found some catch-up response in terms of wage levels; however they also argue based on their study that this catch-up response is seldom complete (Mroz & Savage, 2006, p. 290). In addition to the depreciation of human capital, youth unemployment is also positively related to an increase in crimes such as burglary, theft and drug offences (Bell & Blanchflower, 2010) which in turn negatively impacts another stakeholder, namely society.

### 7.1.2 Society

Society is affected by youth unemployment as inequality increases, human capital is unused (society is performing below capacity) and aggregate demand decreases. As a consequence, real output is below potential out, a concept used in the Keynesian model to describe the level of output which can be maintained in the long-term without inflation (Case, Fair & Oster, 2013). With output below capacity, economic activity is below potential, too. One can argue that unused human capital then both explains and causes youth unemployment. With regard to the output level, Matsumoto et al. (2012) identified that the relationship between the growth rate and the youth unemployment rate constitutes a U-shaped function with countries exhibiting medium annual growth rates (2.9% to 5.7%) having the lowest youth unemployment rates (p. 13). Faster growing economies as well as countries with slow growth exhibited more severe youth unemployment. Whilst higher youth unemployment during times of slow growth can be attributed to a decreased demand of goods and services and therefore lower demand for labour, higher youth unemployment in quickly growing economics might be "reflecting the supply behaviour of young workers in the market" (Matsumoto et al., 2012, p. 143). This means that while jobs are created during booms, labour supply of young workers disproportionally responds to the change in economic conditions. Related to this, there is a positive relationship between growth volatility and youth unemployment because volatility implies a higher turnover of jobs, increases risks and "hence decreases the expected returns from investment" (Matsumoto et al., 2012, p. 13). The negative effect of youth unemployment on aggregate demand is built on the assumption that unemployed individuals have a lower income which reduces their purchasing power and economic activity. This development is especially problematic if society becomes too diverse with respect to financial resources of its members. A widely accepted measure of inequality is the GINI index which measures the degree of inequality. The GINI coefficient can take values from 0 (perfect equality) to 100 (perfect inequality). Put simply, the GINI coefficient reports the share of national income that accrues to various quintiles of households (Borjas, 2012, p. 292). Morsy (2012) found that the GINI coefficient in Spain during the crisis increased by eight percentage points which he assumes to be partly caused by higher youth unemployment rates (p. 17). Morsy's (2012) findings are further backed by data provided by Eurostat. Unfortunately, Eurostat only offers data for the entire population which will thus be used as a proxy for inequality among young people as to changes in inequality over time. The share of national income of the first quintile, the poorest 20%, fell from 7% (1999) to 5.7% (2012). Put in perspective, the 2012 average values in the European Union and eurozone both were 7.9% (Eurostat, 2014q). To stress the meaning of these numbers it is worth emphasising that absolute equality would require each quintile to have a share of 20% of national income.

Table 7: Income distribution 2007 per quintile in Spain; % share of national income (Eurostat, 2014q).

| | Spain | | | | Percentage change (1999-2008) | Percentage change (2008-2012) |
|---|---|---|---|---|---|---|
| Year | 1999 | 2004 | 2008 | 2012 | | |
| 1st quintile | 7% | 7.3% | 6.8% | 5.7% | -0.2% | -0.5% |
| 2nd quintile | 13% | 13% | 12.9% | 12.3% | -0.1% | -0.6% |
| 3rd quintile | 17% | 17.8% | 17.7% | 17.2% | +0.7% | -0.5% |
| 4th quintile | 23% | 23.5% | 23.8% | 24% | +0.8% | +0.2% |
| 5th quintile | 40% | 38.3% | 38.7% | 40.8% | -1.3% | +2.1% |

What becomes clear when looking at table 7 is that the richest 20% have a way larger share of national income than each of the other groups and larger than they would have in a perfectly equal society. By contrast, people situated in the 1st and 2nd quintile have a far lower income than they would have in a perfectly equal society. Importantly, this paper does not claim that perfect equality (i.e. that each quintile accrues 20% of national income) is desirable. In fact, some inequality is not only natural but essential to the proper functioning of a liberal market economy as it provides incentives to work and invest. There are always some people who work harder than others and these people need to be awarded for that by means of higher incomes, for instance. However, if inequality increases too much, this brings along a number of problems. If people within one system (one country) are too diverse in their financial capabilities, a proper functioning of the economic and political system is hard to maintain. This is especially true if social mobility, that is, the ability to move from one social class to another, is very limited. People may get trapped in their social class if inequality reflects poor access to financial services which would have provided them with the opportunity to seek education or to invest in entrepreneurial activity (Berg & Ostry, 2011, p. 14). One minor yet worth mentioning limitation to the discussion on inequality is that the numbers show the total income of a person rather than earnings from labour market activity and thus include investment returns, welfare transfers and tax policies, for instance. However, since earnings from labour market activity often constitute the major source of income, the discussion still demonstrates how unemployment is linked to inequality and unfolds potential threats of unemployment to society. Therefore, society should try to avoid what is called 'labour polarisation', a concept referring to a situation in which "jobs requiring a medium level of skills are diminishing relative to those requiring very little skills, and those requiring greater skill levels" (Stiglitz, 2012, p. 9).

### 7.1.3 The government

Youth unemployment shows a negative impact on the government in two major respects, namely higher welfare expenses and less (income) tax revenue which in turn increase the debt level. In order to ensure liquidity, governments often try to shrink the level of debts by implementing austerity policies which can have far-reaching and incalculable long-run effects on youth unemployment. Whilst the standard Keynesian model anticipates a contracting economy and lower employment when austerity policies are applied, political elites during the economic crisis argued that fiscal austerity measures would stabilise countries thereby making them more attractive to investment which in turn creates jobs. Higher youth unemployment also increases the welfare expenses of the government on passive supports as one can deduce from comparing welfare expenses in times of low unemployment with welfare expenses in times of high unemployment (Eurostat, 2014r). The absence of a similar increase in expenditure on active measures can partly be explained by the austerity policies in Spain and resulting political inability to become active in this field.

To conclude this paragraph, this paper hypothesises that the fiscal austerity programmes implemented in Spain have actually impaired a quick recovery. Austerity programmes in Spain partly account for today's youth unemployment misery in this country. This assumption also refers to the discussion on 'austerity versus stimulus' which has been widely and controversially discussed, particularly with regard to the limited monetary sovereignty of eurozone members. An interesting case in this context is Poland where monetary policy outside the frame of the euro as well as stimulus packages steered the country quite well through the crisis years. Remarkably, Poland was the only EU member state exhibiting positive GDP growth in 2009.

### 7.1.4 European Union member states

European Union member states as highly interdependent countries in economic, political and social terms are affected by youth unemployment, too. It is important to recognise two different perceptions a European Union member state might have of youth unemployment in another member state. One the one hand, if Spain suffers from high and structural youth unemployment and employment prospects for young people are rather bad, other European Union member states might actually benefit from this. The reason behind this way of thinking is that young people might start looking for work abroad thereby providing valuable human capital and filling vacant occupations in the recipient country. However, this perception presupposes some level of mobility, de jure and de facto. On paper, workers can move freely within the European Union; however, the actual mobility is often considered to be rather low. Reasons for low mobility are diverse but often relate to linguistic, domestic, cultural and personal hindrances. Therefore, even young people, whose mobility is assumed to be the highest because they have not yet settled down to family life, are rather reluctant when it comes to working abroad or even in another region within a country. In fact, Dolado et al. (2013) found that the number of young people living with their parents were up to 40 percentage points higher in Spain than in France, Germany, the United Kingdom and the Netherlands (Dolado et al., 2013, p. 47).

One the other hand, it is also true that 'we are all in the same boat'. In particular, EU member states trade a lot among each other thereby exploiting the benefits of the single market. If a trading partner struggles, this inevitably impacts on the healthy country, too. It appears that both ways of arguing are valid; however, this paper tentatively argues that it is unlikely to be in any country's interest if a partner suffers from high youth unemployment. The potential positive effect for recipient countries from foreign individuals who seek employment abroad can be considered minor and is very likely to be outweighed by the overall negative effect of decreased economic activity resulting from a decline in exports, for instance.

## 7.2 Appendix 2: Data overview

| Variable ↓ Year → | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Youth unemployment (%) | 26.1 | 22.9 | 21.0 | 22.2 | 22.6 | 22.0 | 19.7 | 17.9 | 18.2 | 24.6 | 37.8 | 41.6 | 46.4 | 53.2 |
| Minimum wage level (€) | 381 | 393 | 400 | 411 | 402 | 399 | 443 | 464 | 484 | 497 | 504 | 517 | 522 | 533 |
| Unemployment benefit level (€) | n.a. | n.a. | 647 | 671 | 699 | 723 | 744 | 764 | 794 | 839 | 872 | 894 | 910 | 935 |
| Employment Protection Legislation (scale 0-6) | 3.3 | 3.3 | 3.3 | 3.3 | 3.3 | 3.3 | 3.3 | 3.3 | 3.0 | 3.3 | 3.0 | 3.0 | 2.6 | 2.7 |
| Collective bargaining coverage (%) | 88.3 | 83.4 | 82.0 | 80.5 | 79.1 | 77.4 | 77.5 | 76.6 | 77.3 | 80.2 | 82.5 | 73.2 | n.a. | n.a. |
| People in higher education (Mio.) | 1.299 | 1.335 | 1.312 | 1.280 | 1.250 | 1.220 | 1.169 | 1.138 | 1.109 | 1.112 | 1.097 | 1.127 | 1.157 | 1.202 |
| ALMP participants (Mio.) | 1.407 | 1.575 | 1.445 | 1.678 | 1.992 | 1.861 | n.a. | 3.194 | 4.257 | 3.410 | 3.179 | 2.981 | 2.745 | n.a. |
| ALMP expenditure (% GDP) | 0.632 | 0.659 | 0.607 | 0.564 | 0.561 | 0.549 | 0.582 | 0.626 | 0.627 | 0.605 | 0.657 | 0.730 | 0.708 | n.a. |
| GDP growth (%) | 4.7 | 5.0 | 3.7 | 2.7 | 3.1 | 3.3 | 3.6 | 4.13.5 | 0.9 | -3.8 | -0.2 | 0.1 | -1.6 | -1.2 |
| Public expenditure on education (% GDP) | 4.38 | 4.28 | 4.24 | 4.25 | 4.28 | 4.25 | 4.23 | 4.26 | 4.34 | 4.62 | 5.02 | 4.98 | 4.82 | n.a. |
| Students completing at least upper secondary education (%) | n.a. | 41.2 | 41.3 | 41.1 | 39.9 | 39.9 | 40.1 | 39.8 | 39.9 | 39.0 | 40.0 | 40.1 | 39.9 | 41.1 |
| Wage growth (%) | -0.5 | -1.9 | -0.5 | 0.1 | -0.5 | -1.4 | 0.3 | -0.4 | 1.3 | 2.7 | 5.9 | 0.3 | -1.3 | -2.3 |
| Temporary employment (%) | 32.7 | 32.1 | 31.6 | 31.8 | 31.8 | 32.5 | 33.3 | 34.0 | 31.7 | 29.3 | 25.4 | 24.9 | 25.3 | 23.6 |