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**ABSTRACT**

# The Scandinavian tiger: strength, dynamism and variety of the Norwegian economic policy

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ABSTRACT

Questo elaborato si propone di dare una chiara e concisa descrizione dell'economia norvegese, da me definita forte, dinamica e varia. Forte perché la Norvegia è ormai considerata una delle nazioni più ricche del mondo, dinamica perché questa economia ha mostrato col tempo di essere quasi immune alle crisi globali e varia perché associa ad un forte controllo statale in alcuni settori chiave dell'economia (come quello petrolifero) una grande libertà individuale, come testimoniato da alcuni indici che attestano la Norvegia come uno degli stati più adatti per aprire un nuovo esercizio o semplicemente per avviare un'attività imprenditoriale. La mia analisi si muove prima di tutto da un punto di vista storico e nel primo capitolo, prima di analizzare i dati macroeconomici odierni, cerco di dare una breve spiegazione storica dei motivi della presenza di un modello politico economico così performante. Sicuramente, la svolta definitiva per lo stato norvegese si è avuta negli anni 70, a seguito della scoperta dei giacimenti di petrolio (l'Ekofisk field), che ha permesso ad un'economia chiusa e abbastanza arretrata di aprirsi definitivamente al mondo e di crescere in maniera smisurata. Oggi, la Norvegia è fra i primi posti al mondo in quanto a PIL pro-capite, assieme a paesi come Lussemburgo, Qatar, Australia e Svizzera e addirittura Oslo è stata considerata la seconda città più cara al mondo, la prima in Europa. Un dato molto importante per definire la salute globale di un'economia è quello relativo alla disoccupazione, che in Norvegia si attesta su livelli bassissimi, sotto al 4%. Questa percentuale non è frutto del caso. Il governo norvegese ha lavorato e continua a lavorare per raggiungere l'obiettivo del "*Job for everyone*", tramite politiche del lavoro sempre più inclusive ed efficaci, soprattutto nei confronti dei giovani. La disoccupazione a lungo termine è uno dei più grandi spauracchi per un governo, e per evitare che essa si materializzi fra i giovani, la Norvegia prevede da molti anni a questa parte un programma chiamato "*Youth guarantee*", che aiuta i giovani in cerca di lavoro concedendo loro la possibilità di

partecipare a molte iniziative di formazione. Un altro dato di grande importanza è la produttività: se infatti prendiamo come indice il rapporto fra PIL pro-capite e ore medie lavorate settimanalmente (che sono fra le più basse al mondo), la Norvegia primeggia a livello mondiale. Ma lo Stato è a conoscenza del grosso gap fra le aziende norvegesi e quelle degli altri paesi mondiali in quanto a crescita della produttività annua, e da qualche anno a questa parte, oltre a nominare una speciale commissione che guidi il governo a politiche efficaci, ha agito concretamente iniziando ad incentivare tramite sgravi fiscali gli investimenti in R&S da parte delle aziende. Fra i Paesi nordici la Norvegia ha la più ricca bilancia dei pagamenti corrente, dato sicuramente gonfiato a dismisura dagli enormi proventi dall'industria del petrolio. Essi vengono utilizzati sia per finanziare il *Government Pension Fund*, ormai divenuto il più grosso fondo pensione del mondo, sia in piccola percentuale dal governo per finanziare le sue manovre economiche. Nel primo capitolo ho deciso di porre l'attenzione anche sul rapporto fra la Norvegia e l'Europa. Come risaputo, la Norvegia non è un membro dell'Unione Europea, ma intrattiene con essa numerosi rapporti di svariata natura, politica ed economica in primis. Come firmataria, dal 1994 la Norvegia fa parte dello Spazio Economico Europeo (SEE) che ha unificato l'Associazione Europea di Libero Scambio con il mercato europeo. Da quel momento, la Norvegia assieme ad Islanda e Lichtenstein ha accesso alle quattro libertà del mercato interno: libertà di movimento di beni, persone, servizi e capitali. A livello politico la collaborazione fra Oslo e Bruxelles si esplica in via formale e informale attraverso incontri fra i leader europei e quelli norvegesi, a cadenza regolare. Inoltre, la collaborazione fra Norvegia e Unione Europea nel campo della libertà di circolazione è sancita ufficialmente dalla firma del Trattato di Schengen, avvenuta nel 2001.

La solidità dell'economia norvegese è da ascriversi anche ad una attenta e rigorosa politica fiscale, i cui budget sono annualmente decisi in modo preciso ed inequivocabile. Infatti, nel caso di assenza di coperture per determinati provvedimenti, il governo provvede ad aumentare la percentuale presa dal fondo pensione governativo, invece di inasprire le tasse o bloccare il piano di riforme. Questa scelta ha sicuramente prodotto i suoi risultati nel tempo, perché ci troviamo di fronte ad una macchina dello stato veramente efficiente e sufficientemente elastica per muoversi in situazione di crisi od emergenza. Il suddetto fondo pensione contiene al suo interno tutti i proventi del petrolio ed è gestito dalla Banca Centrale norvegese (*Norges Bank*), che ha previsto un suo continuo aumento nel tempo. Sono notizie confortanti per il governo norvegese, soprattutto a causa del fenomeno di crescita dell'età media che in questi anni sta colpendo tutta Europa e costringendo tutti i governi a rivedere le politiche in materia di pensioni. Se il fondo continua a crescere a questi ritmi, la Norvegia non avrà alcun problema in futuro a mantenere lo stesso schema pensionistico ora in vigore. Per quanto riguarda la pressione fiscale, essa si assesta al 40,8%, che non è una percentuale così alta se consideriamo che gli altri stati scandinavi ed altri europei come Francia ed Italia prevedono una pressione maggiore. La percentuale maggiore di esse proviene dalla tassazione dei redditi, dall'imposta sul valore aggiunto e, ovviamente, dalle tasse sull'industria del petrolio. Come la maggior parte dei paesi nordici, la Norvegia prevede una doppia tassazione sui redditi. Secondo questo schema, il reddito da capitale è tassato con un'aliquota fissa, mentre il reddito proveniente dal lavoro o dalla pensione è tassato in modo progressivo. Lo schema prevede inoltre che alcune categorie speciali di persone, come i disabili e gli anziani, paghino un ammontare di tasse proporzionalmente inferiore alle altre persone. Per gli individui più ricchi la tassazione può arrivare al 53%, mentre il trattamento per le aziende norvegesi è più leggero. Esse infatti sono colpite da un'aliquota fissa del 27%, e inoltre sono esclusi da tassazione i dividendi e i guadagni provenienti dalla quotazione in borsa. Per quanto riguarda le industrie che operano nel settore del petrolio, considerati gli enormi guadagni del settore, il governo ha deciso di introdurre una tassa speciale del 51% da aggiungersi all'aliquota fissa del 27%. Per quanto riguarda le tassi indirette e più specificatamente l'IVA, la Norvegia prevede una percentuale standard al 25% per la maggior parte dei beni ed uno schema differenziato per altri tipi di beni (ad esempio, il biglietto per l'entrata in un museo ha l'IVA ferma all'8%). Sicuramente un aiuto al funzionamento di questo sistema viene dal grande senso civico insito nella popolazione norvegese, al cui interno si registrano pochissimi casi di evasione. Inoltre, il governo norvegese si è posto un ambizioso obiettivo entro il 2020: rendere la Norvegia una nazione senza contante, per abbattere definitivamente il fenomeno dell'economia sommersa. Come detto in precedenza, la Norvegia ha una struttura burocratica incentivante nei confronti dell'imprenditoria: per aprire un esercizio in Norvegia bastano solamente sei giorni. Lo Stato ha capito che per migliorare ed adattare ai tempi la propria economia c'è bisogno di incentivare la nascita di nuove aziende e di start-up ad alto capitale potenziale. Nella parte sulla politica monetaria ho deciso di iniziare con un approccio storico, andando a richiamare la crisi bancaria dei primi anni novanta che ha colpito soprattutto le banche dei paesi scandinavi. Da quell'episodio, la banca centrale norvegese ha imparato una lezione importante, che si rivelerà la chiave per permettere al paese di superare quasi indenne la crisi finanziaria del 2008. Le liberalizzazioni di capitali e la crescente importanza del mercato mobiliare avevano avuto un'eco importante anche in Norvegia, dove all'inizio degli anni 90 si è avuta una crisi paragonabile per la forma a quella dei mutui statunitensi del 2008. La Norvegia ha imparato da quella lezione, rafforzando in modo deciso i meccanismi di sorveglianza dell'autorità di supervisione finanziaria (FSAN) sulla borsa. In materia di politica monetaria, la Banca Centrale norvegese vigila soprattutto su ciò che accade al prezzo del petrolio, e sovente ha deciso di intervenire in situazioni di crisi (è notizia di qualche giorno fa l'ulteriore abbassamento del tasso di interesse della

Corona norvegese a seguito di un ulteriore deprezzamento del petrolio). Il rapporto con l'Euro non è stabile e questa instabilità negli ultimi tempi è facilmente spiegabile dal susseguirsi di numerosi eventi su entrambi i fronti (quantitative easing, diminuzione del prezzo del petrolio). E' importante sottolineare che il rapporto fra queste monete è di vitale importanza, vista l'enorme mole di scambi commerciali fra la zona euro e la Norvegia. Per quanto riguarda il tasso di cambio reale è stata ravvisata una crescita importante negli ultimi decenni del tasso di cambio relativo al costo unitario del lavoro, associata ad una relativa perdita di competitività. Infatti, questo aumento non è da associare ad un aumento di produttività, ma in larga percentuale ad un aumento degli stipendi causato da un aumento dei profitti derivanti dal petrolio. Potenzialmente, una situazione del genere potrebbe generare un effetto depressivo sull'economia, in situazioni di crisi dei prezzi del petrolio. Infatti l'azienda petrolifera, con i suoi enormi profitti, ha finito con il condizionare in modo indiretto anche gli stipendi di altri settori industriali norvegesi. Se aggiungiamo che il settore manifatturiero ha subito nel corso degli ultimi decenni un forte declino, il quadro è chiaro: il governo ha bisogno di intervenire per attenuare questa crescente dipendenza dal petrolio, e ha bisogno di farlo urgentemente, a causa della perdurante crisi dei prezzi del greggio.

Il terzo capitolo è dedicato al modello di welfare norvegese. Esso è caratterizzato da una forte spesa del governo centrale che si traduce in una universale disponibilità di aiuti sociali. Il modello è caratterizzato da una alta occupazione, da una alta mobilità sociale e da un alto grado di parità di genere fra maschi e femmine. Il modello è così efficiente che non di rado molti studiosi, soprattutto appartenenti alla scuola del neoliberalismo, ne hanno proposto una esportazione in altri Stati quali l'Inghilterra o gli Stati Uniti. In ogni caso, parlando in modo più realistico, questo modello così massiccio e costoso a mio modo di vedere è possibile in queste proporzioni solo in Norvegia, uno Stato caratterizzato da forti guadagni nel settore petrolifero e dalla

presenza di una popolazione eticamente devota allo Stato e alle sue istituzioni.
Il quarto capitolo si pone l'obiettivo di dare una descrizione specifica dell'industria del petrolio che, se guardiamo ai dati macroeconomici, definirlo il settore nevralgico dell'economia norvegese suona quasi come eufemistico. Ancora una volta l'approccio è dapprima storico, poi via via l'attenzione si sposta sulla situazione odierna. Il governo ha provveduto nel tempo a stabilire una legislazione chiara e scrupolosa nei riguardi dell'industria nella sua totalità, oltre che i propri confini di intervento. Lo Stato possiede il 67% delle azioni di Statoil, ma la partecipazione di altre aziende private è ovviamente garantita. La regolamentazione dello Stato si allarga anche sul campo delle emissioni, che sono fortemente ostacolate e tassate dal governo. L'obiettivo è quello delle zero emissioni nel più breve tempo possibile e i risultati ottenuti finora sono in questo senso molto confortanti. Come detto, l'economia norvegese è fortemente dipendente dall'oro nero e le evoluzioni negative dell'industria del petrolio mondiale rischiano di minare seriamente la crescita economica della Norvegia, se non addirittura di causare una crisi di grosse proporzioni. Il governo è dunque chiamato alla sfida più importante: mantenere la sostenibilità del modello norvegese diminuendo man mano la sua dipendenza sulle risorse petrolifere.

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# INTRODUCTION

Norway is widely considered one of the healthiest country in the world. It is a small open economy which showed to have the capacity to adapt itself and to grow in a continuously changing world. The target of this dissertation is to provide an explanation of the Norwegian success in many way. First, I analyse in a general way the main features of the Norwegian economy, then going more deeply throughout all the peculiarities which made Norway an envied and studied model. Data regarding GDP per capita, unemployment, balance of payments, overall productivity are here taken into examination. In the second chapter a deep overview of the Norwegian economic policy is taken into account, both the fiscal policy and the monetary policy. The third chapter includes an analysis of the Nordic model, namely the famous welfare model. The government during time has expertly exploited the large availability of oil resources. The fourth chapter provides an overview of the main features regarding the oil sector, that has been the main vector of the Norwegian economy, its impact on the overall production, the relationship between government and firms, and what are the challenges to face in the years to come.

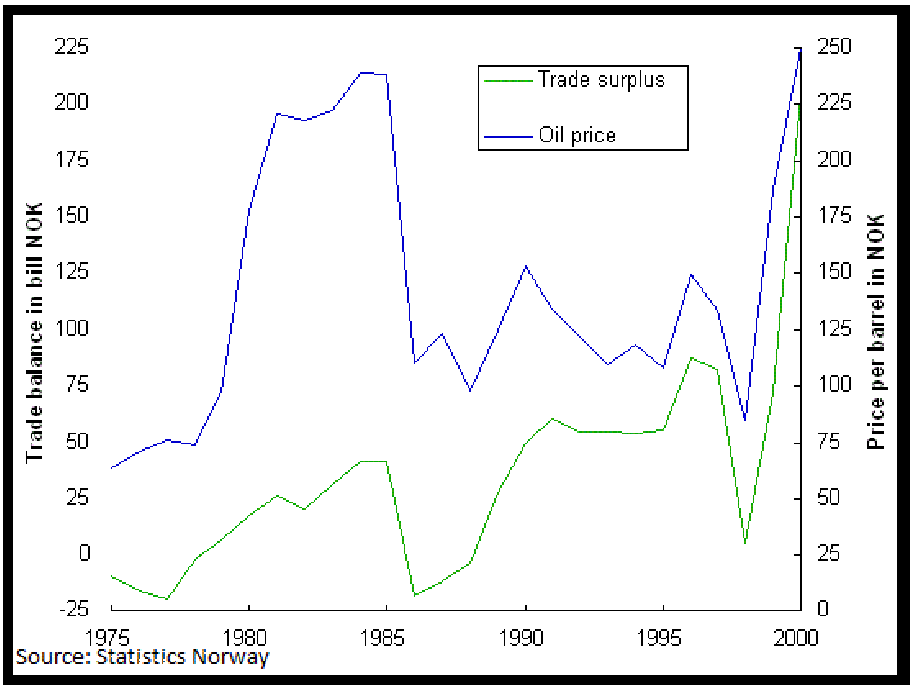
## CHAPTER 1 – A WIDE FOCUS ON THE NORWEGIAN ECONOMY

The Norwegian economy is a mixed economy, a very clear example of how capitalism and free market can coexist with the government participation in some key sectors of the economy. According to the International Monetary Fund (2014), Norway has the 6th highest GDP per-capita in the world, based on a PPP calculation, and it is considered one of the richest country in the world. The cost of living here is much higher than in the United States and in the United Kingdom: to make an easy example, a cinema ticket costs 81% more than the same ticket in the United States[1] and 36% more than in the United Kingdom[2] (NationMaster.com). Large income from natural resources, such as hydroelectric power, fisheries and since the beginning of 1970-ties petroleum, explains part of the rapid economic growth and these levels of richness. During time Norway showed to have a growing interest to establish a closer relationship with the European Union. Even if the nation never asked the Commission to be part of the European Union, it signed the EEA agreement in 1994 and it is also part of the Schengen Area. The economic success of Norway has to be found back in time: the years from 1950 to 1973 are often called the golden era of the Norwegian economy (Grytten 2008). While the economic growth was lower than the other western countries, during these years Norway posed the bases for its model of successful planned economy together with a large public sector and a GDP per capita annual growth rate of 3.3 percent, accompanied with a low rate of unemployment and with a stable inflation rate. But the key moment for the Norwegian economy is, without any doubt, the oil price shock of autumn 1973 which followed the collapse of Bretton Woods system. In fact, in 1969, Philips Petroleum discovered petroleum resources at the Ekofisk field, which was defined

[1] Nation Master, Cost of Living, URL: http://www.nationmaster.com/country-info/compare/Norway/United-States/Cost-of-living
[2] Nation Master, Cost of Living, URL: http://www.nationmaster.com/country-info/compare/Norway/United-Kingdom/Cost-of-living

as part of the Norwegian continental shelf. Thanks to such discoveries, Norway run a countercyclical financial policy during the stagflation period in the 1970s which brought the country to have a growth rate higher and unemployment rate lower than all the other European countries. Anyway, the development of petroleum industry had its negative aspects. In a few years this profitable industry accelerated the process of deindustrialization, despite government efforts to save the manufacturing sector. The decline of this sector has to be also found into the accommodating behaviour of Norwegian firms during these years, which did not adapt their structure to the changing international market. Due to the government subsidies, they did not find incentives to improve productivity at their international rivals' level. As a result, during and after the deindustrialization, the oil sector has become vital for the country's economy. Even if the oil industry gave to Norway a huge economic growth and the creation of thousand new job opportunities, the strong correlation between its economy and this sector caused a dangerous dependence of the Norwegian economy to the oil price. As it shown by the chart (figure 1), the trade surplus curve is very strongly linked to the one of the oil price.

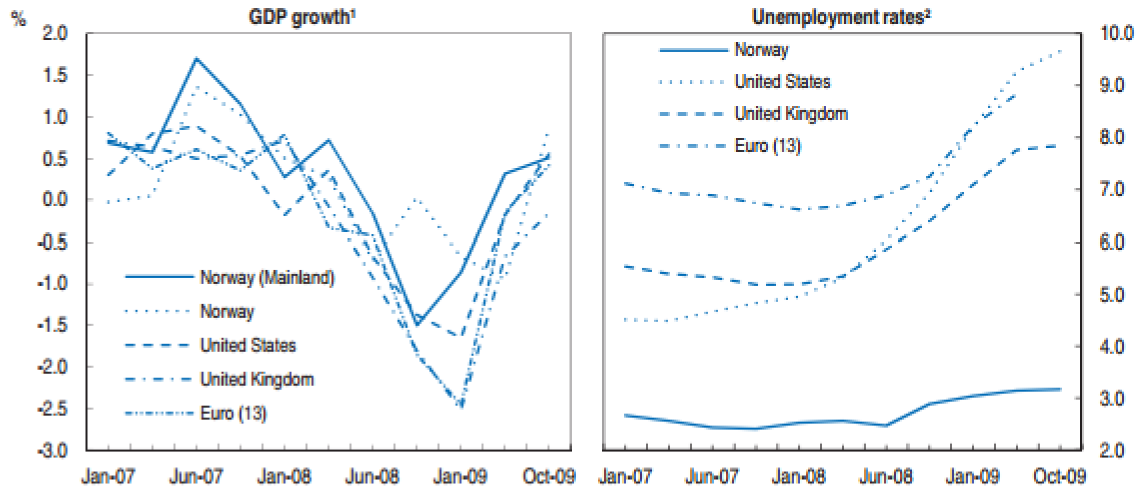
**Figure 1: Comparison between oil price and trade surplus in Norway**



1.1 THE ECONOMIC GROWTH UNTIL TODAY AND A MACROECONOMIC ANALYSIS

During the noughties the economic growth was almost steady and near to an average of 2.5% between 2000 and 2007 (Authors' computation with data.worldbank.org), only for a little extent above the European average. Now it is important to focus the attention on the impact of the financial crisis on such a solid economy. Of course, the global crisis did not spare Norway, but its economy showed to be more solid and flexible than the other European and Anglophile ones. The recession between mid-2008 and mid-2009 in this country was less than 2.5%, while the average percentage of GDP losses in the OECD area was almost double, as it is shown by the chart (figure 2):

**Figure 2: GDP growth[3] and unemployment rates[4]**




*Source: OECD Economic Outlook Database.*

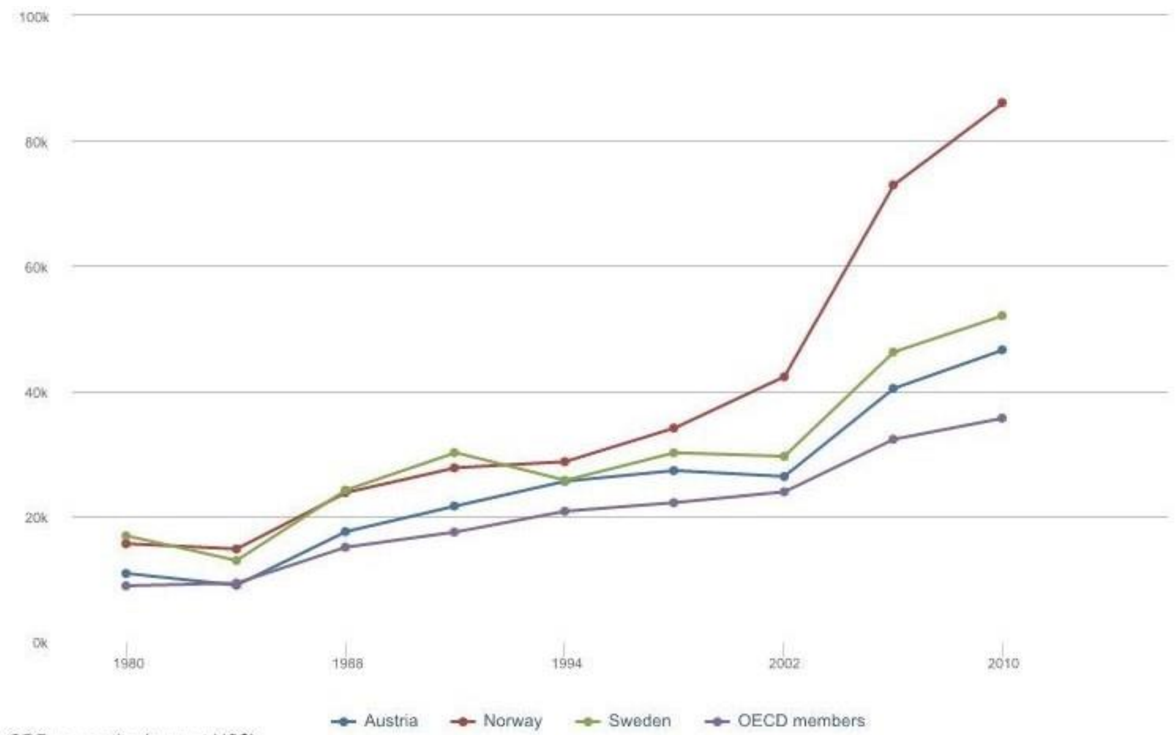
Undoubtedly, the recession arrived just after some years of strong growth, from 2003 to 2008, when the GDP growth was near to an average of 4%. It was driven by a higher productivity growth and higher employment, mostly thanks to the immigration. Both of these factors fell in 2009, but to a very small extent if compared to the other OECD countries. Furthermore, the presence of oil significantly helped Norway to avoid the impact of the collapse of global trade.

[3] Growth rate, quarter-on-quarter until October 2009

[4] Unemployment rates, quarter-on-quarter until October 2009

If we analyse in a deep way the macroeconomic factors, Norway is facing a continuous growth in average incomes, low inequality, low unemployment and low inflation. All of these factors bring the country to have one of the highest GDP per-capita in the world.

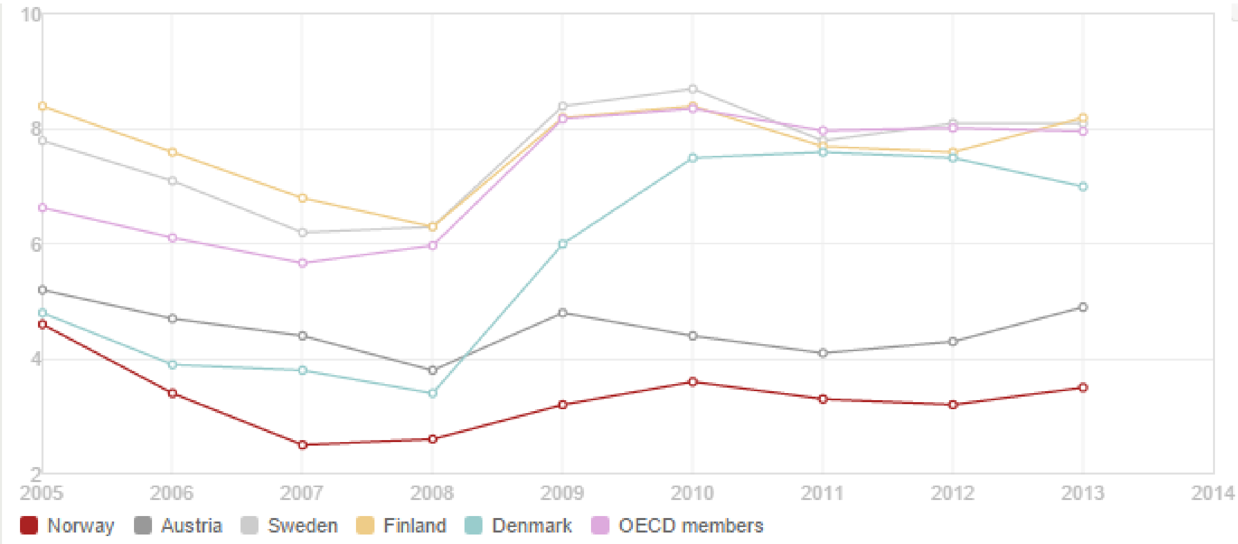
**Figure 3: GDP per capita (current US$)**




GDP per capita (current US$)
Source: Data.WorldBank.org

The chart (figure 3) is useful to show the real extent of Norwegian growth from the eighties until the first decade of the noughties. The data considered here is the amount of GDP per capita, which is nowadays almost ten times higher than its value in the middle of the eighties. The chart comprehends also the data of Austria, which has the highest GDP per capita in the Eurozone, apart from Luxembourg (World Bank). I chose to include Austria also because it is a well-performing economy, with a solid and well-functioning democracy, the most comparable-to-Norway country in the continental Europe. If we move towards a deeper analysis, we can find many other differences between Norway, the Scandinavian countries and Austria. For example, another Norwegian characteristic is the low percentage of unemployment, as it is shown by the chart (figure 4):

**Figure 4: Unemployment, total (% of total labour force)**

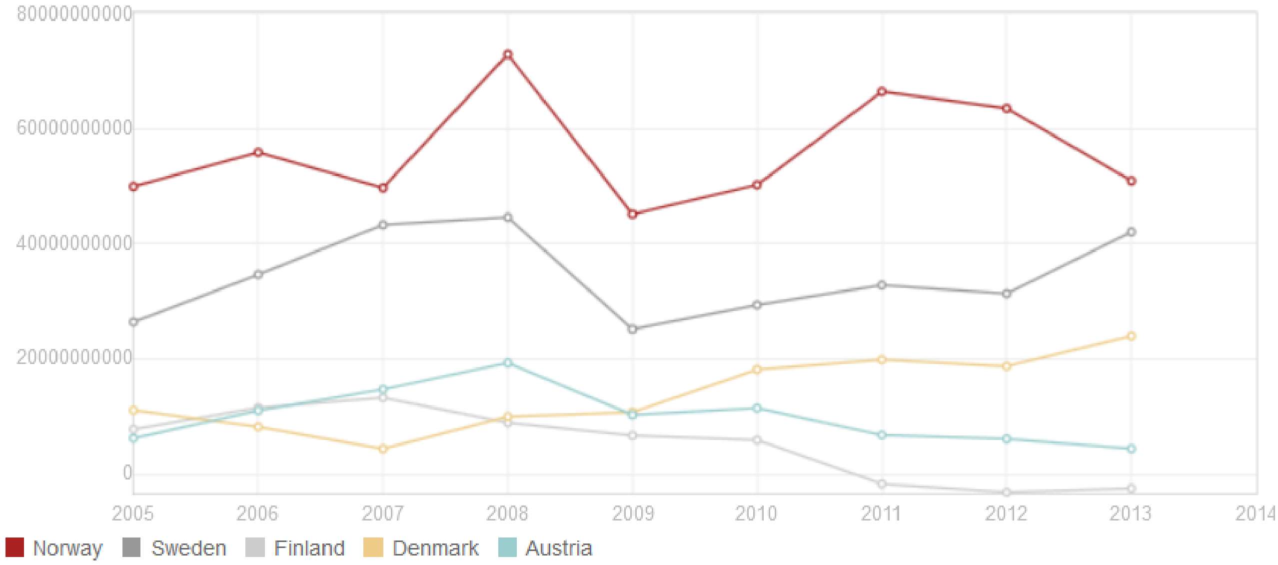



Unemployment, total (% of total labor force)
Source: Data.WorldBank.org

The government succeeded to answer in a proper and fast way to the world challenges, such as the openness of the market, the globalization, etc. Norwegian labour market has been always at the top of the policy making process for government of both conservative and progressive sides. "Jobs for everyone" is a mantra of the Norwegian government, which followed an active labour market policy especially after the 2008 financial crisis. An important concern is the youth unemployment and the government's main purpose is to avoid a long-term friction unemployment. Talking about capability to find a job, youths with a low degree of education showed to react with more sensibility to market fluctuations, with a higher vulnerability of their workplace (Sundell et al. 2011, p.31). What "A Study on the Rights of and Measures for Young Jobseekers" showed is also that "the likelihood of becoming unemployed declines the more education a person has, and it appears that an increased education level reduces the risk of becoming unemployed". Consequently, youth unemployment ranks high on the political agenda in Norway, both with a deeper sensibility for youth-oriented labour initiatives and also with measures to ameliorate Norwegian education. The education policy measures have focused on reducing dropping out and on ameliorating secondary level education. When it comes to labour market policies, youths are considered a “special group”: according to this “special treatment”, Norwegian government created a “Youth guarantee”. The guarantee applies to everyone under the age of 20 years who has neither a job nor a place in the educational system. Its purpose is to prevent passivity and long term unemployment by ensuring that youth unemployed are provided by a variegated offer of labour market initiatives (*ivi*, p.26). In general, it must be said that unemployment rate here is very low, if compared with similar countries, such as the Scandinavian ones and Austria. The Norwegian labour market can be compared to a paradise, because it combines high productivity and high employment. What the government did during time has been a constant and huge investment policy, both to enhance productivity and to strengthen the link between education and work. Norway incentives the development of the R&D sector throughout a tax credit, an industry neutral subside eligible for each company if its R&D project meets the parameters of the Research Council of Norway (RCN). ). Apart from the industry neutral subside, another support is given to specific industries, such as the agricultural industry, which is declining its impact on the GDP, and newer industries, especially if related to renewable energy and energy saving (OECD 2014, p.28-29). To maintain a high productivity it is important to have well-trained workers, with a completed and effective cycle of study. Indeed Norwegian government is committed to reduce the dropout phenomenon considered in the range from 18 to 24 year olds, which is higher than many European countries, with 13 per cent of students leaving tertiary education without graduating (Eurostat, 2014). The link between education and work is enforced by strengthening the employability of young people through closer links between education and work. This link is fundamental to maintain a low level of unemployment: for example firms and government work together to provide a growing number of apprenticeship places offered in companies and the number of applicants awarded apprenticeships has increased in recent years.

The fluctuating amount of the balance of payments, and also its enormous amount if compared to similar countries, show the real extent to which Norway is dependent on oil revenues.

**Figure 5: Balance of Payments (Current account balance, US$)**




Balance of payments (Current account balance, US$)
Source: Data.Worldbank.org

If compared to Scandinavian countries and Austria, which are countries without this amount of exportable oil, the difference is quite high. In the range considered by the graph (figure 5), Norway has an average annual surplus of 56 mld$. The State shares a very high percentage of the total oil revenues, thanks to its participation in Statoil (the Government of Norway is the largest shareholder in Statoil with 67% of the shares[5]). The revenues are mainly used to finance the Government Pension Fund and the government budgets, which every years are strictly correlated to the amount of oil exports. In fact, in this period Norway is considering measures to counter oil price drop and the Prime Minister admitted that the previsions for the 2016's government budget need to be revised (Reuters, 2015). The analysis of the Norwegian balance of payments shows that Norway is still too dependent on oil

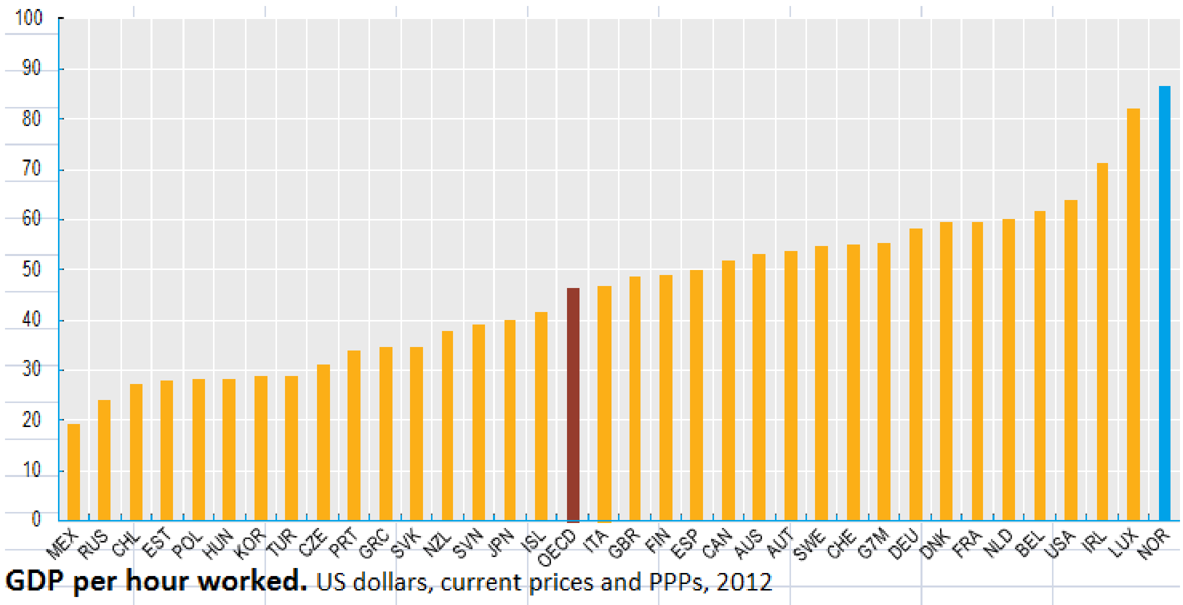
[5] Data collected by third party, authorized by Statoil, 2015, URL: http://www.statoil.com/en/InvestorCentre/Share/Shareholders/Top20/Pages/default.aspx

revenues, a fact which brings with it two considerations: when the oil market works in a proper way, the balance of payments is sharply positive and the government has a huge budget that can be canalized into the reform path, when the oil price drops the government needs to face the issue of a reduced budget, with negative effects on its reform path.

How can be explained the difference in GDP per capita, the difference in unemployment rate, and the difference in the balance of payments between these countries and Norway? Of course it cannot be explained only by the oil revenues. The thing that makes Norwegian economy different from the others is also the way by which they face issues. Nowadays, according to The Legatum Prosperity Index, which considers factors like the economy, the entrepreneurship, the education, etc., Norway is at the top of the prosperity ranking (Prosperity.com). This result shows how the capacities of the various Norwegian governments have been effective. Either conservative or social democratic ones, they showed the capacity to adapt the country to different economic conditions, putting away their ideologies for an effective “pragmatism” (The Economist, 2013). Thanks to this behaviour, the country grew with a sort of political equilibrium, based on a reformism devoid from ideologies. Undoubtedly, the relative absence of corruption enhanced the reforms’ path, together with the presence of high-quality people. Citizens pay their taxes and play by the rules, showing to be maybe the most civic-minded population in the world. Also, the reforms followed a path based on the conciliation between the big presence of the state and the respect for the individual (The Economist, 2013).

The World Values Survey says that the Nordic countries are the world’s biggest believers in individual autonomy. It may seem odd to some, but the state’s main job is promoting individual autonomy and social mobility. Any piece of Nordic social legislation, and Norwegian one does not differ, can be justified in terms of individual autonomy. Universal free education allows students of all backgrounds to achieve their potential. Separate taxation of spouses puts wives on an equal footing with their husbands. Universal day care for children makes it possible for both parents to work full-time. This mentality has been called "statist individualism" (*ibidem*). By giving the individual such responsibility, the State reached the goal to maintain high and to improve productivity even without having a R&D sector comparable to US one, and to other states which registers a bigger R&D sector but a low productivity level than Norway.

**Figure 6: GDP per hour worked**[6]

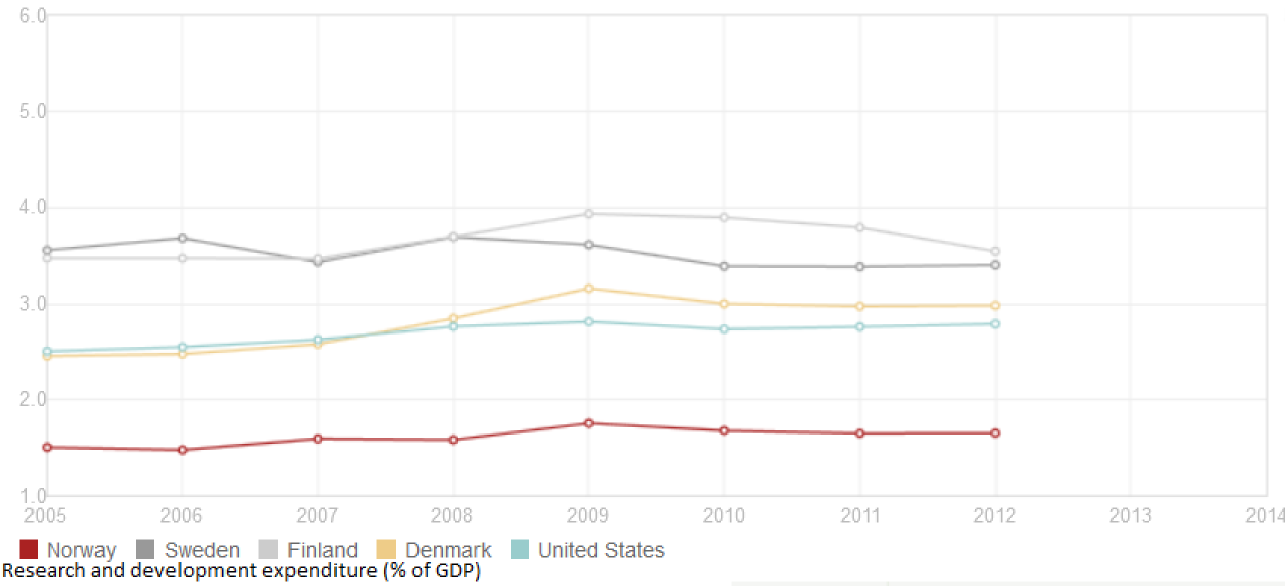



In this graph (figure 6), to measure productivity level, OECD used the indicator "GDP per hour worked". As shown by the figure, Norway registers the highest productivity among the OECD members. It must be said that within the factors which affect productivity, Norway's high oil production contributes significantly to its GDP, and consequently to productivity. But, "However, even after controlling for the rent [profits] from natural resources, Norway has high productivity. And more importantly, our relative productivity has increased a lot from the early 1990s to 2011, even after adjusting for natural resource rents" (Hsieh quoting Cappelen, 2013). Despite this remarkable result in productivity, Norway registers a small

[6] US dollars, current prices and PPPs, 2012

investment policy in R&D sector if compared to other OECD members, and many scholars called this puzzling situation as "the Norwegian paradox".

**Figure 7: Research and development expenditure (% of GDP)**




Research and development expenditure (% of GDP)
Source: Data.Worldbank.org

How can Norway register such a high result in productivity (figure 7) while it spends less than other countries in R&D? In order to answer to this question, there are different school of thoughts. According to Thomas von Brasch in its "The Norwegian productivity puzzle – not so puzzling after all?", "..using PPPs from the expenditure side can grossly overestimate productivity in Norway, mainly because it is assumed that relative net export prices can be proxied by the market exchange rate in the calculation of expenditure PPPs" and "..using an empirical model that took the level of human capital, R&D capital stock and the distance to the technological frontier into account, it was shown that unexplained productivity growth has not been significantly higher in Norway compared with other countries." (Brasch 2014, p.25). In other words, mistakes among the factors used to calculate productivity have been done and they leaded to a wrong measurement of Norwegian productivity. On the other side, also the position of the OECD is very clear. In the Economic Survey of Norway in 2007 they stated: "Since Norwegians are rich and getting richer, and not only because of petroleum exports, it could be argued that lackluster performance in innovation is not a major problem. Productivity is high, real growth rates have been respectable, overall TFP growth is better than in many countries with higher R&D spending, and industry has by and large managed to survive a changing world and a strong exchange rate." (OECD 2007, p.129) In their opinion, the more you spend on science, the more innovative, the more productive, and hence the wealthier you are. For this reason there is a clear paradox in Norway, but it seems not to matter if the R&D spending is not at the international standard, because the other economic indicators are clearly positive. The Norwegian government decided to intervene in order to solve this puzzle by nominating a special commission led by the economist Jan Fagerberg. What it has been found is that the majority of terminology used by OECD is misleading: for example, they defined the oil industry as a low tech industry because the R&D spending as a percentage of its turnover was very low, but every scholar knows that oil turnover is very huge and that if we look at its R&D spending we know that the oil industry is technologically advanced and invested much into innovation (Norway Exports, 2010). The committee has two goals: to clarify that there is not a puzzle and to recommend changes in the government spending for R&D that can lead to the highest economic benefit for the Norwegian society (*ibidem*). After all of these discussions, what it seems indisputable is the good performance in productivity registered by the Norwegian economy. According to Røed Larsen, productivity is "the x-factor" of the Norwegian economy. What is the secret behind the Norwegian high productivity? In its opinion, there are many sources of productivity: the human capital, and the Norwegian government is doing well in providing well trained and educated people to the labour market; work culture and norms, and we underlined before the fact that Norway is a country with "high quality" people (Larsen 2012). Also, in quoting Cappelen, Hsieh attributes Norway's high productivity to another important factor: the equal distribution of income. In Cappelen's opinion, "[this point] relates to the idea that a company will stop hiring when the productivity gain of adding another employee equals his or her wage, in other words, when it becomes unprofitable to hire more employees. Therefore an economy with very low wages will create many low-productivity jobs, and an economy with very high wages will create very few high-productivity jobs. With equal income distribution, Norway has eliminated the two extremes which results in a high average productivity." (Hsieh 2013).

On the other hand, as registered by The Conference Board Total Economy Database™ (2015), the TFP growth of Norway, estimated as a Tornqvist index, is negative since 2005, which means that the government has to continue its investment policy on improving the overall productivity, in order to maintain a leading position in the world among productivity. The commission headed by Jan Fagerberg is working together with the government to accomplish this goal.

## 1.2 THE RELATIONSHIP BETWEEN NORWAY AND EUROPE

"The reason is easy: Norwegian people said no, twice in two different referendums, every time with a simple majority. The arguments for the no were multiples: fishing industry and agricultural industry would have suffered after the adhesion and the admission would have brought more centralization and an impairment of equality and of the welfare state". The reasons why Norway never asked the European Commission to be part of the European Union are well summarised by Rune Bjåstad, press advisor of the Norwegian Ministry of foreign affairs in UTalk, an interactive weekly programme produced by Euronews. By the way, these considerations do not have to hide the strong and strict collaboration between Norway and Europe. In fact, since 1994, Norway is part of the European market, through the EEA Agreement, which unified the EFTA market with the EU market. From that moment, Norway (together with Iceland and Liechtenstein) has got access to the internal market's four freedoms: the free movement of goods, persons, services and capital. The access to these freedoms is enhanced by Norway's participation in EU programmes and agencies. These programmes and related activities serve to improve the cooperation in areas not covered by the internal market. The areas covered by such programmes are research, education, social policy and culture (Norway mission to the EU 2015). More than simple agreements, the participation in these programmes, especially the exchange programmes, help Norwegian people to feel European, as well as it also helps European people to improve their knowledge about Norway. It is an extremely effective way to Norwegian integration into Europe, which can bring, in some years, to a future admission of Norway into the European Union. One of this programme is the *Erasmus +*, in which I took part. Of course, the participation does not stop at education, but it continues in fields like innovation, research and politics. In fact, Norway sends a number of national experts on secondment to the European Commission. To underline how much Norway believes and sustains these programmes, it is important to say that Norway's contribution to EU programme budget is the 97% of the total EFTA contributions and during the programme period 2014–20, its contribution is intended to increase substantially, in parallel with the EU programme budget (*ibidem*). Norway and the EU also cooperate extensively in the field of justice and home affairs, for instance through the Schengen Agreement. Norway joined the Schengen cooperation in 2001, and it applies all of the Schengen rules. This means that Norway applies the harmonised policies on visas and external border control. As we know, thanks to Schengen Agreement, within European states there is no border control, which means a coordinated work to safeguard internal security and to fight cross-border crime. As all the other states which are part of Schengen, also Norway shares part of the responsibility for effective control of the external borders, participating in the European Borders Agency, *Frontex*, which aims to coordinate the management of the common external borders.

### 1.2.1 THE COOPERATION AT POLITICAL LEVEL

Norway and the European Union have a close collaboration at political level, which is essential to face all the challenges which involve both the institutions. The EEA Agreement provides all the elements for a well-functioning political collaboration between Norway and the EU, such as the meetings twice a year at ministerial level within the EEA Council (Norway mission to the EU 2015). These meetings are used to discuss the overall functioning of the EEA Agreement and matters of common concern. Connected with these meetings is a separate political dialogue meeting, which is held to discuss foreign and security policy issues. Apart from the platform concerning the EEA Agreement, Norway and the EU use also other ways to collaborate, for instance with various bilateral high-level meetings, where members of the Norwegian government often meet with EU leaders. Moreover, the European Parliament often invites Norway to present its view in certain issues, such as its involvement in the Middle East, the Arctic and the High North, and Norway's energy policy. The close relationship between the European Parliament and Norway is also witnessed by the fact that Norway is the only non-EU country with a designated liaison officer to the European Parliament (*ibidem*). The political cooperation does not end up here, because Norway has decided to collaborate with its European partners in more other areas, such as with the Schengen Agreement, and on foreign and security policy. We know that Norway entered in the Schengen area in 2001, and it applies all the norms contained in it. This means that Norway, even if it is not part of Europe, applies the same policy for internal borders within Europe of all the other EU members. In fact, all the Schengen states abolished internal border control, establishing a close cooperation between them, to safeguard internal security and to fight cross-border crime. All European members plus Norway are equally considered in the Schengen Council, which means that all Schengen countries take on their share of the responsibility for effective control of the external borders. In fact, Norway participates in the European Borders Agency, *Frontex*, which aims to coordinate the management of the common external borders.

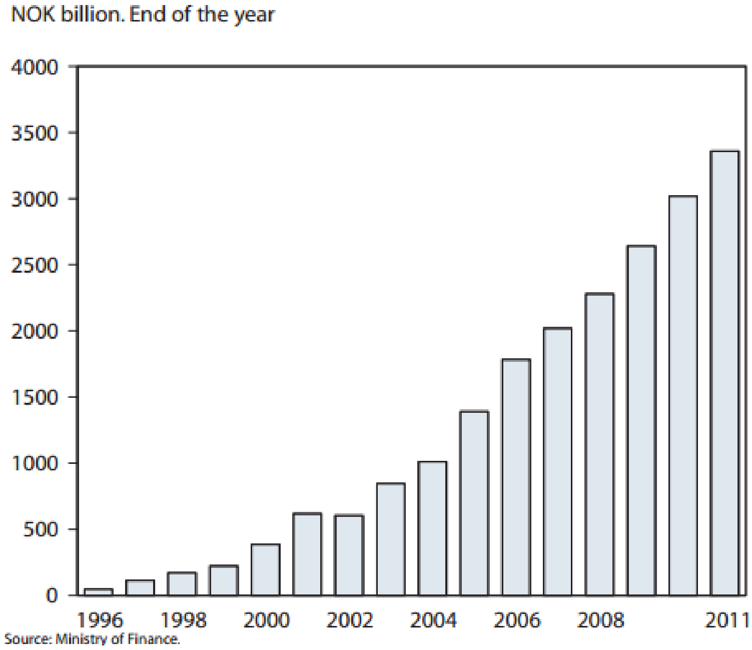
## CHAPTER 2 - THE ECONOMIC POLICY

“The Government's primary economic policy objectives are high employment, an equitable distribution, the further development of the Norwegian welfare society and sustainable development.” This is the incipit of the Report no. 29 to the Storting, widely known as the Guidelines for economic policy, which have been faithfully followed by the governments since 2001 (Ministry of Finance 2001, p.1). The Norwegian governments chose to follow policies imprinted on the economic stability, in order to face effectively the cyclical fluctuations. Their target was and still is to set up an economic policy sustainable over time, in order to avoid the need for extensive policy shifts that could weaken the basis for public services. It is true that in the noughties government budgets showed substantial surpluses, thanks to the high prices of oil, with sizeable transfers to the Government Pension Fund, but it is also true that the population is ageing in the world and in Norway, which means that the expenditure on pensions and health care will increase sharply.

Government’s answer was not a tighter fiscal policy, but a widening of the share of petroleum revenues into the Government Pension Fund. One fundamental principle of Norwegian fiscal policy is the so-called budgetary rule, namely that, over the course of a business cycle, the government may spend only the expected real return on the fund, estimated at 4 percent per year. For example, 117.3 billion kroner was transferred to the national budget from the fund in 2013. However, as stated by the Ministry of Finance, “this rule should not be used mechanically and considerable emphasis should be placed on stabilising economic fluctuations.” (Ministry of Finance 2013). In fact, the Norwegian Prime Minister Erna Solberg has been elected in the 2013 with a program which had some points regarding a boost of expenditure for education, health care and infrastructure, coming from an increase of the percentage transferred from the fund.

The Government Pension Fund comprises two entirely separated sovereign wealth funds owned by the Government of Norway: the Government Pension Fund Global (formerly The Government Petroleum Fund) and the Government Pension Fund Norway (formerly The National Insurance Scheme Fund). The Government Pension Fund Global changed his previous name in 2006 and it is widely known as The Oil Fund. As written in the “Guidelines for economic policy”, “The Government Petroleum Fund was established in 1990 with a view to safeguarding longterm considerations in the use of petroleum revenues. The Fund's income is the net cash flow from petroleum activities and the return on the Fund's capital, while the Fund's expenses comprise a transfer to the central government budget to cover the non-oil budget deficit. Transfers to the Fund comprise the capital remaining when the Storting has decided the share to be used for consumption and investment over the central government budget” (Ministry of Finance 2001, p.3). The Norwegian Central Bank manages the fund and it is currently the largest pension fund in Europe, even though it cannot be considered a pension fund in the traditional sense, due to the fact that it is financed by oil profits, not by pension contributions. The Norwegian Ministry of Finance forecasts that the fund will reach NOK 10 trillion (€1.2 trillion) by the end of 2019, such a huge amount of money that the government could use for investments and to improve its pension system, in an uncertain future of population ageing and globalization challenges. The graph below (figure 8) shows with extreme clarity the huge increase of the Government Pension Fund in the last 15 years.

**Figure 8: Market value of the Government Pension Fund Global**



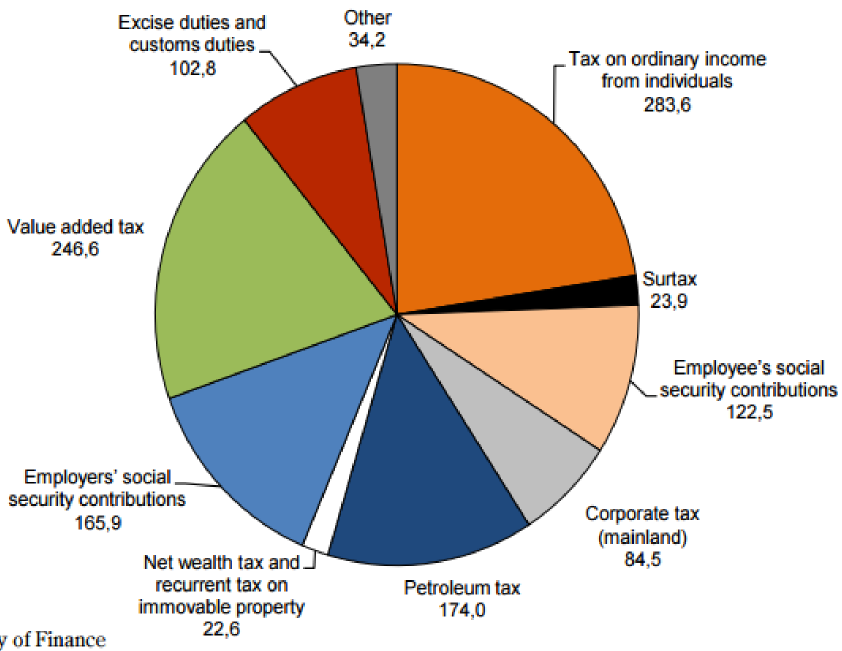

## 2.1 THE FISCAL POLICY

In 2013, the total tax revenue was 40.8% of the gross domestic product[7]. Of the OECD member countries Austria, Belgium, Denmark, Finland, France, Sweden and, surprisingly, Italy had a higher tax revenue than Norway. The taxes are paid for a large extent to the central government, which uses them to invest for public services. In fact, the relatively high tax level, however lower than the other Nordic states, can be explained by the presence of a huge welfare state. The tax system has a counter-cyclical effect. It is flexible enough to adapt itself for good times and declining periods, with the decline or the increase of tax revenues. The figure 9 shows that the main sources of tax revenues are tax on ordinary income, value added tax, petroleum tax and employers' social security contributions. Taxes are divided into direct and indirect taxes. If we look at the figure below, we can summarize the direct taxes into two big groups: the tax for individuals (tax on ordinary income, employee's social security contributions and surtax) and the tax

[7] OECD Statistics, URL: http://stats.oecd.org/index.aspx?DataSetCode=REV

for enterprises (petroleum tax, corporate tax). Direct taxes account for 72% of overall taxes revenue, and the other 28% is accounted by indirect taxes. They include value added tax, which is the main source for indirect taxes, excise duties and customs duties.

**Figure 9: Accrued direct and indirect taxes**

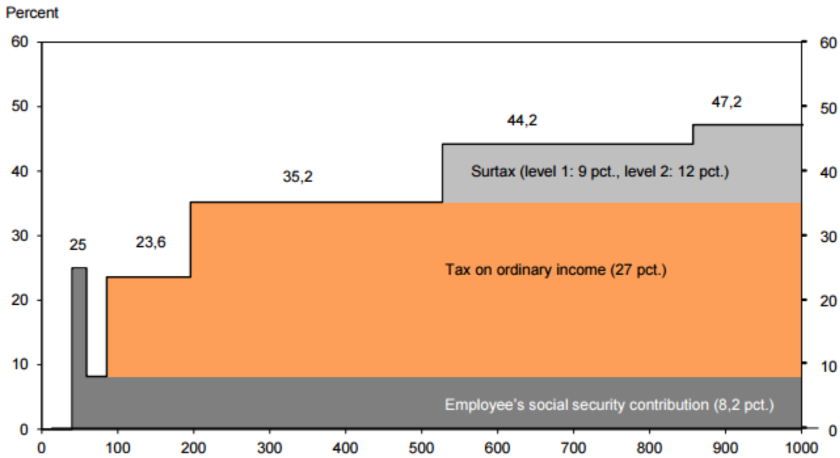



Source: Ministry of Finance

## 2.1.1 DIRECT TAXES

Following the Nordic model, Norway adopts a dual income tax. Under the dual income tax, capital income is taxed at a flat rate, while income from labour and pensions is taxed at progressive rates. Firstly, a flat rate tax of 27% is paid on "ordinary income" less the personal allowance and certain special allowances. Secondly, employee's social security contributions and any surtax are paid on so-called "personal income", which comprises gross wage income and pension income, without deductions of any kind (Ministry of Finance 2014, p.5). The fiscal imposition is progressive, which means that rich people pay proportionally a higher amount of taxes on their personal income. This progressivity is achieved by minimum allowances and surtax (figure 10).

**Figure 10: Marginal tax rates on wage income**[8]

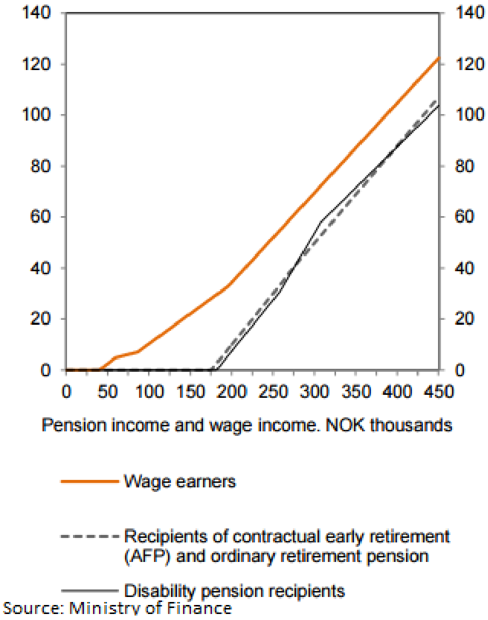



Source: Ministry of Finance, 2014

If we move our attention towards retired people and people with disabilities, since the basic allowance is somewhat lower for pension income than for wage income, tax rules are made in a way that pensioners and recipients of some social security benefits pay less tax than wage earners. The Government also granted a special non-refundable tax credit for pension income both to those on contractual early retirement pension and ordinary retirement pension. The result is that no taxes are paid on any pension income up to the minimum state pension, and less tax are paid on pension income than on wage income above that level. As it is showed in the figure 11, there is a clear difference in taxation between wage earners and recipients of pension (*ivi*, p.7).

**Figure 11: Tax on wages and pensions**

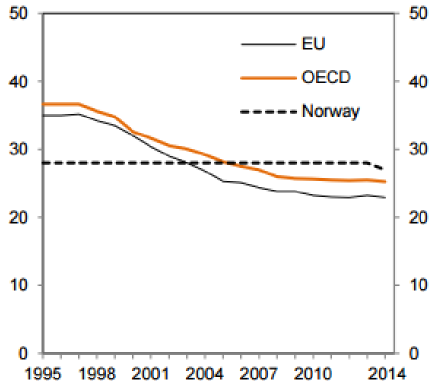
[8] Marginal tax rate on wage income (excluding employers' social security contribution). 2014 rules for a wage earner in tax class 1 with only wage income and standard reliefs. NOK thousands



Source: Ministry of Finance

For individuals, taxes can reach a level superior than 53%, but companies are treated with more softness, because their profits are taxed with a fixed rate of 27%. Moreover, to avoid chain taxation in the corporate sector, the tax system provides an exemption method, which implies that companies are exempted from the taxation of dividends and gains on shares. The graph below (figure 12) indicates that the corporate tax has remained the same during years, for long time less than the EU and OECD ones.

**Figure 12: Statutory corporate tax rates**[9]

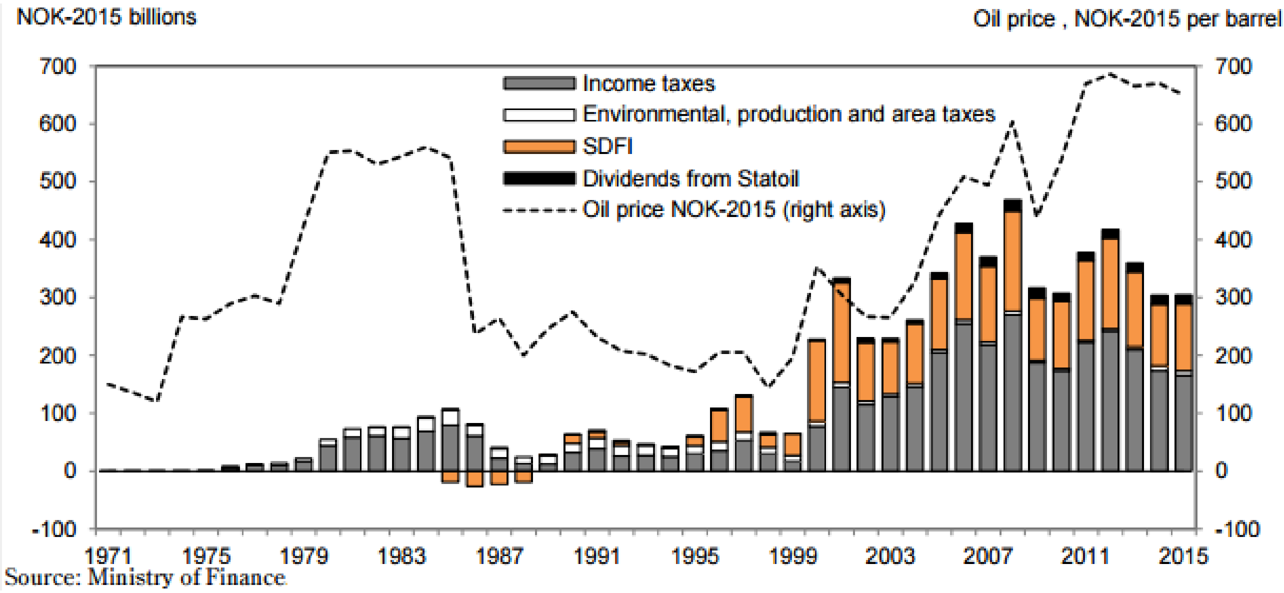


Sources: OECD, Eurostat and the Ministry of Finance

The taxation of petroleum activities is based on the rules governing ordinary business taxation. Considering the huge excess return associated with the extraction of oil and gas, the Government introduced a special tax of 51% on income from petroleum extraction, in addition to the ordinary income tax of 27%. Consequently, the marginal tax rate on the excess return within the petroleum sector is 78%. The Figure 13 shows the configuration of central government revenues from petroleum activities. If we leave all the factors equal, higher oil prices will result in higher profits for oil companies, and thus in higher revenues for the State. Conversely, government revenues from the petroleum industry will decline considerably when prices are low. Revenues have also increased over time as the result of higher production (*ivi*, pp.10-11).

[9] Statutory corporate tax rates in Norway, the EU-28 and the OECD (1995-2014)

**Figure 13: Oil price and petroleum revenues[10]**




Source: Ministry of Finance

## 2.1.2 INDIRECT TAXES

In Norway, VAT has a standard rate of 25%, higher than international and European rates, apart from Hungary (27%) and Iceland (25.5%). By the way, the standard rate of 25% is general, but we can found some reduction and exemption: foodstuffs are subject to a reduced rate of 15%, while a number of services are subject to a reduced rate of 8% (cultural events, museums entrance fee, cinema tickets). Certain goods are exempted, thanks to the so-called zero-rating, which implies full deductibility of value added tax on goods and service inputs, i.e. newspapers, books and periodicals (*ivi*, p.14).

Another important indirect taxes are the excise duties: "Excise duties are intended to fund government expenditure, but are also used as instruments for the pricing of the social costs of using products that are environmentally harmful or hazardous to health", as it is pointed out by the Ministry of Finance (*ivi*, p.15). The main difference between these taxes and the VAT is that, by using excise duties, the Government tries to shift consumption away from some products by putting on them these heavy taxes. In fact, they are useful to shorten the social costs

[10] Oil price and total net central government revenues from the petroleum sector. NOK 2015 prices

associated with the use of products that are environmentally harmful or hurtful to health. By the way, some of them are used only to enlarge government revenues, i.e. the reregistration tax on motor vehicles. Some examples of excise duties intended to safeguard citizens' health are tax on alcoholic beverages and on tobacco goods (*ivi*, p.16).

Of course, the high civic sense of Norwegian people helped this system to work in a proper way. The Nordic culture is respectful towards the government and there are few cases of tax evasion or frauds against the State. Moreover, Norway is fighting the shadow economy with one of the most evolved payment system around the world. Nowadays, as Finans Norge pointed out, "cash is used in only five percent of Norwegian transactions, with only Sweden and the UK having a lower level of cash usage than Norway". Finans Norge went beyond, stating that Norway should be cashless by 2020 (Wimborne 2014).

We can say that it is true that there is high taxation in Norway, but it is accompanied by a lower taxation of businesses and, moreover, by an entrepreneurs-friendly's structure, characterised by small prices and small bureaucracy needed to start a new business. According to the World Bank Group, Norway is 6th in the "Doing Business 2015" Ranking[11], and the small bureaucracy means that entrepreneurs need just 5 days to start a new business. There are four phases that need to be accomplished: one day to deposit initial capital, three days to register with the Register of Business Enterprises, one day, simultaneously with the previous procedure, to enrol in the mandatory workers' injury insurance and three days, simultaneously with the previous procedure, to arrange for mandatory occupational pension plan for employees. The total cost to start a new business is approximately 700€, a very small price if compared to the Italian counterpart. In Italy, to start a new business it is necessary to pay at least 3500€, plus other charges to buy

[11] World Bank Group, Doing Business, URL: http://www.doingbusiness.org/data/exploreeconomies/norway/

corporate books and accounting books (Doing Business 2015). The Norwegian government shows to have understood that the oil sector and the public sector cannot be the only sources for its revenues, while it is important to boost the birth of new businesses and to promote the individual economic initiative, in order to improve the heterogeneity and the freshness of its economy.

## 2.2 MONETARY AND FINANCIAL STABILITY POLICY

### 2.2.1 NORGES BANK: FROM CRISIS TO RECOVERY

The analysis of the banking crisis of the 1990s is important to explain how the Norwegian government reached to overcome the financial crisis in 2008 almost without any suffer. Banks' structure was still based on the old macroeconomic stability properties and did not reach to face the exchange rates trouble that ECU was suffering during 1992 (Steigum 2010, p.2). Moreover, since 1984 the Norwegian government followed the international trend of liberalization, dismantling the structure of quantitative restrictions that were posed on banks for credit lending. Exposed on an international competitive and liberalized environment, with a downward pressure on the interest rate, the Norwegian banks started to expand their lending also to borrowers with uncertain guaranties of payment. With low interest rates, many Norwegian families were motivated to enlarge their debt level. In such contest, Norges Bank could not do anything to stabilize domestic demands, because concentrated on maintaining stable the exchange rate. In a situation of fixed exchange rate, many Scandinavian banks, and the Norwegian banks to some extent, started to borrow money in foreign currency. Given that the fixed exchange rate would have continued, they decided to borrow in foreign currencies at rates lower than domestic interest rates. As a result, exchange rate and liquidity risk was high (Sandal et al. 2004, p.84). Once the fixed exchange rate regime collapsed, the bankruptcies of many banks exposed with the foreign currency borrowing was behind the corner. The collapse arrived when the continuously pressure on the

Norwegian krone became unsustainable, with high level of inflation, due to the European monetary instability. The first government answer has been the creation of a crisis management institution, the Government Bank Insurance Fund (GBIF), a huge fund (0.6% of 1991 Norwegian's GDP) with a clear mandate of providing loans to the two private guarantee funds previously existing (CBGF[12] and SBGF[13]) to enable them to perform their roles (*ivi*, p.88). The situation became worse and very critical when the mergers of small or medium banks in larger and healthier ones were not enough to prevent losses and collapse. Therefore, Norges Bank decided to intervene, by ensuring investors and banks that it would have secured the necessary supply of liquidity to the suffering banking system (*ivi*, p.89). Moreover, the government decided to bail out the three largest commercial banks, in order to avoid the collapse of its economy, not financing them but nationalizing them. Another response given by the government has been the improvement of FSAN means and the enlargement of its members. FSAN, namely the Financial Supervisory Authority of Norway, or *Finanstilsynet*, "is an independent government agency that builds on laws and decisions emanating from the Parliament, the Government and the Ministry of Finance and on international standards for financial supervision and regulation"[14]. In addition, the Norwegian government chose to become owner of a portion of the bank hit by the crisis, also many years after the crisis was resolved. Prior to the crisis, these banks had all been privately owned (Vale et al. 2004, p.3) Nowadays, almost all of government's bank ownerships have been sold. From the banking crisis to the following financial crisis, the Financial Supervisory Authority of Norway showed to have a prudential supervision of financial movements, a very different approach if compared to the English FSA, which treated financial movement with a "light touch". FSAN's supervision was stronger and more active,

[12] Commercial Banks' Guarantee Fund
[13] Saving Banks' Guarantee Fund
[14] Finanstilsynet, URL: http://www.finanstilsynet.no/en/

with regular on-site inspections and close contact (quarterly meetings) with managements of the most important financial institutions. Furthermore, the Ministry of Finance inaugurated a close cooperation with FSAN and Norges Bank, thanks to which they share financial reports and have regular meetings to discuss financial stability issues. For example, after the failure of Lehman Brothers in October 2008 and the collapse of the international money markets, there have been frequent meetings between them to discuss ways of securing medium-term bank funding (Steigum 2010, p.7). As I said before, Norway showed to have learnt from the lesson, because their banks suffered a relative low amount of losses in the recent financial crisis. Once got over from the bank crisis, the Norwegian economy felt the positive effects of many factors: high prices of petroleum, the devaluation of its currency and an international boom. After the above mentioned bank restyling, the recovery has been fuelled by two factors: the acceleration of offshore oil investments and the continuous growth of public expenditures.

### 2.2.2 THE NORWEGIAN KRONE AND THE EURO

**Figure 14: Euro exchange rates NOK**

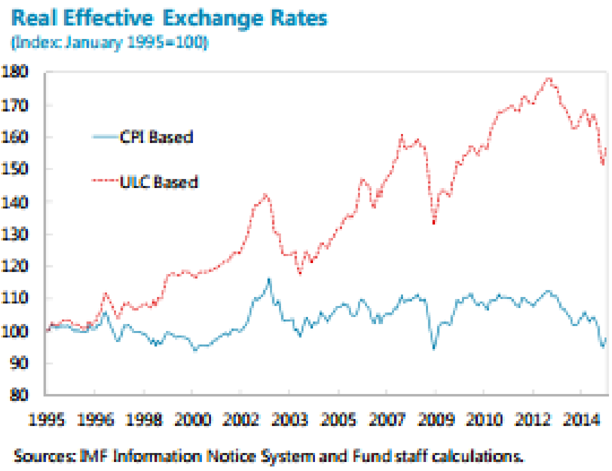
Norway has a floating exchange rate. The exchange rate between Euro and NOK is 8.90 (July 2015) (figure 14). To understand how much is important the relationship between Euro and NOK it is enough to underline the enormous amount of trading between Norway and the European Union: in fact, the European Union is the first major import and export partner for Norway, capturing 74.3% of the latter's trade[15]. What is also true and maybe more important it is what it happens in the Eurozone, especially in this period of quantitative easing and of increasing inflation, a way by which the ECB is trying to answer to a low and somewhere inexistent economic growth. The financial crisis in 2008 revealed a fragile financial system in several of the member of the Eurozone, the so called PIIGS, which showed the presence of an enormous debt (Lindeberg, Jacobsen 2011, p.49). The debt situation is a challenge for the whole EU and the Eurozone and a lot of resources have been allocated to re-establish economic and financial stability, but the results are still uncertain (*ivi*, p.52), and during the last months has been considered also the reversibility of Euro. Of course, this uncertain situation has the direct consequence of weakening the European currency throughout its exchange rate. If the EU experiences low economic growth, this can have a negative effect on the demand for Norwegian goods. This would bring to a reduction of the demand for the Norwegian krone and, indirectly, the NOK/EUR exchange rate could be affected if the euro depreciated on a general basis. This depreciation could come as a result of decreased demand for euro-goods and services. A weaker Euro would make Norwegian goods less attractive, due to an unfavorable exchange rate (*ivi*, p.52). A stronger Euro and a stronger European Union it is what Norway hopes, especially in such situation in which the Norwegian economy is so exposed with its large amount of trading with the European Union.

[15] European Commission 2015, URL: http://ec.europa.eu/trade/policy/countries-and-regions/countries/norway/

### 2.2.3 NORWAY'S REAL EFFECTIVE EXCHANGE RATE AND ITS EFFECT ON COMPETITIVENESS

The Norwegian real effective exchange rate (REER) based on the CPI[16] has been broadly stable during the last 20 years, giving us the impression that Norway has maintained its price competitiveness relative to its international competitors. Nevertheless, the measure of this index does not take into account some substantial factors, the most important of which are cross-country differences in consumption models, and domestic differences in the costs of unit labour. Moreover, based on CPI REER is not the advisable measure for competitiveness in such a small open economy, because the prices are mostly determined by external price expansion. To sustain our arguments, if we look at the following picture (figure 15), REER based on unit labour costs (ULC) suggests an erosion of price competitiveness over time.

**Figure 15: Real Effective Exchange Rates**




The domestic cost conditions are fairly better described by the ULC-based REER. The figure records one of the highest appreciations among Norwegian competitors and is now significantly above its long-run historical average (IMF 2013, p.5). This appreciation can be explained by both the high wage growth and low labour

[16] Real Effective Exchange Rate (REER) is a measure of the trade-weighted average exchange rate of a currency against a basket of currencies after adjusting for inflation differentials with regard to the countries concerned and expressed as an index number relative to a base year. Based on the CPI means that the real exchange rate is computed with the consumer price index.

productivity growth. While Norway has one of the highest GDP-per hour worked data, productivity growth has been much lower for the past decade than two decades ago, namely that unit labour costs have had an enormous growth in the noughties than in the nineties. Wage growing is easily explained by referring to the growth of the oil industry, which in the last years is expanding its influence also in the mainland economy. What it has been found is that the “oil effect” is reflecting also in non-oil industries: the rise in wages occurred in the oil industry is affecting also the other industries, which have sharply rose wage shares in recent years, reflecting the steep increase in unit labour costs. Moreover, oil industry has also an indirect effect on the mainland economy, because many industries such as engineering are growing thanks to their relationship with the hydrocarbon sector. Brought together, all of this data show that Norway is losing international competition if compared to many of its peers, and even if the market share for oil industry is remaining steady, the manufacturing export is losing a growing percentage of market share over the past few decades (ivi, p.8). In such situation, made worse by low oil prices, the Norwegian government is called to intervene in a stronger way, by enhancing the productivity growth and by putting more attention towards renewable energy industries, in order to reduce the growing dependence of the mainland economy on the oil industry.

# CHAPTER 3 - THE NORWEGIAN WELFARE STATE

## 3.1 A COMMON NORDIC MODEL

In this chapter, we often will not refer to a specific Norwegian welfare model, but rather to a Nordic model. In fact, unlike the rest of Europe, the Nordic societies share a common set of basic values. Of course there are singularities in every nation, but the big amount of similarities between these countries is sufficient to constitute a recognisable “Nordic welfare model”. It is also known that the countries will face almost all the same challenges in the future. Thanks to their co-operation, Nordic states can reach the social innovation of the region Nordic by sharing experiences across national borders.

As summarised by Stokke et al. in “Labour Relations in Norway”, the Nordic model, and specifically the Norwegian one, is characterised by a huge expenditure for welfare arrangements, which are universally guaranteed, and a large public sector. Also, there is high employment among both men and women, small wage differences and a large degree of social mobility. Wages are negotiated with a Nordic exclusive tripartite technique: close co-operation between the government, employers’ associations and trade unions (Stokke, Løken, Nergaard 2013, p.7). According to Andersen et al. in their “The Nordic Model”, this model is “widely regarded as a benchmark. Many comparative studies of economic and social performance have ranked the Nordics high”. A common finding of such comparisons is that the Nordics succeed better than other countries in combining economic efficiency and growth with a peaceful labour market, a fair distribution of income and social cohesion (Andersen et al. 2007, p.11). Moreover, for many scholars the model is considered as an exportable source of inspiration. For example, Anthony Giddens, the proponent of New Labour’s third way, in its “Progressive Futures - New Ideas for the Centre-Left” has suggested that it offers “a policy framework of relevance to a diversity of societies” (Giddens et al. 2003 p.32) even if, as he observes, it is not necessarily possible simply to duplicate what the Nordic countries have achieved. Some other scholars ask themselves how Nordic economies can prosper and grow in presence of weak economic incentives like high tax wedges, a generous social security system and an egalitarian distribution of income. Critics have been looking for inner contradictions in the model and they have questioned its sustainability. Some goes beyond, arguing that “the economic performance of the Nordic countries, especially for Norway, is simply a result of exceptional and temporary advantages” (Andersen et al. 2007, p.11), i.e. the growing percentage of oil revenues used by the government to sustain its welfare. Both the points of view have some solid points but our purpose is to provide a deeper analysis of this very well functioning welfare model.

## 3.2 THE NORWEGIAN LABOUR MARKET

As stated by Ministry of Finance in the report “The Norwegian welfare model - prosperous and sustainable?”, “Labour is by far the largest component of our national wealth. The value of our work today and in the future amounts to 85 percent of total national wealth” (Schjerva 2012).This very high percentage can be explained referring to the high productivity growth together with low unemployment rates, one of the lowest in Europe. In fact, while almost all the Eurozone states failed to face the 2008 financial crisis, Nordic countries, especially Norway, almost did not feel any crunch in the labour market, showing that the way taken from the last 40 years to reform the labour market is the right one. The labour market in Norway is based on some crucial points:

- Substantial public investments by the government in the human capital and in labour market programs;
- Flexible labour market policies (about 60 percent of the economic shock was absorbed by internal flexibility);

- Tripartite technique of bargaining between the State, the employers' associations and the Trade unions;
- Small differences in wage between the richest and the poorest;
- Gender equality (the female labour force participation increased from 50% in the beginning of the 70s to 76% in 2011).

Labour market policy has traditionally been directed at ensuring subsistence for the unemployed, as well as at helping them to find new employment. Unemployed workers can receive unemployment benefits over a maximum period of two years, with a level of compensation which did not suffer any change over the past decade. Like many other countries, Norway in recent years posed an increasing attention on measures to aid an early return to work. The government instituted a huge number of different types of labour market programs for job seekers, training, job skills training and job application courses. The attention is posed also to aged workers: in the national pension reform, the emphasis was on creating a stronger correlation between the accumulation of pension rights (i.e. the number of years worked as well as income level) and actual pension payments. Moreover, the new pension system makes it easier to combine part-time retirement and employment. It is also a way to encourage older workers to remain in employment longer and to encourage full time employment. In fact, people who stay more will gain more in their pension. The reason which surrounds these kinds of policies must be found in the increasing demographic challenges that, over time, will lead to a situation of fewer people in employment to support an increasing number of elderly (Stokke, Løken, Nergaard 2013 p.16).

Labour relations are regulated by a combination of legislation and legally binding collective agreements between trade unions and employers' associations or single employers. The legal framework is based on a three-tier collective bargaining system where the government deals with the employers' associations and the Trade

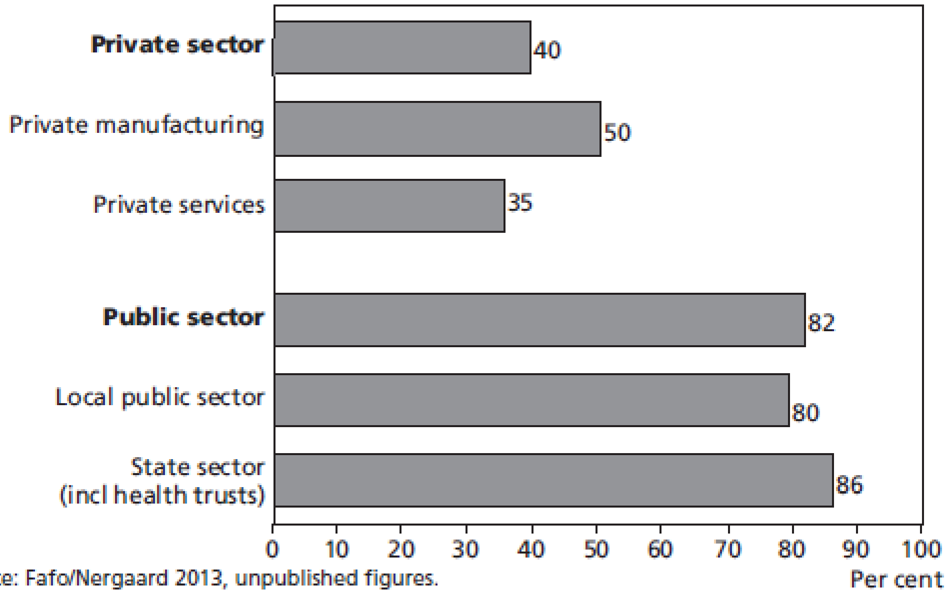
Unions. The rights of the individual employee find their regulation in the "Working Environment Act". As stated by Stokke et al. in "Labour Relations in Norway", "the scope of this act is to ensure safe physical and organisational working conditions and equal treatment among workers, and to ensure that the working environment forms a basis for a healthy and meaningful work situation. It regulates matters such as working environment (health and safety etc. in the workplace), working time and rights to leave, protection against discrimination, hiring and dismissal protection, including also and transfers of undertakings" (Stokke, Løken, Nergaard 2013, p.17). This act applies to all private and public employes, with the exception of seafaring and fishing, which are regulated by separate legislation.

Concerning the collective labour law, the basic piece of legislation is the "Labour Disputes Act". Firstly written in 1915, it has been recently renewed (2012) and it is based on the promotion and strengthening of collective agreements as an instrument for regulating wages. It creates also a mechanism for peaceful solution of industrial disputes. In fact, it formalized a distinction between disputes of interest and disputes of rights previously included in collective agreements. The Labour Disputes Act applies to both the private and the municipal sector.

The National Insurance Act regards employees' social welfare entitlements, which are negotiated by the individual employee and the authorities. The target of national insurance is to provide benefits in the event of sickness, pregnancy, childbirth, unemployment, old age, disability or death of the family bread-winner. Provisions are also offered to single-parent families. All the benefits regarding illness, parental leave or unemployment vary according to income, while pension allowances are calculated according to the number of years in employment as well as previous income. These agreements define obligations for both employers and employees, and grant rights. According to the Labour Force Survey (2012), 54% of all employees in the private sector are covered by a collective agreement. We also know that in the public sector all employees are covered. Given that public sector has 100% coverage, the coverage of collective agreements in the whole labour market is approximately 70% (Stokke, Løken, Nergaard 2013, p.35). This number shows the presence of a large public sector: in 2010, according to OECD, one worker out of three worked in the general government sector. These employees work in various fields including education, healthcare, and for the government itself. This percentage is double the OECD average of 15%, with a clear consequence: Norway has the highest level of general government sector employment as a percentage of the labour force of all OECD countries. Moreover, Norway has a very well-functioning trade union scheme, which is fundamental in a country where the agreements apply to all the public workers. Based on union membership statistics and the number of employees estimated by Labour Force Surveys, the trade union density is 52%. While we have a density of 80–85% in the public sector, in the private sector it is 40% (figure 15). To understand the extent to which trade unions are present in the Norwegian labour market we can make an easy comparison between Norway and Italy. In Norway, one worker out of two is enrolled in a trade union, while in Italy only one worker out of three[17]. By the way, the density is lower than the other Nordic states, due to the fact that unemployment insurance in Norway is organised by the state and not by the unions as it traditionally is in these countries. The percentage of women enrolled in a trade union (59%) is a bit higher compared to men's one (51%). The main explanation for this difference is the fact that many women are employed in the public sector.

[17] OECD. Stat (2013), URL: https://stats.oecd.org/Index.aspx?DataSetCode=UN_DEN#

**Figure 16: Trade union density by sector, in %**

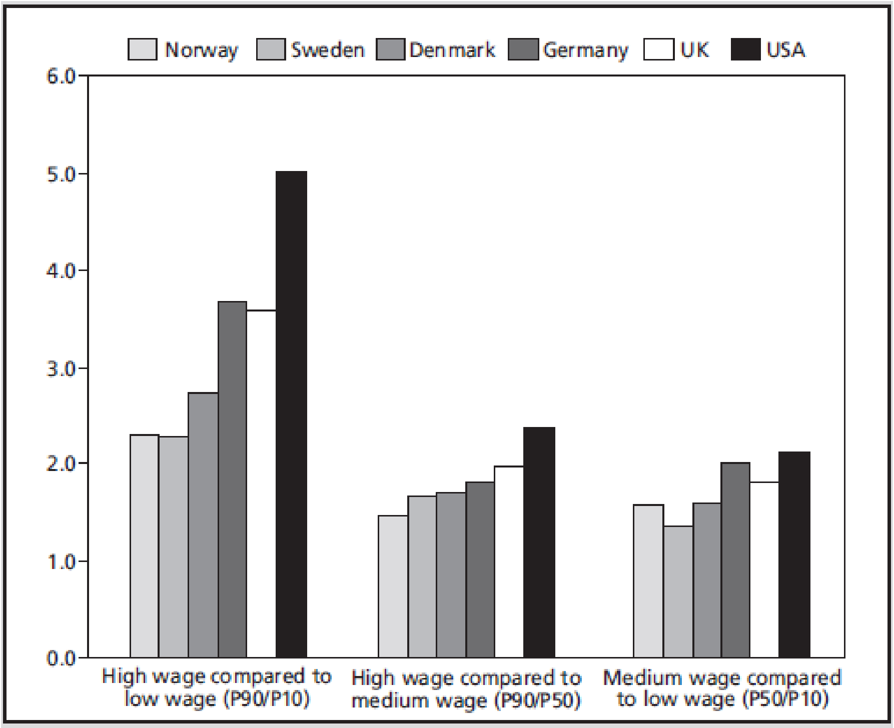



Source: Fafo/Nergaard 2013, unpublished figures.

The trade unions negotiate also wages. They are regulated in collective and individual agreements: there is no statutory minimum wage in Norway, even if wage agreements normally contain minimum pay rates. While blue collar workers receive a salary based on a fixed system where their experience and skills are key elements, white collar workers have individually determined wages, and the bargaining regards the yearly increase of these wages at the company level (Stokke, Løken, Nergaard 2013, p.37). Of course, in the agreements there are also elements of variable pay based on individual or company performance. When talking about wages, what it is important to underline is that Norway, together with Nordic countries, has the most compressed wages in the world. This indicates that Norway has a high degree of social equality, fact confirmed by one of the lowest Gini's coefficient of the world (25)[18]. As it is shown by the chart (figure 17), there is no big difference in all the three comparisons (high-low wages, high-medium wages, and medium-low wages).

[18] CIA: The World Factbook. URL: https://www.cia.gov/library/publications/the-world-factbook/rankorder/2172rank.html
(If income were distributed with perfect equality the index would be zero; if income were distributed with perfect inequality, the index would be 100).

**Figure 17: Differences in wages**




Source: OECD – Distribution of gross earnings of full-time employees (2010/last available year)

The government is also trying to reduce the gender pay gap: women's wages as a proportion of men's wages were 86.5% in 2012. In the public sector the number was 88.9%, and in the private sector it was 84.1% (Statistics Norway 2012). There is still much work that has to be done, but the way is right because the gender wage gap is one of the lowest in the world. The Global Gender Gap Index 2014 is based on a ranking where the highest possible score is 1, which means perfect equality and the lowest possible score is 0, which means no equality at all. In this ranking Norway holds the third place, with a score of 0.84[19], showing that this country has made a huge effort to promote gender equality. First, the things started to change with the the improvement in women's political representation. Female politicians, thanks to their position, started to promote "women-friendly" policies and the government changed its agenda into a more gender inclusive perspective. In many countries the radical feminism and their protests are rarely accompanied with a strict

[19] World Economic Forum: Global Gender Gap Index 2014, URL: http://reports.weforum.org/global-gender-gap-report-2014/rankings/

collaboration with the “state feminism”, but in Norway it is different. There is a close interplay between women politicians and autonomous women’s organizations which is fundamental to realize many women inclusive policies. Apart from the advantageous collaboration, what really did matter has been the highly developed social infrastructure of services and leave provisions, which characterizes the Norwegian welfare state. According to Huber and Stephens’ cross-national analysis “public delivery of a wide range of welfare state services is the most distinctive feature of the social democratic welfare state and that this feature is a product of the direct and interactive effects of social democracy and women’s mobilization” (Lister 2009 p.252). Some scholars go beyond, defining Norway “a caring state”, a State that extends provision and public care services for both children and older people, in an universalistic view. Particularly important is the treatment reserved to lone working mothers: the available evidences show that single mothers who meet poverty are a very low percentage(Lister 2009 p.53), if compared to the United States one, where almost four single mothers out of ten are poor (The poverty rate for single-mother families in 2013 was 39.6%, according to the Single Mother Guide)[20]. One of the factors which contributed to such gender equality is the “parental choice orientated” model, by which both parents can decide by themselves how to use the parental leave. In Norway the statutory parental leave is either 49 weeks at 100% salary or 59 weeks at 80% salary to be divided between both parents but with some constraints as to how much a mother must take and how much a father must take. One Norwegian exception is the so called “daddy quota”, an earmarked leave for fathers on a use it or lose it basis. Norway has been the first country to introduce the father’s quota in 1993, and some scholars have argued that it is thanks to an individual component in the allocation of parental leave that we have a growing gender equality in the country. In fact, in models

[20] Single mother guide, Poverty. URL: https://singlemotherguide.com/single-mother-statistics/

where the parental leave is given to the family, the majority of times it is the mother who uses it, exacerbating the difference in productivity between men and women. By doing so, employers are more reluctant to assume women, and this brings to a phenomenon of growing gender inequality. The obligation for the father to take a period of parental leave is fundamental to reduce obstacles to women to combine employment and children and to make it easier for men to start a closer relationship with the son, staying more time with him during the first period of his life. It is also important to underline the combination between high labour force participation and high birth rates, which leaded the government during time to put much attention on welfare policies. For example, referring to studying women, they are allowed to freeze their studies in order to take care of their child. Such policies heavily contributed to Norway's fertility rate, which is close to the 2, compared with the EU average of 1.5[21].

In conclusion, the Norwegian government shows to have developed a very well-functioning model, which covers all the fields of Norwegian society. Challenges are the growing population, the integration of the immigrants, and the gender equality, but the government seems to be well prepared to such challenges, because such themes now hold the top positions on the policy agenda.

## 3.3 THE NORWEGIAN LABOUR MARKET AND THE EUROPEAN LABOUR MARKET

After the sign of the EEA agreement in 1994, Norway is incorporated into the EU single market. The EEA sets framework conditions for companies and labour relations. The single market presents free movement, competition, state support as well as minimum worker rights rules, and all the European states, as well as Norway, are obliged to respect the common rules and to implement the internal market. In Labour Relations in Norway Stokke et al. stated that "With respect to worker rights,

[21] The World Bank, 2013. URL: http://data.worldbank.org/indicator/SP.DYN.TFRT.IN
(Total fertility rate represents the number of children that would be born to a woman if she were to live to the end of her childbearing years and bear children in accordance with current age-specific fertility rates.)

the main rule is that the EU decides minimum standards, while although the countries may have higher standards" (Stokke, Løken, Nergaard 2013, p.53).
During years, Norway, as part of the EU market, adopted some important directives from the European Commission, concerning labour issues. One of them is the *Council Directive 98/59/EC of 20 July 1998,* which primarily interests the employer, which has to inform workers about planned redundancies and to discuss the reduction of negative effects with employee representatives (*ibidem*). The *Council Directive 2001/23/EC of 12 March 2001* was established as a warranty for individual workers' rights in case of transfers of undertakings. It states that the rights and obligations of the former employer, for example employment conditions, need to be transferred to the new employer. The new employer must respect the collective agreements previously signed with the former employer unless he declares in writing that he does not wish to be bound by it. The transferred employees will nevertheless have the right to retain the individual working conditions follow from the collective agreement until it expires. Moreover, the *Directive 2002/14/EC of the European Parliament and of the Council of 11 March 2002* gives some other rights to the workers. They must be informed and consulted on economic situations and on important decisions likely to lead to substantial changes in work organisation or in contractual relations (*ivi*, p.54). The *Directive 96/71/EC of the European Parliament and of the Council of 16 December 1996* is related to the condition of posted workers. "We say a worker is "a posted worker" when he is employed in one EU Member State but sent by his employer on a temporary basis to carry out his work in another Member State." (European Commission). According to this directive, these workers are entitled to some statutory working conditions in the host country, such as provisions relating to the work environment, work and rest time, paid vacation and minimum pay as well as overtime pay. Minimum and overtime pay apply only if followed by a specific legislation or generalized collective agreements in

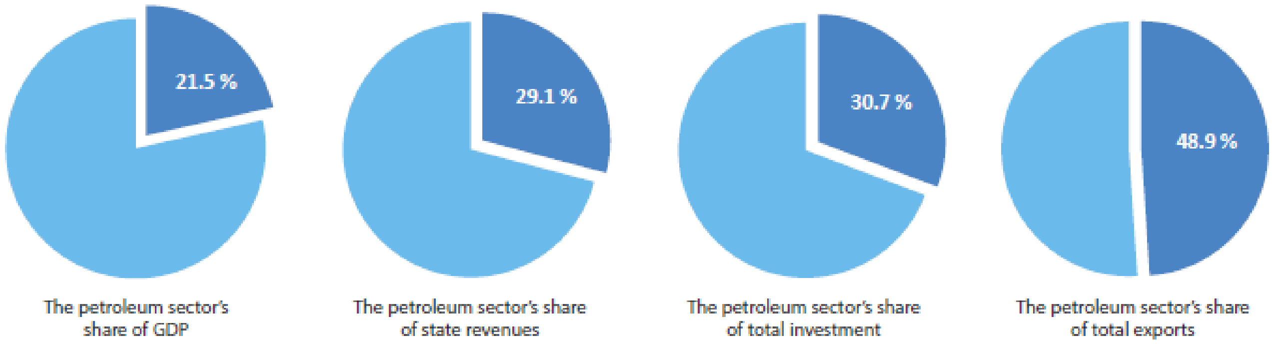
the host country. In Norway, the directive has been incorporated into the working environment act, and through an administrative provision under this act (*ivi*, p.55). The *Directive 2006/123/EC of the European Parliament and of the Council of 12 December 2006* regards the employers and it establishes the right to provide services and to establish business activities across borders. The directive requires the removal of obstacles to the free establishment of businesses and provision of services within the EU/EEA area (*ibidem*). As we observed, Norway had in fact very few such obstacles to the establishment of new businesses.

## CHAPTER 4 – THE NORWEGIAN BLACK GOLD: THE PETROLEUM ACTIVITY AND ITS FUTURE CHALLENGES

The oil experience in Norway has a relatively recent history: even if the first step by the Norwegian government has been made in May 1963, when it proclaimed sovereignty over the Norwegian continental shelf, the fundamental data is the 1969, when the Ekofisk field was discovered. Since this year, the government followed different ideological approaches to the exploitation of oil resources. In the first years the authorities gave freedom to the foreign companies dominate exploration among the Norwegian shelf, until the creation of state-owned oil societies, like Norsk Hydro, Saga Petroleum, and Statoil, which showed the growing participation of the state. Moreover, it was established a principle which gave the state a 50% ownership interest in each production license gave to foreign companies. Only in 1993 this discriminating principle has been changed and now the State participation is decided case by case.

Nowadays, the oil industry is Norway's largest industry and during time, governments showed to have done much work to promote a sustainable and fruitful development of this resource. "2013 was yet another good year in the Norwegian petroleum sector. The activity level is high; the shelf is explored, resources discovered, fields developed and hydrocarbons produced and sold. Norwegian petroleum activities have been the dominant domestic industry for decades and have contributed to huge value creation, a substantial number of jobs and wide-ranging effects in local communities." According to these words pronounced by the former Minister of Petroleum and Energy, Tord Lien, in the latest "Facts – The Norwegian petroleum sector" (2014), the Norwegian government has many reasons to be truly optimistic for the future. The so called "Norwegian oil experience" is something that the Latin American countries, especially Venezuela, took inspiration from, to form their petroleum industry root. The model is characterized by high competiveness, with the massive presence of private companies which extract petroleum, high productivity, thanks to a huge budget dedicated by the government to investments and to R&D sector, high regulation, thanks to a legal framework based on The Petroleum Act, and high taxes, which serve to finance the Government Pension Fund. The oil industry is managed in a way that reached to combine the logic of profit which moves the action of oil companies, with the wellness of Norwegian society. This is the reason why the State posed a high tax pressure on oil revenues, taxes that serve to finance the Norwegian welfare state. In fact, one of the function of the Government Pension Fund is to finance the high-costly Norwegian welfare. To understand the real impact of the oil sector on the fiscal budget, the pie chart that now follows (figure 18) is very useful: it shows that almost 1 out of 3 State's total revenues come from the petroleum industry. The other data contained in the figure show the real extent of the importance of the oil industry in Norway. The whole oil sector accounts for 21.5% of the total Norwegian GDP, and this is witnessed by the high portion of Norwegian population employed into that industry. Oil companies and companies that supply the petroleum industry now employ about 150000 people. If we move toward the total effect of the petroleum industry, the number of people employed is approximately 250000 (Ministry of petroleum and energy 2014, p.13), showing that it is a neuralgic sector of the Norwegian economy. The attention kept by the government on this sector is also remarked by the percentage of government investment on oil, which is 30.7% of State total investment. The petroleum industry is also fundamental for the exports sector, because almost 1 out of 2 goods exported by Norway refers to this industry.

**Figure 18: Macroeconomic indicators for the petroleum sector, 2013**




*Source: Statistics Norway, Ministry of Finance*

Companies which are involved in exploration, production and infrastructure are more than 50, showing, as I noted before, that there is a high degree of competiveness which promotes efficiency. The largest company on the Norwegian shelf in numbers of production volumes is Statoil, followed by international companies such as Shell, Total, ConocoPhillips, Eni.

## 4.1 THE FRAMEWORK OF THE PETROLEUM INDUSTRY

Given that the petroleum exploitation is a high-risk activity, the Government has set during years a clear and predictable framework, to give to the companies the possibility to make good decisions, to safeguard the environment from disastrous consequences and to ensure the population that the value created will benefit the entire society.

The legal framework is based on The Petroleum Act (Act No. 72 of 29 November 1996 relating to petroleum activities) which gives the general legal basis for the licensing system related to petroleum activities. First of all, the act confirms that the State owns the petroleum deposits on the Norwegian continental shelf. This means that in all stages of the petroleum activity official approvals and permits are needed, from the exploration to the production, until the management of field cessation. In order to prevent an indiscriminate exploitation that could threaten the North Sea environment, the act set out a precise regulation for the exploration of the Sea. In fact, before to give a production license, impact assessment are needed to underline

the financial, social and, most important, the environmental impact that the activity could have. Licenses are given after a Government decision: each year a certain number of blocks are made available for the production and companies interested into the exploitation of a block can apply for it. The criteria for the assignation of the licenses are the relevance, the objectivity and the non-discrimination. Once received the license, the company has the exclusive right of exploitation in a certain block, within the area covered by the license, which is valid for an initial period (exploration period) that can last for up to ten years (*ivi*, p.28).
The State institutions that handle with the oil sector are the Storting (the Parliament) and the Government, the first one adopting legislations, the second one throughout the activity of its ministries which transform policy into reality. In fact, the responsibility for the various roles in Norwegian petroleum policy is much differentiated: The Ministry of Petroleum and Energy accounts for resource management and the sector as a whole, the Ministry of Labour is relevant for its responsibility for regulating and supervising the working environment, as well as safety and emergency preparation in connection with the petroleum activities. The Ministry of Transport and Communications holds the responsibility for oil spill and for its transport all over the country and outside of it, while the Ministry of Climate and Environment is liable for the safeguard of the external environment (*ivi*, p.29).
The Ministry of Finance has the overall responsibility for taxation and fees from petroleum activities: Norway has a special system for State revenues from the oil industry, which can be explained with the huge amount of profits generated with the production of these resources. The Petroleum Taxation Act fixes the system for the oil taxation, which comprehends an additional special tax. The ordinary tax rate is 27%, while the special tax rate is 51%. State revenues are not only based on taxation, because the State, as a majority owner of Statoil, it receives dividends which are part of the petroleum activity revenues. Included into the total taxation

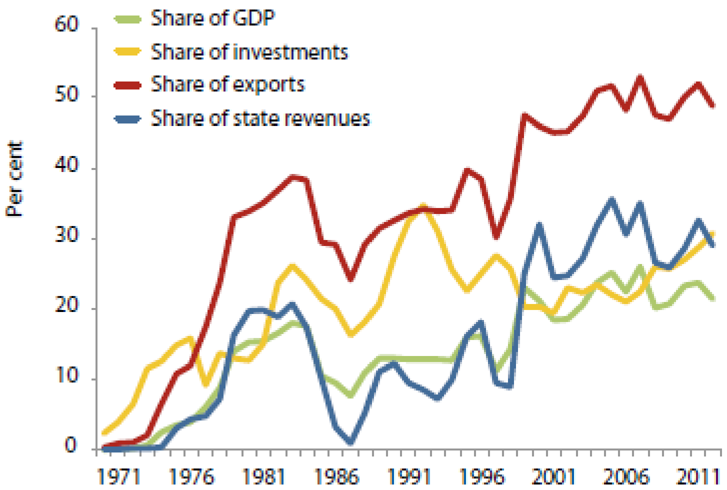
are the CO2 and NO taxes, the so called "environmental taxes" for the petroleum activities. Oil companies need also to satisfy emission requirements, in order to start their oil activities. These are not the only instruments used by the government to safeguard the environment and the climate: in fact, it has been introduced a comprehensive set of policy instruments in all phases of the petroleum activities, from licensing rounds to exploration, development, operations and disposal. Emissions and discharges to the sea from the Norwegian petroleum activities are regulated through several acts, like the Petroleum Act and the CO2 Act. In fact, Norway is one of the first countries in the world which introduced a CO2 tax in 1991. Thanks to the introduction of this tax, companies have worked harder to improve their productivity reducing emission reductions, in order to improve their profits. Oil companies have been also warned to keep the general flaring level on the Norwegian shelf low, which nowadays is lower if compared with the rest of the world level. Moreover, the collaboration between the authorities and the petroleum industry generated the so called "zero discharge goal": in other words, oil companies have committed themselves to reach the target of zero harmful discharges to sea; this goal has been achieved for added chemicals (*ivi*, p.48). As a result of strong policy instruments and joint efforts between authorities and oil companies as regards research, technology and expertise development, the Norwegian petroleum activities maintain a very high environmental standard compared with petroleum activities in other countries. The strict collaboration between the government and the oil companies, which remembers for some aspect the tripartite collaboration in the labour market, has been fundamental to the development of an environment-friendly exploitation of petroleum resources. Nowadays the Norwegian petroleum activities maintain a very high environmental standard compared with these activities in other countries.

If we move our attention to the supply industry, Norway has one of the highest skilled and internationally competitive supply industry, thanks to more than 40 years of petroleum activities in Norway. The service and supply industry currently consists of more than 1300 companies which provide instruments across the entire value chain: from seismic and drilling rig equipment, through valves, nuts and hoses for the shipyard industry, to advanced offshore supply and service vessels and subsea technology. This industry alone employed in 2012 about 125000 people all over the country (*ivi*, p.54). An external boost to the improvement of this industry has come from the conditions in which extraction is conducted. The North Sea is one of the roughest place where to extract petroleum, and Norwegian authorities, together with oil companies, have worked to adapt the supply industry to these conditions, improving technologies and infrastructures during time. To underline the importance of the supply industry, it can be noted that with its 125000 workers it alone represents the Norwegian second largest industry, after oil and gas sales.

## 4.2 THE FUTURE OF THE PETROLEUM INDUSTRY AND ITS CHALLENGES

"With the prospect of rigorous activity on the Norwegian shelf, the petroleum industry will remain Norway's largest and most important industry for years to come. Only 44 per cent of the projected total recoverable resources on the Norwegian continental shelf have been extracted." (*ivi*, p. 58). Following these words, the Norwegian oil industry should has a bright future in the years to come. The Norwegian government is making all the possible efforts to continue a sustainable exploitation of petroleum resources, concentrating on know-how projects and on the improvement of technologies. The R&D sector is fundamental in this sense and, thanks to it, today the Norwegian petroleum sector is founded on broad technical knowledge, continuous improvement of new technology and it is well prepared to face complex challenges. In order to maintain this level, the government ordered the birth of many research programmes, such as Petromaks 2, Demo 2000, Petrosenter. Petromaks 2 has an annual budget of 260 millions of NOK and this fund is used to finance a broad range of projects, from basic research at universities to innovation projects in the industry. It is very important for the oil industry because it has the overall responsibility for research that leads to the best possible management of Norwegian petroleum resources. More than a simple programme, DEMO 2000 is an important policy instrument used to test new technology solutions in the petroleum industry. The programme is mainly used by Norwegian businesses which offer technology to oil companies on the shelf. Petrosenter is a relatively new programme, established in 2013, with a joint function. In fact, it has as a main target to facilitate cooperation between the industry and research communities in order to apply new solutions in a quick way. Instead of diminishing, over the next ten years the oil production may potentially increase, thanks to the discovery of two new fields. But in a long term, more than R&D, what it seems to really matter is the availability of new fields, which is fundamental to maintain this production's pace. It is almost certain that new large discoveries are excluded, so the government purpose is to improve the research to find new small fields and, most important, to improve the productivity of the existing fields (*ivi*, p.59). With relatively stable investment costs in the future, the major challenges for these industries do not seem to be brought by the government, which instead shows to have a clear vision of continuing the exploitation of oil resources. Moreover, the resources do not seem to meet a breakdown at least in the next 50 years, according to the previsions of the Norwegian Ministry of petroleum and energy. What it seems to really matter in this context is the international market: oil price is something that neither the Norwegian government nor the oil companies can control, and for a country where almost 10% of the labour force (Statistics Norway, 2015) is involved into the oil industry an unpredictable factor is potentially a dangerous element. As we can see in the graph below (figure 19), the Norwegian economy is too exposed on the oil industry.

**Figure 19: Macroeconomic indicators for the petroleum sector (1971-2011)**




For oil countries is always hard to find the right balance in their economies, to avoid a complete dependence on oil. Thanks to the high presence of other energy resources, like hydropower (over 99% of the electricity production in Norway is covered by hydropower plants), Norway seemed to achieve the target to face an oil crisis, at least in the first period of it. The recent dropping in oil price shows its high dependence on this energy resource, firstly by its effect on the Norwegian krone: "The Norges Bank cut interest rates to a record-low 1 percent on June 18 (2015, a/n), and said it may need to ease policy further to avoid a recession in western Europe's biggest oil producer" as reported by Bloomberg (Meakin, De Aragao 2015). This is a consequence for the falling price of oil, which is now sold at 45€ per barrel[22]. The reaction of the Norges Bank underlines once more the fact that "Norway has become heavily leveraged to the oil price because of the perception that the Norges Bank is setting policy with one eye on the oil price," as said by Adam Cole, head of global foreign-exchange strategy at Royal Bank of Canada in London (*ibidem*). The government response is now at the study of the Prime Minister Erna Solberg, as she said in its interview at DN, a Norwegian newspaper: "Overall situation for the Norwegian economy is not that bad. But it is not enough to counter the fall from oil and gas. We are now assessing further measures" (Reuters 2015).

[22] Oil-Price, URL: http://www.oil-price.net/ consulted in date 09/09/2015

This is one of the worse period for the oil industry since the seventies and both the government and the central bank are working together in order to face this issue in a proper way. The situation now is worse than in July, and the Norges Bank is really doing “whatever it takes” to give breath to the Norwegian economy, as witnessed by the latest surprising cut of the interest rates occurred the 24th September 2015. The interest rate on NOK is now at a historical minimum (0.75%) and if the price of oil continues to remain low the central bank did not exclude another cut before the end of the year. During these months, the Norwegian government, together with the Norges Bank, is continuously lowering the growth prospects for the Norwegian economy, which it is now near to zero, if we also take into account the inflation of NOK. Before summer, the Norwegian government seemed to have the right tools to contrast this crisis, in order to maintain marginalised its consequences on the Norwegian economy, but during the last months the likelihood of a serious slowdown is under the eyes of the government, which will really need to pull a rabbit out of the hat to keep the macroeconomic indicators previously analysed at the pre-oil crisis level.

## CONCLUDING REMARKS

Before summer, the Norwegian government seemed to have the right tools to contrast the oil crisis, and its effect on the Norwegian economy appeared to be under control. Nevertheless, during the last months the likelihood of a serious slowdown is under the eyes of the government, which will really need to pull a rabbit out of the hat to keep the macroeconomic indicators previously analysed at the pre-oil crisis level. The data analysed in the first chapter showed a very healthy economy, where people is rich if compared to the other European and American counterparts and where there is a smart and developing investment policy. If the productivity continues to remain high or, moreover, if it rises as the government expects, Norway has a handy solution to the oil crisis and a worrying rise of unemployment could be avoided. Given that, it is nowadays impossible to predict how much this crisis will affect the real economy, and a tightening of the fiscal policy is still behind the corner. We Italians have already experienced the effect of the austerity and even if the application of this policy in the Norwegian economy could have unpredictable effects, it seems unadvisable for the government to follow this policy. Under attack it is also the "Norwegian model", a welfare state system characterized by flexible labour market policies and, most important, by high gender equality. Some real troubles need to be solved and it seems that the model, as conceived until now, is not to affordable anymore. As Siv Jensen, the Norwegian finance minister, said: "Approximately 600,000 Norwegians, who should be part of the labour force are outside the labour force, because of welfare, and pension issues" (Koranyi 2014). The benefits made also possible the presence of one of the lowest work week average in the world, less than 33 hours a week[23]. It is true than unemployment is low, but the underemployment is large. The already quoted crisis

[23] CNN Money, *World's shortest work weeks*, URL: http://money.cnn.com/gallery/news/economy/2013/07/10/worlds-shortest-work-weeks/3.html

can be used as an opportunity to do a real and effective reform of the welfare state, as the majority of the public opinion is asking during the last years.
In conclusion, the trust in Norway is still very high and it will be almost for sure the same in the upcoming years. The economy is growing more slowly than before, but despite the oil crisis, the Norwegian government seems skilful enough to handle it, and there are many fields in which it can act, like by approving measures to improve productivity, by reforming its welfare state and, more immediately, also by financing its fiscal budget using a higher percentage of the Government Pension Fund.
Moreover, Foreign Policy Magazine ranks Norway third from last in its Failed States Index for 2015, judging Norway to be the world's most well-functioning and stable country together with Sweden and Finland[24].

[24] Foreign Policy, *Fragile States Index*, URL: http://foreignpolicy.com/2015/06/17/fragile-states-2015-islamic-state-ebola-ukraine-russia-ferguson/

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