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AN ANALYSIS OF EDUCATIONAL STIPENDS FOR HIGHER EDUCATION, AS CONDITIONAL CASH TRANSFERS, AS SEEN IN THE CASE OF MALTA

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Introduction

The objective for this dissertation is to analyze and speculate, both theoretically and statistically, whether tertiary education stipends are necessary to promote further education in order for governments to generate human capital in the near future. All this will be applied and deliberated in terms of the Maltese system. Moreover, this thesis addresses an array of topics and concerns that come about when exploring this matter, some of which include a literature review of conditional cash transfers together with dissecting its rationale.

In addition, the motivation of this topic came about when discovering that Maltese students are quite fortunate for not only attending a free public university, but also getting paid to do so. Only three other European countries offer free state-funded higher education together with monetary aid to full-time university bachelor pupils, which are Denmark, Finland and Cyprus. Most of the remaining European countries, except for Iceland, such as Germany, Ireland, Greece, Spain, France, Italy and the list goes on, only give a minority of the students a grant. Iceland, on the other hand, does not provide any financial aid whatsoever to students. Full-time university students are not charged with any University fees in not only Malta but also in Cyprus, Denmark, Greece, Finland, Slovenia, Scotland, Norway and Turkey (Diacono, 2014).

As discussed further on, this scheme is mainly used as an incentive for further education. However, taking all this into consideration, it did spark some queries on where the funds are coming from and if there is any proof that this indeed leads to better success rates and if as a country, Malta, has enough employment to cater for all these graduates. This thesis was compiled by exploring and excavating any data regarding the stipend financial program in Malta, however, due to the lack of information, provided that Malta is quite a small country when compared to other more relevant countries, this was quite limited. Regardless, I hope that this dissertation will shed light on this underrated prominent feature, that is, the stipend system.

So as to achieve and successfully manifest my motivation and objective, the best approach to take was that of mostly tackling this topic from a theoretical point of view which is complemented with some descriptive statistics whenever deemed suitable and available. By doing so, a clear and descriptive assessment will hopefully be acquired. Nonetheless, all

statistical and quantitative evidence which have been uncovered will be added as reinforcement to any theoretical evidence.

This thesis is divided into a number of chapters and sections for better comprehension. After this brief introduction a literature review can be found which mainly dives into various economists' works starting with the development of human capital in general and even associated to education. This is then followed by an analysis on conditional cash transfers, social policies in the case of Malta and also a comparison of the Maltese program to that of the Nordic countries. Chapter 2 will then focus on how the educational Maltese stipend and grant originated in terms of history and the programs that led to the one present today. This chapter compromises of an introduction on the Maltese education system which is then followed by the earliest program of educational student aid and any reforms that followed, such as the smart card program and the present system. Moreover, Chapter 3 tackles eligibility and stipend amount where the program will be looked at in terms of purchasing power. Chapter 4 is concerned on dissecting and understanding the reasoning behind the program and what is willing to achieve. The statistical analysis is then presented in Chapter 5 and finally the conclusion which summarizes the whole thesis.

'Despite its small size and its dependence on foreign trade, Malta has managed to outperform its peers in the face of the global economic downturn. Structural adaptation has played a key role in Malta's rapid growth and its consistent resilience to external shocks.' (Bonnici, 2016). Malta is also known to be the smallest economy in Europe as it only produces less than a quarter of the food it needs, has a limited supply of fresh water, not to mention, has restricted sources when it comes to energy. (Central Intelligence Agency, 2020) In the year 1964 Malta declared independence from the British, and so, from this date onwards, there were numerous drastic changes that enabled Malta to economically grow and flourish into the country it is today. Moreover, two of these changes that made an enormous impact on our Maltese economy were the entrance to the European Union in 2004 and the adaptation of the euro currency, thus eliminating the so-called Maltese Lira, in 2008. (Bonnici, 2016)

Like any other country, Malta has its strengths and weaknesses. The main economic benefits that Malta encapsulates are its low external capital needs and its good business environment. Malta has a low-cost, English-speaking labor force together with a favorable tax regime making

it an attractive country for investors. Such investors are not only attracted for this reason, but also, because of the advantageous tax schemes. (Central Inteligence Agency, 2020) Due to this reason, Malta was able to diversify its economy which led to niche sectors like offshore banking and especially online gaming. Moreover, the low external capital needs aspect is driven by the strong net creditor position that the Maltese households pertain. This then gives the government and the private sector the power to rely on domestic financing and also to defend themselves against any external shocks targeted on financial markets. On the downside, Malta is still considered to be a small open economy with a weak fiscal position. Thus, it is still prone to external shocks. (Dumitru, 2014)

One of the most popular ways to evaluate a countries economic background and progress, is by looking and comparing the country's Gross domestic Product, GDP. Malta was the best at dealing with the euro-zone crisis from all the EU members, all thanks to the low debt-to-GDP ratio and financially stable banking sector (Central Intelegence Agency, 2020). Malta's GDP has been gradually rising and resembling that of some of the advanced economies of the European Union (EU). When comparing the GDP per capita of the years 1980 and 2004, one can note that whilst in 1980 it stood at 48% of Europe's leading economy, which at the time was Germany, in 2014 this statistic skyrocketed to 68%. (Grech, 2016)

Figure 1.2.1 displays the changes in GDP per capita of Malta compared to that of Germany for the past 25 years. It is clear that Malta's GDP per capita has been increasing, except for that of the 2008-2009 crisis mishap. In spite of all this, there is still gaping literature when coming to data concerning Malta's GDP and growing economy although it is constantly on the rise and investing in factors such as education.

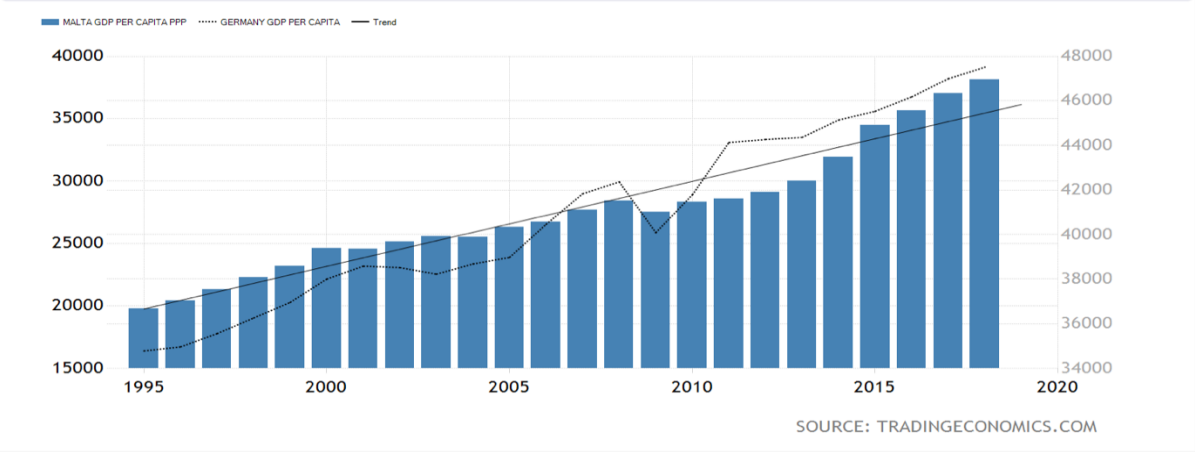

Figure 1.2.1: Maltese GDP per Capita compared to Germany's for the past 25 years (Source: Trading Economics (2019) available at: *https://tradingeconomics.com/malta/minimum-wages)*

Moreover, on a larger scale, the Maltese GDP per capita, of a particular year, can be compared to multiple European countries as displayed on the following map. In the year 2019, Malta was one of the countries which had a GDP of more than $45,000, which resembled that of the northern more prominent countries such as Spain. This proves that although Malta is geographically very small, it does have potential and is still an emerging country. (Wikipedia, 2020)

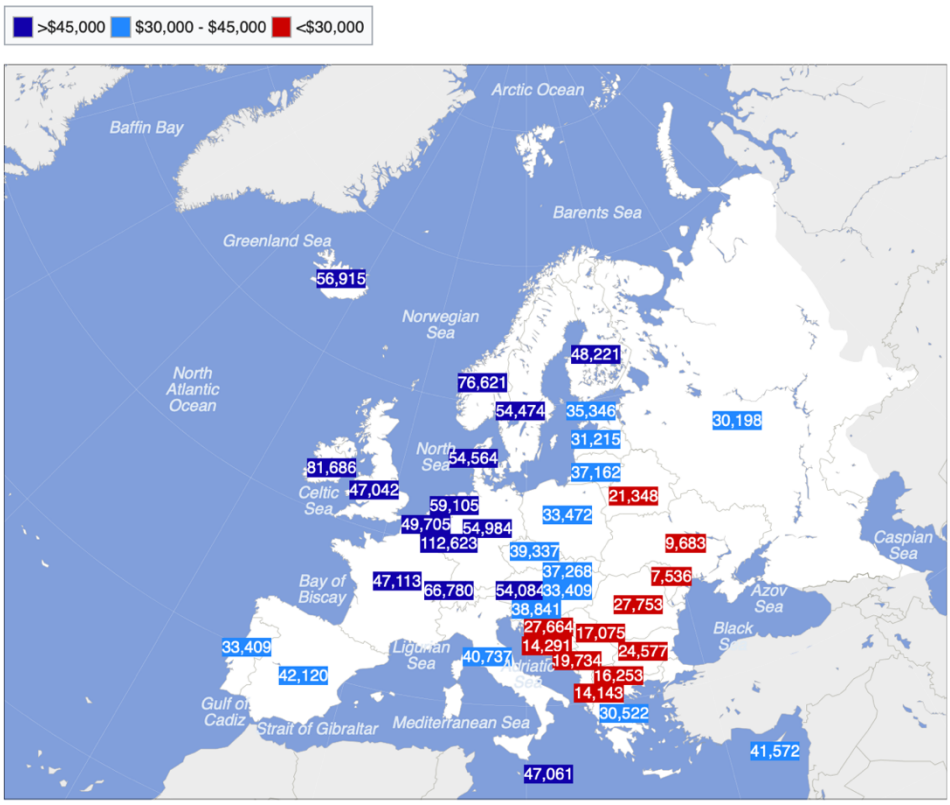

Figure1.2.2: Map displaying the GDP (PPP) per capita for sovereign states in Europe in international dollars (source: Wikipedia (2020) available at: https://en.wikipedia.org/wiki/List_of_sovereign_states_in_Europe_by_GDP_(PPP)_per_capita)

Chapter 1 Literature Review

This chapter is dedicated to exploring the framework that the whole dissertation is tackling with the aim to comprehend the rationale and purpose. Money is the source of everything nowadays, it is heavily prioritized, and people are willing to do almost anything to attain it. It has come to a point where the government is using this factor to enforce and encourage citizens to behave in a certain manner for a financial reward in return, under certain terms and conditions. Therefore, the government itself is intruding by using social policy mechanisms to 'manipulate' people's lives. Government social intervention is thus a distortive feature applied through good intention to change societies behavior towards a certain aspect. This targeted aspect must not only benefit society, but also the government alike. Education is one of the prime examples, as by incentivizing the population to enhance their knowledge, in turn the government will eventually have a more knowledgeable and enhanced form of human capital. (Psacharopoules, 1986)

Section 1.1 Relationship between Human Capital and Economic Growth with regards to education

The costs and worth of education have been an ongoing debate for ages, with economists looking at education as being a form of private/social investment since Adam Smith. When analyzing the cost of education, one must not only consider the tuitions and school related expenditure but also the opportunity cost, that is, what the student could have made if he was employed instead of going to school. This rationale is taken when considering further education. With this being said, if the end of the educational journey results in the student earning a higher wage than without education than it would all have been worth it. If one were to compare the internal rate of return, of the overall schooling costs and the rate of alternative investment, a mathematical conclusion can be drawn on whether the educational investment in a person's future is worthwhile. It is only worth it if the internal rate of return is larger than the rate on alternative doings. This was highlighted by Becker (1964) which will be further discussed at the end of this chapter. It is a well-known fact that the more education you have the higher the wage you earn. This is because in the eyes of the employer, more educated workers are deemed to be more experienced and skillful. Thus, there is a greater demand for educated workers, which in turn raises the rate of return on education. However, in the case

that this demand was to remain constant whilst the supply of educated workers increases exactly for this reason, there will be a decrease in the rate of return. Between 1890 and 1950, in the USA, the educational development resulted in a regression in terms of rate of return to education. Long-term educational growth throughout the years has been brought about by diminishing financial and social barriers whilst at the same time increasing family incomes and public policy. Moreover, a recent study, also mentioned by Mincer (1981), conducted in 32 countries, states that developing countries (LDCs) have a higher rate of physical capital particularly on human capital investments than in industrial countries (DCs). This continues to show the finite supply of capital in developing countries, with human capital being drastically scarcer than physical capital.

It is often said that individual wages depend on the size of his human capital. Hence, due to this, one's human capital stock is said to increase over his lifetime through educational investments, job selection, job training, job flexibility and health investments. The level of earnings at any point in this so-called life cycle, depends on the size and utilization of the human capital accrued throughout the previous periods, and the growth rate depending on the net investment rate. There is a diminishing trend in the investment aspect throughout a person's life, the cause of this decline is because 'benefits decline as the payoff period shortens' and also because of the opportunity costs of time, which is an input in the learning process which is likely to increase' as the person's working life progresses. Regardless of this, a common interpretation of such earning profiles can be seen through differences in sex, occupation and other features that cannot be specifically linked to aging and experience. With this being said, experience is still a very big determining factor of earnings and can be analyzed through a 'learning curve' where with age and experience there is growth in not only the person's knowledge but also in terms of a wage. If a certain job offers costless training/learning, this would mean that the workers would be able to earn a higher wage quicker with this reasoning and hence would attract qualified workers. However, if this were the case, this position would initiate with a relative low wage to level the demand and supply. This would create so-called opportunity investment costs for those who are considering moving to this position. (Mincer, 1981)

The relationship between schooling and post-secondary investment is positive according to empirical economic research. This is because the labor market is densely populated with more

educated people. This can also be understood from an efficiency point of view, as schooling is said to increase information absorption and thus leads to better job investments. This theory is a construct established by Schultz (1976) and Welch (1970) which is also known as the 'worker allocative effect'. This theory states that education is able to endorse technological innovation which has been previously recognized, especially in agricultural production activities findings. (Mincer, 1981)

Therefore, there exists a linear relationship between two very crucial factors, that are economic growth and human capital. Academics consider both human capital and labor production to have a positive relationship especially on their impact and position in terms of education on economic growth. By making use of the Cobb Douglas production function, Angel de la Fuente highlighted this relationship in terms of EU countries. The outcome of this was that with each supplementary year of education on top of the average years of schooling, there was a 6.2% increase in the labor productivity of these EU countries together with a 3.1% increase in long-term economic growth. Moreover, Sonmez & Sener through the use of panel data of 10 developed and 10 developing countries established that education and human capital affect economic growth in both types of countries. However, there were also some scholars such as Bils & Klenow and Vandenbussche that believed that there is no significant effect between human capital and economic growth. (Y. Wang, 2016)

The Human Capital Theory outlined by Mincer (1958,1974) and Becker (1964) explains just this. This theory links education and training to an individual's productivity, as education and training enhances a person's skills and knowledge. This positive relation also shows how the increment that these two factors produce results in higher wages as they get promoted up the labor market. Hence, this theory states that education plays a vital role when it comes to economic performance and higher individual earnings. After finishing compulsory education, one has the choice to either invest in further education or start working. Becker (1964) also wrote about what a person who is committed to invest in education subject to the rate of return is getting from doing so. According to Becker (1964), the lifelong returns must exceed the costs for any rational economic agent to invest in education. The optimal investment in one's education, which can be found by looking at the optimal years of education, is attained when the expected marginal benefits together with the expected marginal costs are at minimum equal. (Vella, 2019)

Becker (1964) was also able to summarize this typical Human Capital theory as an equilibrium condition in the form of an equation:

$$\sum_{t=1}^{T-s} \frac{W_s - W_{s-1}}{(1+r_s)^t} = W_{S-1} + C_s\,,$$

Equation 1.1.1: Becker's Equilibrium Education Condition

This equation consists of the level of education chosen represented by the letter 's', 'T' as the retirement age, 'W' as the wage, 'C_s' as the net cost of education and 'r_s' as the internal rate of return. Hence, Becker (1964) outlines the fact that for an individual to make a rational investment decision regarding further education, he must make sure that the internal rate of return is larger than the alternative returns available on the market. (Vella, 2019)

In addition, Mincer (1958, 1974) was also able to represent his theory, that was outlined in Becker's model as determinants of the wages earned by individuals in the labour market, in a simpler form:

$$\log w_x = X\beta + rs + rh_o x - \left(\frac{rh_0}{2T}\right)x^2 + \log(1-h_x)\,,$$

Equation 1.1.2: Mincer's Specification

And for a specific individual i:

$$\log w_i = X_i\beta + rs_i + \delta x_i + \gamma x_i^2 + \mu_i,$$

Equation 1.1.3: Mincer's Specification for Individual I

In this case, 'w_i' represents the wage that individual 'I' earns, 's_i' as a measure of the level of schooling, 'x_i' as a measure of work experience (estimated by deducting the age at which the person leaves school from their actual age), 'X_i' the set of variables which are most likely to affect the wage also known as control variables, and 'μ_i' is the error term representing various

factors which might not be measurable assumed independent control variables X_i and s_i. (Vella, 2019)

Section 1.2 Conditional Cash Transfers

Conditional cash transfers (CCTs) contribute to this mechanism specifically. The World Health Organization, also known as WHO, defines the term 'Conditional cash transfers' as programs that "give money to households on the condition that they comply with certain pre-defined requirements. These conditions can include, for example, up-to-date vaccinations, regular visits to a health care facility, regular school attendance by children, and complying with health and nutrition promotion activities" (WHO, 2019). These cash transfers are mainly practiced in low/middle income countries such as Africa and Asia to combat poverty and improve the standard of living. However, in terms of welfare and unemployment benefits, Conditional cash transfers are also used in high-income countries with the aim to improve and motivate labor market enhancements. The most popular application of this social policy tool is implemented substantially to aid struggling families to provide and invest in their children's education for further potential human capital.

As defined, this non-contributory cash transfer comes with strings attached, which in the case of education is either school attendance or performance. If an eligible person fails to abide with the specific behavioral fulfilment, the person is no longer entitled or eligible to receive the transfer for a specific period of time. Thus, in this case, the scheme is perceived as a negative incentive. Vice-versa, a positive incentive is attained by an eligible person who abides by the behavioral requirement.

Conditional cash transfers have been applied to education and health care in many countries (example South America) but are quite rare in the EU. Belgium has adapted this social policy technique as a means-tested transfer to help parents in schooling costs, even for those families that had children still in kindergarten. A 90-euro additional yearly benefit was also given to poor and middle-income families who were eligible. The only restriction these eligible families had was only school attendance. If they failed to meet this condition, they were forced to repay each and every financial transfer they were given annually.

At later stages of schooling conditional cash transfers are widely seen to adapt positive incentives. Post-compulsory schooling-related support which embody certain behavioral restrictions are popular throughout the world, especially in developed countries. Some programs are extended in order to financially aid those who are struggling to financially support their children who are pursuing full-time education and are above the age for prevailing eligibility. This extension is mainly adapted by EU and OECD countries such as Poland, Czech Republic, Australia, Slovenia, Bulgaria and Malta. These are said to partake in 'income-tested family cash benefits with an age extension'. (Medgyesi, 2016)

Human capital is one of the motives for these types of conditional cash transfers. If the setback for this motive originates from low income from the less fortunate, there should not be conditional cash transfers but unconditional cash transfers. However, the supply side of human capital does entail the same characteristics as conditional cash transfers are needed to deal with problems such as low level of educational ambitions or even low demand due to insufficient information available to parents or adolescents. (Medgyesi, 2016)

Section 1.3 Social Policies in the case of Malta

Therefore, Conditional cash transfers can be said to be social policies. In order for the government to promote greater equity and overall wellbeing, social policies are essential. In terms of social policies, Malta is categorized into the lower-middle ranks in the 29th spot (from all the EU for the year 2004). Compared to that of 2014, Malta has been on an increasing streak as it has improved by 0.5 points. The following figure displays a comparison between the various social policy reforms adapted in Malta outlined in Red and the grey area which displays the average EU statistics. Malta seems to be adequately fitted to reflect the Average EU's adaptions. Educational attainment is a key factor for measuring the effects of certain reforms and social policies. (Bertelsmann Stiftung, 2019)

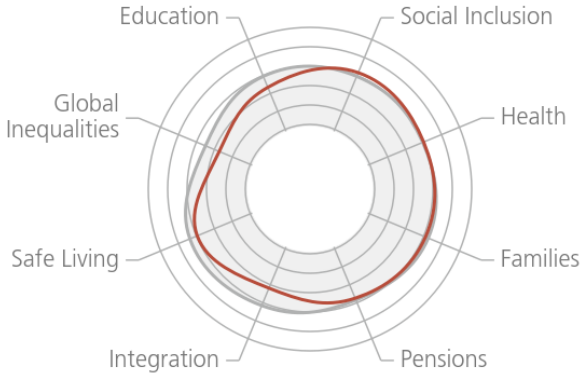

Figure 1.3.1: Maltese Social policies compared to the EU average (source: SGI (2019) *https://www.sgi-network.org/2014/Malta/Social_Policies)*

	1991		2000		2005		2008	
	Malta	HIC	Malta	HIC	Malta	HIC	Malta	HIC
Primary (% gross)	107.9	101.8	106.6	101.3	100.1	101.3	99.0	100.0
Primary (% net)	97.0	95.2	95.5	95.9	91.2	94.9	91.4	94.8
Secondary (% gross)	82.8	91.8	89.2	100.4	99.5	101.0	98.1	100.0
Secondary (% net)	78.3	/	/	89.2	86.6	90.7	82.0	90.3
Tertiary (% gross)	12.7	/	21.4	56.3	31.6	66.2	33.0	67.2

Table 1.3.2: Primary, secondary and Tertiary enrolment in Malta in comparison to high-income countries for the years 1991, 2000, 2005 and 2008 (source: World Bank, World Development Indicators (2011) available at: https://read.thecommonwealth-ilibrary.org/commonwealth/social-issues-migration-health/social-policies-in-malta_9781849290241-en#page2)

Thus, looking at the case of the Maltese stipend, this scheme can be referred to as a conditional cash transfer program, as in order to receive the payment, a substantial amount of class attendance is required together with the mandatory promotion to the next scholastic year, as a measure of performance. These features are called ordeal mechanisms as they make this

program seem unattractive as there are some strings attached. However, these restrictions are not that much of a burden as these all benefit the student and should be the aims of each and every successful pupil. Nevertheless, this stipend program does not discriminate against family income, that is, it is not distributed only low-income families but covers every scholar that is eligible in terms of university admission and other factors that will be mentioned later on.

The program that is in place today is known as a cash welfare, which directly supplies individuals with a sum of money, however, just before this system, there was an In-kind-welfare system known as the 'smart card' where the government provided a card with a sum of money that can only be used at certain shops to obtain school related materials. This will be analyzed in dept in the following chapters.

Section 1.4 A comparison to Nordic grants and student financial aid

As previously mentioned, Malta is not the only European country that has adapted to this system and is giving out student grants. Scandinavian countries are known for giving financial aid to tertiary level students. However, countries such as Sweden and Norway are able to aid their students mainly through loans (OECD, 2006) and so, because of this reason, we shall be looking at the system in both Finland and Denmark.

To begin with, the financial aid found in Finland is financed from both the State and the local authorities as Universities are funded directly from the state budget. The distribution of public financing towards education is equal for all levels of schooling. (Ruzzi, 2005). Education is free for every student, this not only includes tuition, but also, daily meals, social services and transportation for those who do not live close to school. The local authorities and private educational foundations are given grants from the state which covers close to 31-51% of any establishment costs together with 51-86 per cent of operating costs (Finland, 1991). The Student Financial aid is given out to students by 'Kela', a Finnish government agency, which is known to distribute settling benefits under national social security programs. This Social Insurance Institution started in 1937 by handling retirement pays but eventually in the 1980s and 1990s it branched out to giving student financial aid and other fields such as unemployment benefits. The majority of Finnish students receive financial aids, and this also includes foreigners who are permanent residents in Finland or even EU citizens in general. Other factors

for eligibility for this financial aid includes sufficient academic progress, full-time study for at least 2 months and the need for financial assistance. The forms of the financial aid vary from a study grant to government-backed student loans to housing supplements (only for those who are studying abroad) (Kela, 2020). The study grant is the one that is comparable to the one in Malta. The Finnish study grant depends on age, marital status, school choice, whether you have children and whether you live alone or with your parents. The parents' income can also be a variable that affects the amount of the grants. Students under the age of 17 can also be eligible for a supplementary grant for school materials, but no other grant can be given as child benefit is paid for the student If the child benefit is not paid then the student shall receive the study grant. However, on turning 17, the student can also be granted another grant which starts at the beginning of the student's birthday month. (Kela, 2020). The table regarding the amounts of study grants awarded to each student shows that the lowest amount is given to those who still lives with his/her parent and is under the age of/is 19.

Students	Amount of Study grant, EUR per month	Is the study grant effected by parental income
Lives with his/her parent, aged 19 or under	39.04	May increase the study grant: Eur 39.04- 98.63 per month
Lives with his/her parent aged 20 or over	82.20	May increase the study grant: Euro 82.20-184.95
Lives alone, aged 17 or under	102.75	May increase the study grant: EUR 102.75-205.50 per month
Lives alone, aged 18 or over	252.76	No
Married	252.76	No
Guardian of a Minor Child	353.75	No

Table 1.4.1: Amount of study grant (before taxes) for students in higher education as from August 2020 (source: Kela (2020) available at: https://www.kela.fi/web/en/financial-aid-for-students-study-grant)

As from August 2020, the Finnish Grant will also aid any guardians of the students under the age of 18 with the sum of EUR 100.99 together with the EUR 252.76 study grant. This grant is monthly and does not depend or is altered on the number of children someone has. (Kela, 2020).

However, a recent report conducted by the group for Student Aid in the Nordic Countries also known as ASIN, stated that it is in fact Denmark that holds the highest funding position for study support from all the Nordic countries. This report shows that the maximum support when it comes to loans and grants except for student's own work income is the highest in Denmark and lowest in Finland. However, it was also remarked that it is very expensive for students to consider taking a study loan in Denmark due to its high interest claims (which is currently at 4%). (Myklebust, 2019)

Looking at some statistical figures, the number of students receiving this government funding was 291,481 in Denmark, 279,630 in Sweden, 168,534 in Norway, 180,077 in Finland, 4,746 in Iceland and 1,171 in the Faroe Islands. With Denmark having the most expensive student loans, it makes sense that Denmark has the highest proportion of total funding given as a grant, whilst 81% of this Danish statistic in the Faroe Islands, 54% in Norway, 36% in Sweden and Finland being the lowest with just 25%. However, there are some limitations to all this, as the number of months a student can receive this government funding also varies, with the highest being in Norway (88 months) and the lowest in Finland with 54 months. (Myklebust, 2019)

Upon this comparison and analysis, it is crucial to note that although countries such as Finland have free funded further education, the expenses of further education are exclusive from the costs of student living, meaning that students have to fend for themselves for any additional costs of living as the grant is enough to cover only the educational costs. The cost of living in Nordic countries is known to be higher than that of most European countries, hence, making it harder to compare this benefit. A study conducted by Eurostat from 2017 data shows the percentages of young people, aged between 16 and 29, that are still living with their parents. In terms of women, Malta has the highest share in this with 82.4% whilst Finland has the lowest share, that of 30.1%. This comes to show how Finnish students are more in need of the educational financing as they are relying on this sum for their everyday needs such as rent and groceries, whilst most Maltese students are still under their parents' roof.

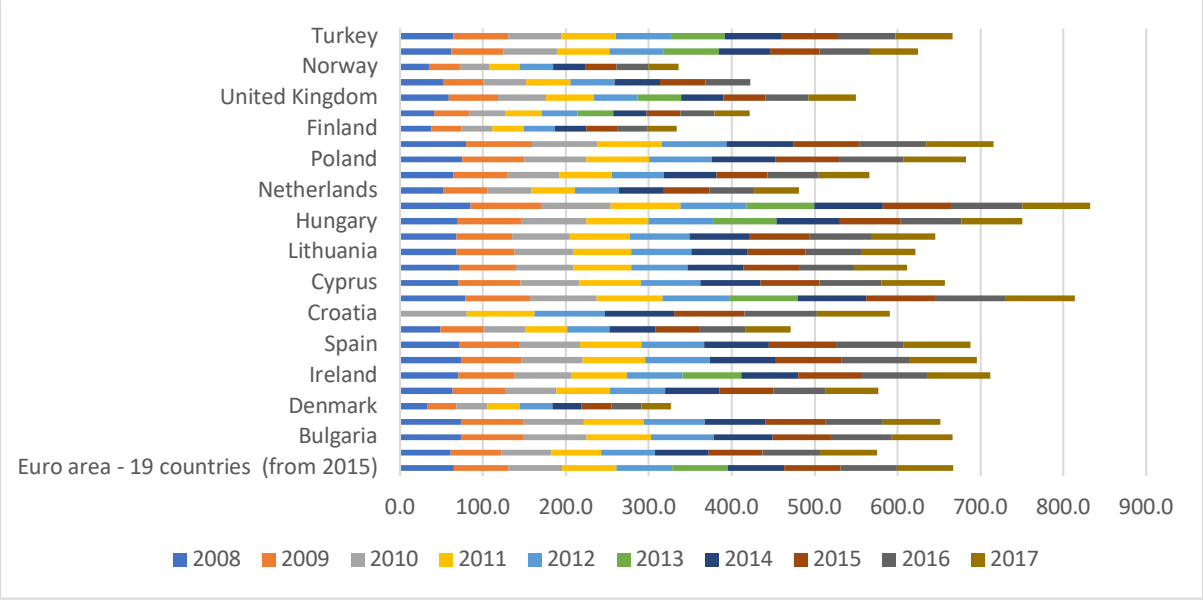

Figure 1.4.2 Share of youngsters (age 16-29) still living with their parents (Source: Eurostat (2020) available at:https://ec.europa.eu/eurostat/statistics-explained/index.php/Young_people_-_social_inclusion)

Chapter 2 Institutional Background: The Maltese University Education and the Stipend Program

Section 2.1 Overview of the Maltese education system

The University of Malta is the only university that there is in Malta islands, that is, without taking into account the foreign universities that are currently under works. Its roots are said to be in a 'Collegium Melïtense' which was set up in 1592 by the auspices of the Jesuits and after this it was taken under the rein of the Knights of St John. At first, University was only available to well off and elite students, as it was at the end of the 19th century that Malta was still indecisive of introducing free primary education irrespective of social class (Sultana, 1995). In the year 1892-3, the University's vice-chancellor stood up to this regulation saying that:

'If the available funds were not limited, if the children of the poor were all enabled to receive free primary education, if the teaching appliances and the school buildings left nothing to be desired, and if the pay of the teachers was adequate in all classes, such a distribution might possibly be defended. These conditions are, however, quite unfulfilled and, for this reason, there must be a large number of children for whose education the State makes no provision whatever...the State pays from 5 to 30 times as much for the children of the comparatively well-to-do portion of the population as for children of the poor. This is an absolute reversal of the principles upon which the systems of national education of all countries are based.'

Thus, this university happens to be one of the oldest universities in the Mediterranean and is situated in Msida, Malta. In Malta education at the tertiary level is free and publicly funded. This means that students receive a fixed monthly sum of money, known as stipend, as well as an allowance for any academic-related expenditure.

According to an Annual statistical report, in the year 2018 there was approximately 10455 local students and 1071 International students, which are said to come from 77 different countries. The University does encourage and engages in Erasmus and other exchanges and this also includes some sort of financing. Apart from having multiple courses, some of which can be full-time or part-time degrees or even diploma courses.

Due to the fact that 'Maltese' is not a commonly known language, the University's primary language of instruction is English, which is the other official language of Malta. For one to be admitted to read for a first degree at UOM, they are required to have 'A level qualifications or anything equivalent. However, if anyone is above the age of 25, they will be enrolled as a mature student, which requires different qualifications. (Government of Malta, 2020)

The Education Act of 1998 outlines the rights and obligations for each stakeholder that has a province in the Maltese Education system. The University of Malta (UoM) is part of the tertiary education system in Malta thus by this act, the Maltese government is obliged to provide free education to all eligible University students together with a stipend, which is a monthly allowance, to aid the students during their studies. (Legal Malta, 2013)

Section 2.2 Early Reforms and The Student-Worker Scholarship

In the year 1972, the Ministry of Education at that time, Ms Agatha Barbara stated that the University was unable to cater for students who wanted to pursue a traditional profession. This 'democratization' resulted in an excess number of students who wanted to further their studies but were restricted to do so by the University itself. However, this had nothing to do with the 'vocationally-oriented Polytechnic' Malta College of Arts, Science and Technology, also known as MCAST which offers training in areas such as management and engineering. Graduate unemployment and underemployment were underway not only in Malta but in other European countries due to the delegitimization of the human capital theory, which inversely decreased any financial investments to universities from the government. In 1978 the Maltese government published the 'white paper' on university reform which was published to evade any economic and political queries held by disappointed unemployed graduates. However, the setback was that privilege should not be a university requirement. This 'White Paper' gave the Labor party the ability to control University access by enabling working class students to obtain university education. (Sultana, 1995).

The student worker-scheme was inspired by the cultural revolution found in Mao Tse Dong China. (Sultana, 1995) The roots of this scheme go back to 1970, where the Labour Government impelled three reforms which regarded the status of tertiary education. These reforms where aimed to:

a) Include more courses apart from the ‘traditional professions’, which might comprise of ‘vocational courses’
b) Diversify the student body by including more scholars which come from the working class, rather than the traditional ‘upper class’ pupil and hence increasing the range to those with socio-economic backgrounds
c) Extend beyond the specter of graduate unemployment which had troubled other nations

All this was mainly targeted to create a sort of ‘sponsorship system’ to all the students and also to make sure that once a student is accepted in the tertiary education field, once finished, a job is ensured. However, apart from all this the most important reform that is vital here is the student worker-scheme, which was for University of Malta students, and the pupil-worker scheme, which was for sixth form students.

The student worker-scheme meant that each scholastic year should consist of 5 months of study and other 5 for work. Thus, employers were funding pupils and giving them a salary whilst still enabling students to continue their tertiary education due to this financial support. With this being said, students however had a sort of contract of work which entails that upon graduation, the said student must work for this employer. Henceforth, each student is guaranteed a job as soon as they finish their tertiary education. On the other hand, the pupil-worker scheme consisted of a salaried period of work which rewarded students to financial aid. Alike these reforms there was also the ‘Technician Apprentice Scheme (TAS) in 1981 which enabled students enrolled in vocational courses to have an extended education-work partnership. There was also the Extended Skills Training Scheme (ESTS) started in 1990, with the difference that there were lower requirements in terms of academic competence and technicality.

These programs were very beneficial, as they not only enabled working-class students to obtain a University level education, but also, the government of the time used this program to incentivize students into pursuing further education together with ensuring that they have a secured job available once they graduate. However, these programs still had their drawbacks. There were complaints about how these programs resulted in restrictions to University education and a reduction in the academic syllabus as time was now divided.

The success of this program was tested by means of an investigation conducted in 1982 by Schembri through a sample of 229 university students. 24.1 per cent of these students claimed

that if it weren't for the worker-student scheme they wouldn't have continued their studies, 26.4% were indecisive and the remaining 46.9 per cent stated that they still would have attended university even without the scheme. Hence, the conclusion drawn from the weighted averages was that the worker-student scheme increased the number of students coming from a 'blue-collar background'. In further analysis, Schembri also discovered that 28 per cent of the student sample had fathers who worked in occupational groups which composes of skilled, semi-skilled and unskilled workers (also known as Categories 4 and 5 of the occupational groups) , whereas the remaining 61 percent had professional, technical, clerical and managerial and administrative fathers (also known as Categories 1, 2 and 3 of the occupational groups). What should be outlined is that only 20 percent of the Maltese labor market is composed of the second set of occupations and are still a majority of the university's composition. Therefore, it could be said that the worker-student scheme was mostly beneficial for the working class, without diminishing the relative disproportion of students amid the top and bottom occupational sectors. A study by Vella, six years after backed up Schembri's conclusion. In February 1985, 185 university freshers, which made 81 percent of the university student base, were given a questionnaire survey which tackled socio-economic origins relative to the proportion of the Maltese population in regard to occupational groupings according to the 1985 Census. This study resulted that pupils with a father from either Category 1, 2 or 3 of the occupational groups have a better chance at being accepted at University than those students whose father works in the other 2 Categories.

Occupational Map of Census 1985		Schembri 1982	Vella (1989)	Schembri (1991)	Xuereb (1994)
I Professional	7.7%	61%	75%	78%	68%
II Administrative & Managerial	5.2%				
III Executive & Clerical	19.2%				
IV Skilled & Semi-Skilled	35.1%	28%	14%	22%	30%
V Unskilled	20.4%				

Table 2.2.1: Occupational background of University of Malta students according to different researchers (source: Higher Education Policy Vol.8, No.3, 1995 by Ronald G Sultana)

Section 2.3 The 1st Stipend and the 1997 reform

In 1987 there was a change in government as the Nationalist Government came to power, at first this system was retained as it was not easy to disrupt and cancel. Nevertheless, some time after, the stipend was born taking the place of the student-worker and pupil-worker program. This dynamic change meant that any student-worker contract that was initiated during the other program was abolished with the sponsorship. With all this being said, the TAS (Technician apprentice scheme) and ESTS (Extended Skills Training Scheme) were not removed. This stipend was given irrespective of the student's social background; hence, it was not means tested. Therefore, the government does not guarantee the student a job upon graduation like the student-worker scheme did.

At this time, there was still a very low percentage of students attending tertiary education, even after the student-worker scholarship, when matched with rival countries. Hence the stipend program was very much vital to incentivize students to continue pursuing further education. The following table comes to show how year by year there was an increasing number of students attending tertiary education. The only year that this statistical number started to decline was after the year 1997-1998, where there was a reform which altered this program.

Year	Total (Number)	Male %	Female %
1986	1,447		
1987*	1,867		
1988*	2,354		
1989*	2,511		
1990*	3,242		
1991	3,602	53.8	42.2
1992	4,662	51.9	48.1
1993	5,177	51.2	48.7
1994	5,805	51.9	48.1
1995	6,263	50.3	49.7
1996	6,368	48.7	51.3
1997	7,146	49.5	50.5
1998	6,959	48.8	51.2
2000+	7,628	44.98	55.02

Table 2.3.1: Growth in Tertiary student population for the years 1986-1998 and 2000+ (Source: The European trading Foundation (2002) available at:

https://www.um.edu.mt/library/oar/bitstream/123456789/33143/1/Vocational_education_and_training_and_employment_services_in_Malta_2002.pdf)

Together with this, stipend amount was assigned increasingly to the level of education the student was currently conducting, which meant that final year University pupils were the ones receiving the maximum amount of stipend:

	Maltese Liri	EUR	US $	UK
Year 1	71.83	167.32	182.37	149.76
Year 2	88.50	206.15	224.69	184.51
Year 3	109.33	254.67	277.58	227.94
Year 4+ till graduation	130.16	303.19	330.46	271.37

Table 2.3.2: Value of stipends received by students in 1997-1998 at the University of Malta, converted into different currencies (Source of Maltese liri amount: Higher Education Policy Vol. 8, No. 3, 1995, Conversion done to the rates in 2020)

Note that the value of this stipend can be compared to the Maltese minimum wage at the time which was Lm 38 (88.52 EUR) and also to a university lecture's wage which was Lm 107 (249.24 EUR) gross per week. (Sultana, 1995)

As the stipend increased with every scholastic year, it can be said that mid-way through the course, a student received a sum close to one fourth of a lecturer's stipend at the time (Sultana, 1995)This system of stipend entitlement was quite chaotic to assign, consequently in the year 1997, the Labour party proposed a reform that established a flat rate of Lm50 (€ 116.47) monthly grant together with a maximum Lm50 monthly loan. This reform change did not affect the students that were already enrolled at University as they kept receiving the progressive grant, conversely new entrants had to abide by the reduced fixed rate grant. To summarize, University of Malta students had to be full time students, Maltese citizens, not more than 30 years of age when enrolling and have regular attendance in order to receive the stipend.

This new reform was not favorable among the student base and caused a racket. College students began protesting this proposition in mass rallies in order to deliver their anger and

dissatisfaction. On the 5th of November 1997, the day the national budget was delivered, a mass protest was held comprising of hundreds of university and post-secondary scholars in front of the House of Parliament. The 2 student activists, SDM and Pulse, together with KSU, the University student council, were also present to aid the students getting their voices heard. This commotion did not stop here, as Junior College students restlessly continued to host protests and marches, where they presented candlelight vigils and padlocking and chaining the college's gates bolted.

Upon their re-election to government, on the 5th of September 1998, the Nationalist Party broadcasted a new stipend system. This scheme consisted of a lumpsum of Lm400 (€ 931.75) to buy scholastic material which include laptops, together with Lm200 (€ 465.87) which is considered a one-time sum which was intended for the students to buy books with. In addition to this, they were also given Lm60 (€ 139.76) monthly for their duration of studies. Therefore, students were put in the same waters as before 1997. (Bennett, 2011) (Sultana, n.d.)

An optimal scenario is created as described by Nicaise (1992) where there should be a greater presence of students coming from the working-class with regards to tertiary level institutions. Where University being free of charge and students receiving financial aid, the University of Malta students quadrupled from 1448 to 4886 just between the years 1985/86 to 1993/94. In addition to this, state investments towards the University also increased between 1987 and 1990 by 724 per cent. It had been stated by high officials like the Minister of Education and Human Resources that the University has transformed from being the 'castle of the élite'. (Sultana, 1995)

Section 2.4 The Smart Card

In the year 2000, students were given a special purpose electronic card known as 'The Smart Card'. However, this card was accessible by students at the end of the year and so students were left financially vulnerable in the previous months. This card could only be used in certain stores that were enlisted in the scheme. Moreover, the chosen retailers would also require an EPOS-type of manual card reader which approximately costs around 500 euro. This scheme was also outsourced to a private company which was reimbursed by a handling fee of 2% which was paid by the government. The card could only be used for educational purposes only as the

intention of this condition may be seen as creditable. But every hurdle can be surpassed, and this condition was effectively unmanageable to police and it was considered an open secret that these retailers and students conspired all sorts of excuses to have any unrelated expenditure qualify as ‘’educational’’. (Bartolo, 2015) There is no research to as why the ‘Smart Card’ was introduced, in my opinion the purpose of it was for students to only use the money for school related items. The change to the ‘smart card’ also enabled a transition for a leveled playing field in terms of monetary sum of payment. Previous to this, students were given a sum according to their year of study, however as mentioned, the Smart Card gave students the same amount of money regardless of their scholastic year.

Section 2.5 The Stipend Today

The removal of the smart card meant that the government will directly deposit the funds into the students’ bank account. According to the Minister of the time, Evarist Bartolo, this measure will save the government an annual administrative cost of 175,000 euro. Mr Bartolo also stated that these annual administrative costs of the smart card scheme outweighed the benefits. This scheme also entails that students who drop out mid-way are required to give back the monies given to them back to the government. The university student body president at the time, Gayle Lynn Callus, agreed with the reform but remarked that the government should ensure checks and balances are all intact on how the students spend this grant as they are coming from taxpayers’ money. (Dalli, 2014)

	Amount (EUR)		
Course	**Stipend**	**Initial Grant**	**One-Time Grant**
Diplomas	90.93	565.87	465.87
General Courses	90.93	565.87	495.87
Prescribed Courses*	159.12	798.81	698.81

Figure 2.5.1: Educational Stipends and Grants according to courses (Source: data from UOM (2020) available at: https://www.um.edu.mt/services/studentservices/stipends/grants#:~:text=Students%20registered%20on%20'Prescribed'%20courses,%E2%82%AC90.93%20every%204%20weeks.)

**Courses that have general educational requirements such as engineering and nursing*

Chapter 3 Stipend Eligibility and Amount

Section 3.1 Eligibility and Requirements for Stipend

University of Malta students are chosen according to the Admissions Regulations (1997) through a selection of regulations and entry requirements. On the other hand, the Subsidiary Legislation (S.L.) 327.178, also known as the Students Maintenance Grants Regulations, is in control of the stipend scheme, this also specifies who is eligible for the stipend and the specific amounts of funds which are given to these students.

However, this stipend comes with limitations on who and when one can enroll for such. Late approvals and confirmations have been blocking students from acquiring the stipend. The Maintenance Grants Board are responsible for administrating the accessibility to stipends. Due to technological advances, the application for the stipend is done through the E-ID system. This system is linked to the students' identity card where the identity card number is linked with a personalized password in order to access the maintenance grant and stipend application. From there the student must fill out a 10-minute form with specific fields regarding socio economic factors such as family status and employment. This is important as a full-time student working part-time cannot exceed the 20-hour a week working condition, if this limit is overlapped, the student must forfeit their stipend due to the legal clause (Clause 10 in LN308/16). This is seen as quite unfair as when students are applying for a job in the future, the employer will prioritize those which have the most job experiences. In addition, the current monthly stipend for general courses is €90.93 with a one-time grant, which is additional to the monthly stipend, of €465.87. (University of Malta, 2020). There are special courses, such as nursing, that enable students to receive a higher monthly stipend for the sole reason to attract prospective students and hence incentivizing students to choose nursing. (Cocks, 2017)

Section 3.2 The Stipend's Purchasing Power

In this section a surface analysis of the Maltese wages and income will be made in order to figure out whether the stipend is comparable to a wage, therefore understanding its purchasing power. As previously mentioned, students are not allowed to work more than 20 hours per week for them to be eligible to the stipend, however, is it worth it to not work and rely on the

stipend as a source of 'income' or should the student work a part time job of more than 20 hours a week for a sustainable pay?

In order to keep everything levelled, the assumption placed is that students earn the minimum wage. In order for students to be willing to advance their education, the costs of further education must outweigh the opportunity cost entering the workforce instead. The opportunity cost increases as the wages increase. However, as it is well known, the higher the education level, the higher the pay.

The following Eurostat chart shows the Minimum wages of January 2010 and January 2020 for EU countries. The minimum wages are usually measured as monthly wage rates for gross earnings. These countries can be split in 3 different groups according to their national minimum wage, in which Malta is classified in the middle group, as its minimum wage falls between 500 Euro and 1000 Euro.

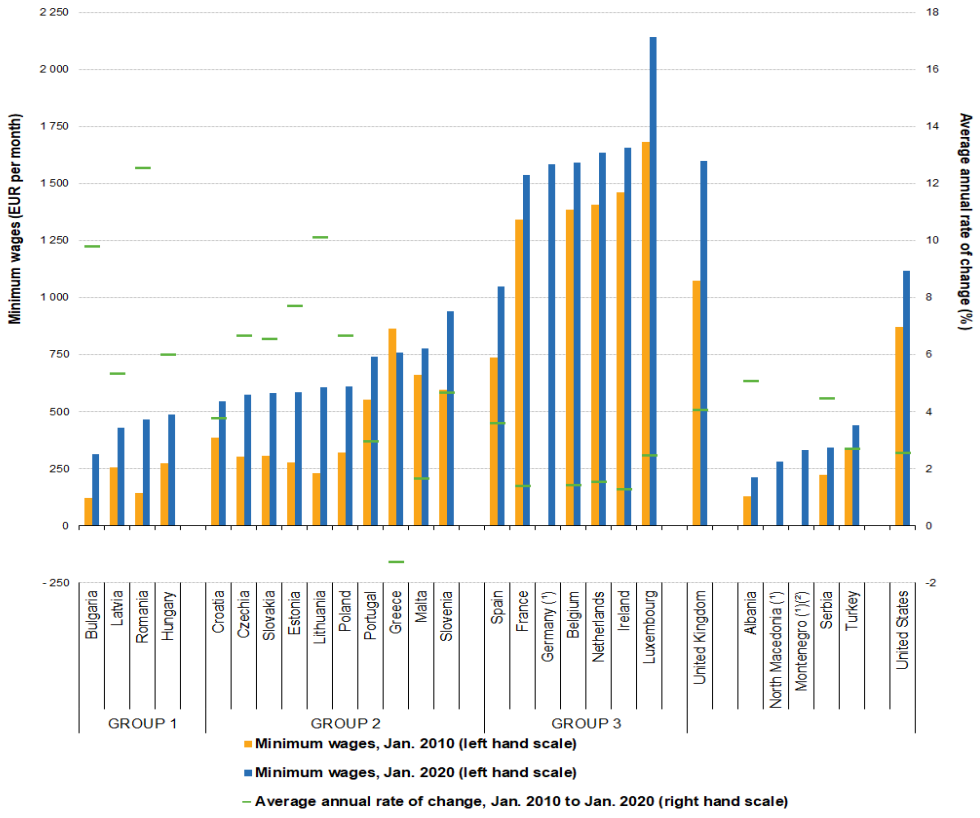

Figure 3.2.1 Minimum Wages for January 2010 and 2020 calculated in Euro per month and in percentages for EU countries (Source: Eurostat (2020) available at: *https://ec.europa.eu/eurostat/statistics-explained/index.php/Minimum_wage_statistics)*

However, in this case, it is better to categorize the minimum wages expressed in purchasing power standards. In Figure 3.2.2, the countries are placed into two groups, in which Malta is placed in the group where the national minimum wage is lower than PPS 1000. Although it is placed in the lowest group, it has the highest statistic of that group, that being, PPS 941. (Eurostat, 2020)

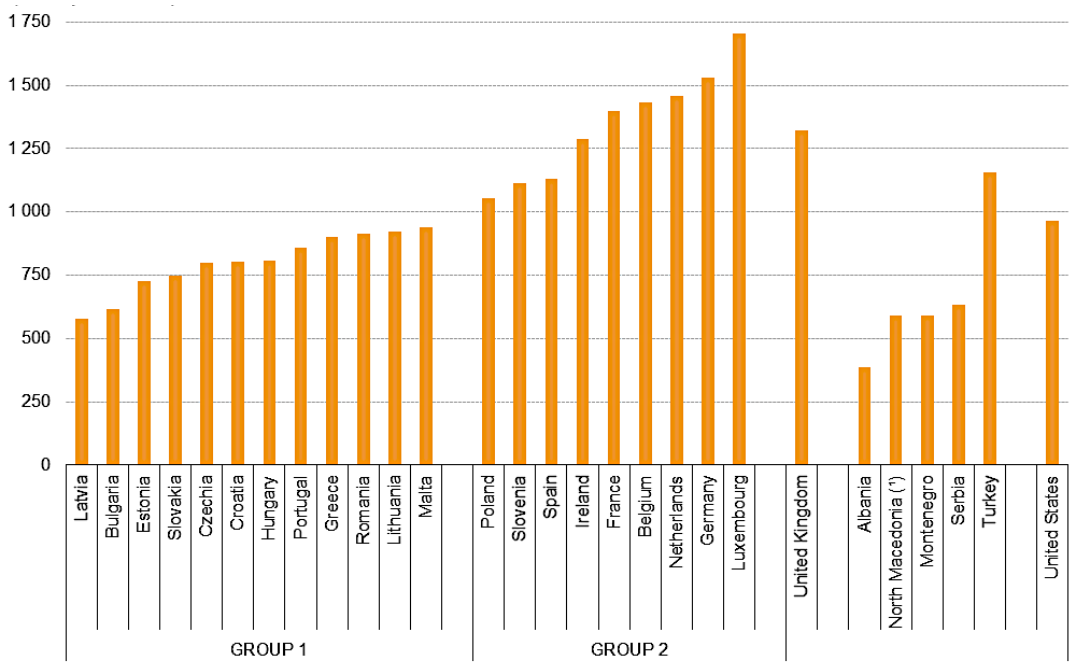

Figure 3.2.2 European Minimum wages for the month January 2020 in PPS per month (Source: Eurostat (2020) available at: https://ec.europa.eu/eurostat/statistics-explained/index.php?title=Minimum_wage_statistics)

The national monthly minimum wage in Malta is currently fixed for the year 2020 at EUR 777.1, which is EUR 686.17 far off from the EUR 90.93 monthly educational stipend given to students. This is quite a drastic difference, which does make sense. This is because, as previously seen in Section 1.4, Malta has one of the highest percentages of young people that still live with their parents. This means that students are not relying on the stipend to support themselves financially (in terms of housing and essentials), but it is mainly just an additive benefit.

Chapter 4 Stipend Rationale

Tertiary education nowadays has become essential in most of the world to build a successful career or even to obtain a long-term stable job. Moreover, the government also benefits from this extent, as decreasing the number of early school-leavers, and therefore, having an educated population, has its perks. In order to create this base, the government must be able to make this concept more accessible and incentivized. However, only few governments have been able to do so. Multiple students around the world have been trying to make ends meet in order to pay for college/university tuition. Few are the countries that have the ability to provide this type of education for free, and fewer actually pay students grants and stipends to continue their studies. Malta is one of this very small percentage that provides this kind of financing. In order to explain the Rational in an organized and structured manner, Dr Godfrey Baldacchino in his report titled 'Students Stipend Scheme Comission', divided the rationale divided into 4 main categories where the stipend system can be seen as an incentive scheme, social benefit, national investment for 'human capital' and financial independence.

Section 4.1 National Investment in 'Human Capital'

The phrase 'National Investment in Human Capital' is an indirect reference in saying that by granting this scheme, the government is indirectly imposing an investment in the nation's future. This expenditure will be repaid in a few years' time in the form of human product in the labor market. The economy's potential for growth can be a product of human capital or even the knowledge and skills that individuals convey. Various literature states that with everything else on the same level, countries that have a substantial amount of human capital have much more opportunities in terms of future output and income. (Brockdorff & Amaira, 2017) Such knowledge and skills are also taken to be capital good, produced and kept like conventional capital. Hence, human capital can be said to pave the way for acquiring physical capital. (Amaira, 2015)

Many economists have expanded on the educational investment returns to society and whether both the government and individuals are making the right optimal choice by making such a rational investment. Some of these economists have been previously mentioned in Section 1.1, like Becker (1962) who argued on such matter. (Vella, 2019)

The European Commission is investing in human capital indirectly by funding the Maltese education system for the government to give out this money as educational stipends and grants. This money can be interpreted as water which is used to water a fruit tree, which after some time and water, grows and gives back in the form of fruit. The fruit in this case is a metaphor for the human capital and economic growth which future students are going to project.

Section 4.2 Social Benefit

The literal definition of a social benefit is the total benefit to society from consuming or producing a good or service, this encapsulates the private benefits together with the external benefits of this production/consumption. (Pettinger, 2029)Let us first look at the concept behind what makes a social benefit, that is externalities.

Externalities are said to be the 'spill-overs' of an action, which means they are unintentional effects to the main action. This in turn results in an extra cost or benefit. This benefit can be either private or social. Private benefits are those benefits who only effect the people responsible in consuming or producing the good, whilst social benefits effect the people around the people responsible for consuming or producing the good. In the case of education and this stipend, the externalities are mostly all positive as it bestows a benefit to non-market participants. When a positive externality is present, usually the good is under-supplied.

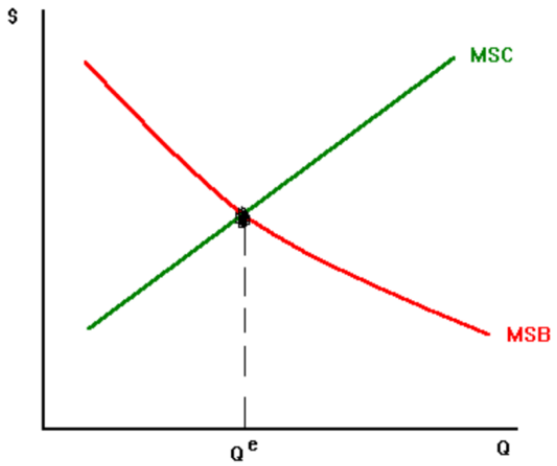

Figure 4.2.1 Economic efficiency in terms of marginal social costs and benefits (Source: David A. Latzk available at:http://www2.york.psu.edu/~dxl31/econ14/lecture31.html)

Figure 4.2.1 displays a supply and demand equilibrium in terms of marginal social cost and benefits to portray economic efficiency. This means that as the quantity increases, there will be less supply of the Marginal Social Benefit and more Marginal social costs.

Moreover, figure 4.2.2 encapsulates how the market performs under a positive externality. Here we are taking into consideration a lack of external costs as MPC = MSC. Another important analyzation is that the Marginal social Benefit line (MSB) is above the Marginal Private Benefit line. This is due to the fact that every time there is a personal consumption, this produces an additional benefit to non-market participants. By saying this, we can generate this into an equation where: MPB + MEB = MSB.

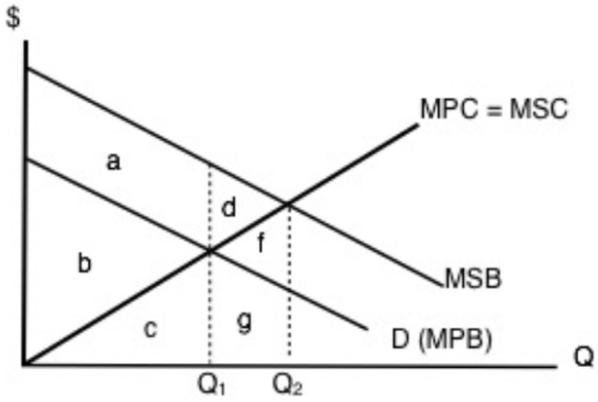

Figure 4.2.2 Market performance under positive externalities (Source: BC Campus (2020) available at: *https://pressbooks.bccampus.ca/uvicecon103/chapter/5-1-externalities/)*

Hence, because we are analyzing social benefits, we must look at Q2. A market surplus, which happens when there is excess supply, can be seen by deducting the triangle F from the triangle B. On the other hand, by adding the areas a, b and d a social surplus, which by definition is the quantity of welfare society has gained from the present consumption of the good, can be constructed. If we were to look at these aspects at point Q1, and therefore decreasing the quantity, to compare these two, one would notice that although the social surplus increased from Q1 to Q2, the market participants have become worse off. In other words, it can be said that a Pareto Improvement probably transpired. (Campus, N/A)

Thus, the stipend is said to be a part of Malta's extensive welfare state as it is referred to as a cash grant with its main purpose being to finance any student expenses and/or to improve their

standard of living. In contradiction to this, students claim that the costs paid out through this stipend are not enough to actually suffice the student costs it claims to cover.

The calculation of the said social cost on education is taken as before tax earnings, hence, school costs are considered to be the total costs of the particular school system per student irrelevant of where the funds are coming from. The social rates of return are not easy to gather in order to measure such externalities. Therefore, the gain to society is larger than the total gains to students, underestimating the social returns. The hardest assumption, in regard measuring and verifying public policy, is weather externalities are substantial and non-negative. These externalities are said to be composed of communication skills, lawful behavior, informed and responsible citizenship and health standards. The reason why these externalities are practiced is to rationalize public efforts to initiate educational investments. These efforts can be made through various ways, two of which include publicly owned school systems and or direct subsidies to students (both in our case). The size of the externalities is not known therefore the required magnitude of support is indefinite. Public intervention can be executed for multiple of other reasons, especially in the case of dispersal rather than the accumulated volume of educational investments. Programs that help 'poor' children attain a minimal degree of earning power is one of the reasons why school is seen as a very important tool. Certain policies are targeted at alleviating financial barriers towards education. Poverty can be said to be a 'relative concept', the volume of government aided education has been gradually increasing as the average education and wage have improved. (Mincer, 1981)

The presence of Social Benefits coming from investing in education has been presented by multiple researchers to outline the benefits that are brought about on an individual level but also for society as a whole. Wolfe and Zuvekas (1997) have shown that social benefits that include charity for individuals that was projected by investing in education could result in reducing social benefits dependence and the ability to save money or enhanced financial competence, not to mention, significant decline in crime rates. On the other hand, Dunn (2007) noticed that an increase in the level of education of one generation created a domino effect where there were superior potentials for future educational levels. Hence, Dunn (2007) looked at the positive influence of what education has on the next generation for society, in other words, these educational social benefits increase the welfare of a country. Heise and Meyer (2004) was able to describe the benefits of education for society and individuals, which mainly

related to what Dunn (2007) previously outlined. However, McMahon (2002) linked non-monetary educational benefits to the rise in health for a population and the decrease in infant mortality and higher life expectancy.

Promoting further education does create social benefits by establishing a well-educated population. Tertiary education is able to enhance esteem and efficacy where people will have better psychological health and a greater inclination towards community participation. Enhanced problem solving and independence of thought can be also brought about from further education and are able to develop the economy. Further education is an asset that can help us as citizens to integrate and eliminate the boundaries between different ethnicities. (Preston, 2002)

Section 4.3 Incentive Scheme

One of the main reasons the stipend scheme was introduced was to encourage students to continue their studies rather than terminate their educational journey at the mere age of 16, the age where most students finish secondary school. The reasoning behind the monetary allowance was to give students that extra push, where needed, to persuade students that this is an extra benefit to continue higher education. One might ask whether the stipend is necessary and whether students would still want to continue their studies without the stipend. These questions are crucial in examining this scheme. However, the answers to these questions depend on multiple factors such as the state of the Maltese labor market, as one has to view such in both long and short term market conditions, together with the effect and importance of the tertiary education enlisted, not to mention the additional division of subject and age differences. The Maltese stipend as previously seen in Chapter 3 started off by segmenting the amounts according to which year the student was in, this was maybe due to the fact that as the student progressed in his studies, the costs of materials would increase as well. The division according to subject is still relevant to the stipend program today as students who are undergoing a prescribed course are given a higher allowance due to higher costs. The answer that will truly justify a need for the stipend scheme would be that as a country, Malta requires this mechanism in order to reach labor market requirements in terms of quality and quantity when looking at the present and future supply of tertiary ‘human capital’.

This incentive scheme is only accountable when students recognize that the sum of investing in their education whilst getting paid to do so outweighs entering the workforce at an early age (when comparing it to the minimum wage). This is also referred to as having an opportunity cost. This exactly ties in with the human capital theory that Becker (1964) and Mincer outlined.

Section 4.4 Financial Independence

The students that decide to further their studies, are said to have cash beneficiaries of the state for at least the least 20 years. As these students mature, their lifestyle differs together with their needs. Thus, as these students enter post-secondary and tertiary institutions, their financial commitments together with their responsibilities continue to increase.

After addressing all these relevant points on the rationale of the stipend scheme, an important factor must be considered, that is, Malta provides free state education. Therefore, not only are students receiving free education, but are also getting paid to do so with reasoning behind it. Before entering into tertiary education, all education costs encountered during the compulsory school-leaving stage must be dealt with by their respective guardian. (Baldacchino, 1999)

One of the many reasons that students opt not to continue their university program is that they rather be more-so financially stable in the coming years rather than in let's say 4 years' time. By giving students a monetary allowance whilst perusing further education, the government is giving them a 'best of both worlds' situation, in the sense that they are given some financial independence with this additional benefit.

This Financial Independence can also be seen in more detail when comparing the stipend's purchasing power in section 3.2. If the stipend is actually meant for this reason, it would not be that much doable as no one is able to live on the stipend alone. The monthly minimum wage cannot be compared to this stipend level as, in calculation, it is a bit more than a minimum worker's weekly pay.

These reasonings do not only apply to the case of Malta, but also to any educational stipend that other countries offer such as that of Finland. However, financial independence plays a bigger role when it comes to the stipends of foreign countries, because as seen in Section 1.4,

Maltese youngsters are said to live with their parents for a longer time than most other EU countries. The main reason for this is mainly due to the small size of the island where students do not have to travel as much to attend university, unlike Finish students for example, that might live far from campus and would be better off lodging somewhere closer to the university.

As seen from these reasonings, an educational stipend is very rewarding and has a lot to offer. Countries that do not give students this opportunity should try to implement a system of this sort. The main downside to the program is the funding that is quite costly for countries that have a much larger student base. The European Commission generously funds this particular program as will be seen further on in Section 5.2. This scheme is truly a benefit for all, as it gives students the opportunity to enhance and further their education keeping them financially stable whilst also creating a more educated population and a better source of human capital.

Chapter 5 Statistics

Section 5.1 General Statistics

To confirm or even to analyze whether the stipend actually works like predicted by the rationale, a set of statistics must be observed and considered as results from the scheme. It is to be noted, that although correlation is observed, causation is not certain and is just assumed. Due to the scarce resource of statistical evidence on Malta, a uniform year could not be kept. It also important to note that most of the data surrounds the years 2004-2005 due to the reform together with research in the years 2018/2019 being the most recent.

One of the ways to determine whether the scheme did make a difference is by looking at the number of students, graduates and dropouts. The following chart shows just this for the years between 2000 and 2006, hence displays the period of the 2004/2005 reform. This has been taken from an annual study regarding education statistics conducted by the National Statistics Organization. During the years 2004 and 2005, one can note that there is a peak in the number of students. This period is well known due to the reform that was underway. However, there is nothing that proofs that there is correlation between these two.

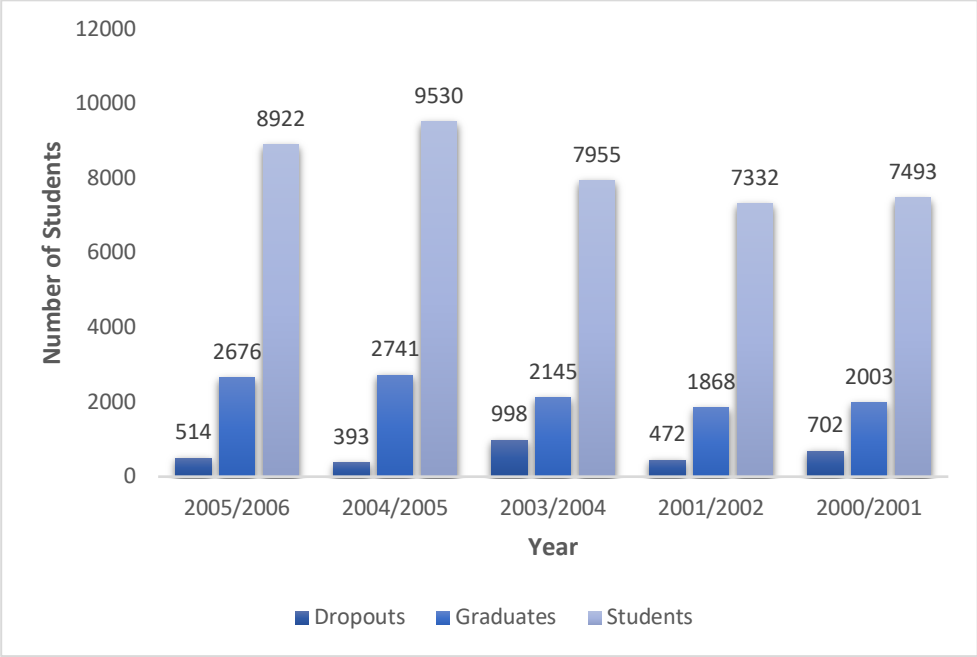

Figure 5.1.1: Number of Students, Graduates and Dropouts for the period 2000-2005 (source: NSO Education Statistics (2006) available at: https://nso.gov.mt/en/publicatons/Publications_by_Unit/Documents/C4_Education_and_Information_Society_Statistics/Education_2006.pdf)

According to a report published by Eurostat in 2017, one out of ten young people in the EU does not proceed further than lower-secondary education. In Malta, 18.6 per cent of young people drop out of school at that stage, which is the highest rate across the EU. Although there is a 32.2 per cent drop from the 2006 rate, there is still a long way to go.

The year 2004 was not favorable for Malta not only in terms of school dropouts, as depicted in figure 5.1.1, but also in terms of early school leavers. In figure 6.1.2, Malta can be seen as having one of the highest percentages in early school-leavers aged between 18-24 for both genders. Almost half of the students in that age group dropped out or did not continue any education in the coming years, which in reality is quite alarming. This might have been the reason for the reform which occurred in this period. Another additional note from the following bar chart is that although Malta did not have the highest number of male dropouts, it sure did have the highest number of female dropouts when compared to all the countries enlisted in this statistical analysis.

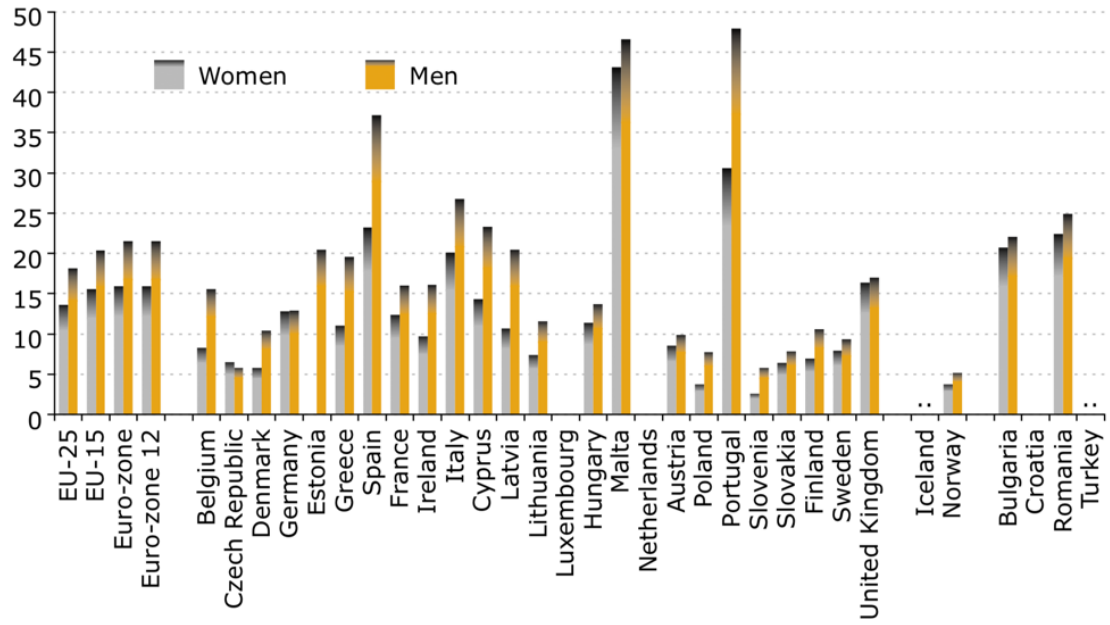

Figure 5.1.2: European Early School-leavers aged between 18-24 for the year 2004 measured as a percentage of the population of the same age group (Source: Eurostat (2005) https://ec.europa.eu/eurostat/documents/3217494/5662835/KS-CD-05-001-2-EN.PDF/2495fe45-a437-4a13-8cd3-70f809d59f3f)

Section 5.2 Expenditure on Education in constant prices

The bar chart and table below display a statistical analysis conducted by Eurostat. This research was done to compare the expenditure on education in constant prices of different European countries. It uses an 'Index' unit of a 100, to measure the total public expenditure on education in constant prices. Eurostat lastly updated the analysis on the 24th of February 2020.

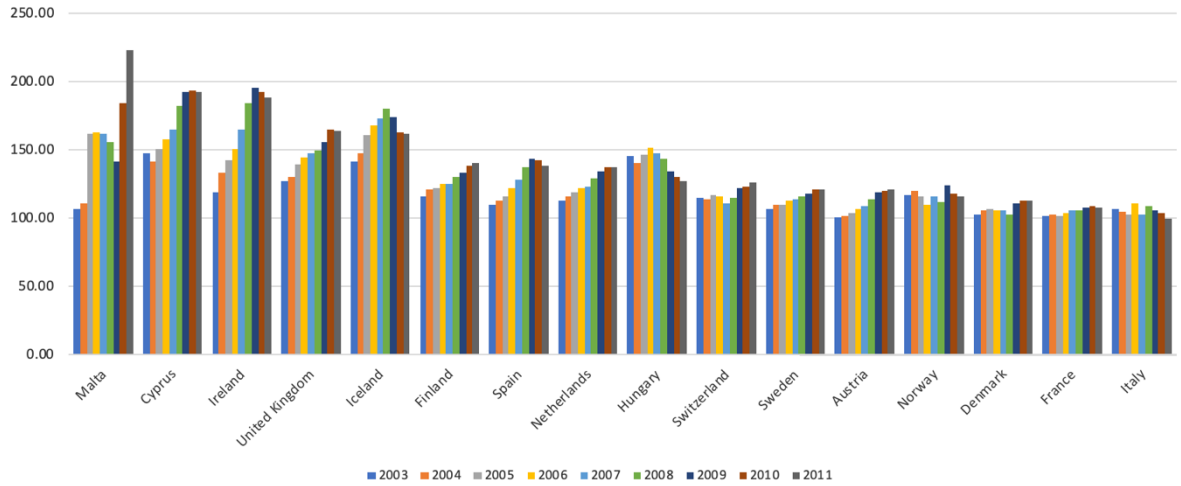

Figure 5.2.1 Expenditure on Education in constant Prices for European countries (source: Eurostat (2020) available at: https://appsso.eurostat.ec.europa.eu/nui/show.do?dataset=educ_fiexpc&lang=en)

The first date recorded is the year 2002. In this period Malta was not prioritizing education and so did not invest in any expenditure. This can be seen through the rankings as Malta was positioned in last place with a total of 99.78. The range of values in this year was 36.31, which is also the difference between the expenditure of Malta and that of Romania.

Throughout the years, Malta has been slowly increasing the expenditure on education at a steady rate. However, one can note that in the years 2004 and 2005 Malta was undergoing an educational reform. This reform was directly targeted at educational expenditure as the government was in the process of removing the 'smart card' so that students could receive their stipend allowance directly in their bank accounts. Due to this, in just one-year Malta went from placing 13th to topping the chart, as the index increased by 51.05.

In the year 2003, Eurostat also conducted a research report on student grants and loans when looking at total public expenditure on tertiary education. As predicted, Malta was one of the top countries in terms of percentage share of student scholarships and other grants, with a total of 30.2%. The average percentage for this statistic is 17.99% where Malta surpassed this mean by almost half. The only country that was able to outweigh Malta's percentage was Cyprus with a total of 44.5% which is not that far off from Malta's value when compared to that of other countries. (Delhaxhe, et al., 2007)

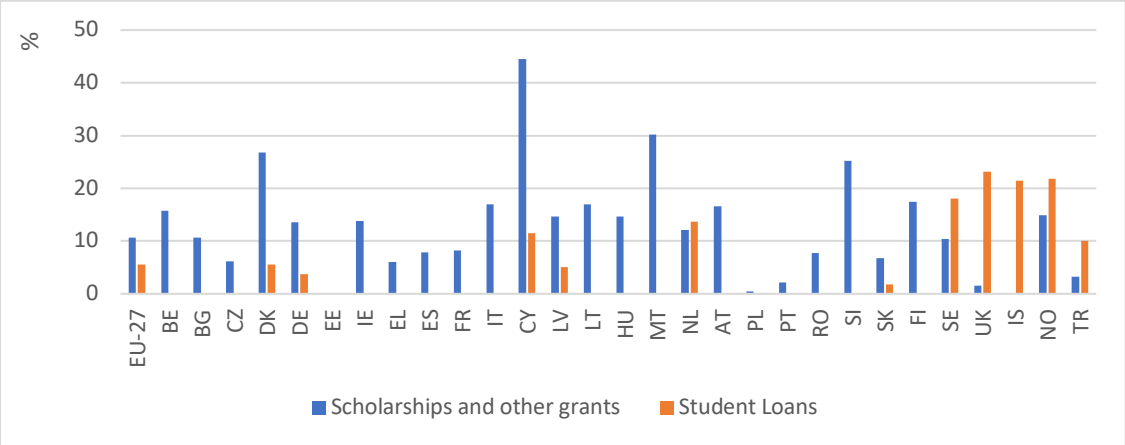

Figure 5.2.2: Share of student grants and loans as percentages of total public expenditure for EU countries on tertiary education (ISCED 5-6) in 2003 (Source: Eurostat (2007) available at: https://ec.europa.eu/eurostat/documents/3217494/5612655/978-92-79-05691-8-EN.PDF/21836f77-90d5-4a51-9e03-b237cae9fe4a)

The European Commission in the programme titled 'Investing in human capital to create more opportunities and promote the wellbeing of society' targets to invest EUR 132 million, from which EUR 105 million are from the EU budget. The highest investment of this programme is to invest EUR 47.4 million in Maltese education to diminish early school leavers and in turn, increase the number of tertiary education students. (European Commission, 2019)

Section 5.3 Employment/Unemployment rate of newly graduates

The best method to examine whether the scheme is actually pathing the way for further human capital in the future is by looking at the employment rate of newly graduates that have completed their studies, which approximately vary between the ages of 20 and 34 years. The following table displays such information and divides this information into multiple categories

such as sex, type of education level and county of birth for the given year 2018. However, the first entity that is fundamental to note is the total percentage. When looking at the total, Malta appears to have the highest percentage amongst all the countries. This comes to show that as a country, Malta, is indeed doing its best to not only push students into a broader and brighter future by allowing them to pursue their educational desires without any financial problems, but also giving them a high probability to find a job immediately upon graduation. Therefore, this goes without saying, that the results imply that this scheme does in fact contribute to greater human capital in the future. This comes to show the importance of higher education, as a person having a high level of education is statistically proven to have a higher percentage probability of getting a job than people who terminated their education after compulsory education (age 16 in Malta)

	Sex (%)			**Education level (%)**		
	Total	Male	Female	Upper Secondary & post-secondary non-tertiary education (ISCED 2011 levels 3 and 4) - General	Upper Secondary & post-secondary non-tertiary education (ISCED 2011 levels 3 and 4) – Vocational	Tertiary education (ISCED 2011 levels 5-8)
EU	81.6	83.3	80.0	66.3	79.5	85.5
Malta	94.8	94.6	95.1	93.0	89.8	96.7
Cyprus	78.9	73.8	82.5	69.4	67.3	81.3
Ireland	84.3	85.9	82.8	71.5	76.9	89.5
United Kingdom	86.7	86.2	87.0	80.0	84.2	88.4
Iceland	94.4	96.1	92.7	91.1	/	95.8
Finland	81.7	86.3	77.8	76.9	78.5	88.3
Spain	75.4	75.9	75.0	64.1	70.0	77.9
Netherlands	92.0	93.4	90.7	89.1	87.9	94.8
Hungary	87.5	91.6	83.4	75.7	87.1	91.5
Switzerland	88.3	88.1	88.6	78.6	85.7	92.3
Sweden	88.5	89.2	87.7	80.9	88.7	92.5
Norway	90.9	90.3	91.5	78.4	90.4	94.8
Denmark	85.9	88.4	83.3	80.0	85.6	87.8
France	77.7	76.1	79.4	48.9	72.0	84.4
Italy	56.5	58.9	54.1	36.2	53.9	62.8

Figure 5.3.1: Employment Rates of recent Graduates (aged 20-24) not in education and training for European countries in 2018 (Source: Eurostat (2020) available at: https://ec.europa.eu/eurostat/statistics-explained/index.php/Statistics_on_young_people_neither_in_employment_nor_in_education_or_training)

Section 5.4 Assessing Human Capital

The construct and rationale behind human capital build-up has been a vital concept throughout this thesis. In Malta, aggregate human capital has been calculated through the use of a cross-classification of the population into four distinct age groups and three educational levels. The age groups are sectioned starting from 14-24 year olds followed by 25-49 year old's and 50-64 year old's and finally the ones being of the age 65 and over. The three levels of education are according to the level of attainment according to the International Standard Classification of Education (ISCED), where the lowest attainment is ISCED 0-2 (early childhood education or pre-primary education), the second ISCED 3-4 and the highest ISCED 5-6. This study uses data obtained by a Human Resources consulting firm to show how much the mean annual basic salary, which is taken before social contributions, tax deductions and overtime payments, is affected by different levels of education in terms of a percentage amount to calculate any performance bonuses, allowances and commissions received. (von Brockdorff, 2017)

The results show that for those having obtained an ISCED 0-2, the mean annual basic salary increased by 4%, whilst those who had an ISCED 3-4 rose by 7% and those who had the highest ISCED got the highest top up, that of 12%.

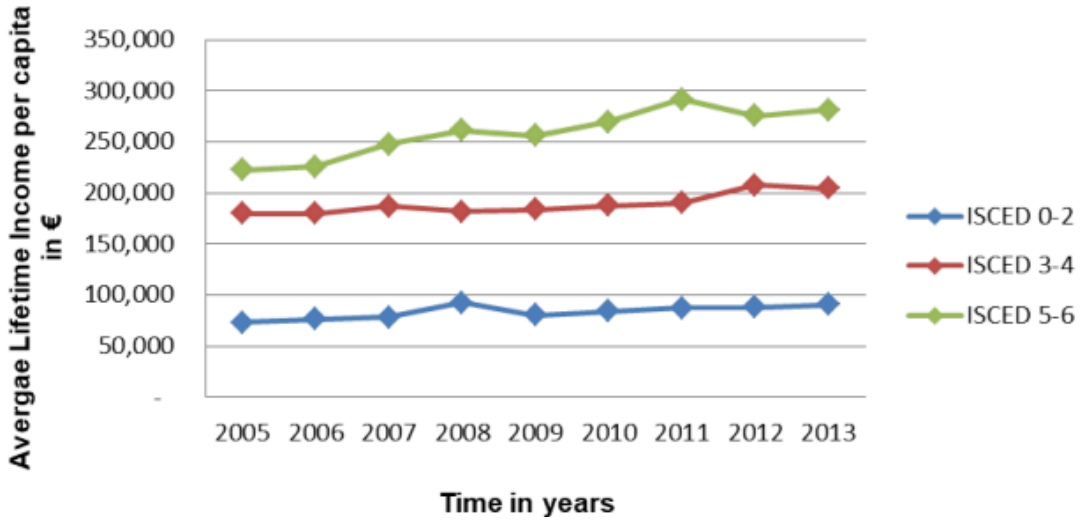

Figure 5.4.1: Average Lifetime Labour Income per capita by educational attainment. (Source: Xjenza Online - Journal of the Malta Chamber of Scientists (2017) available at: https://www.um.edu.mt/library/oar/bitstream/123456789/25583/1/Xjenza%2c%205%282%29%20-%20A3.pdf)

	2005	2009	2013
	€	€	€
All Individuals	122,366	141,523	177,888
Educational Attainment			
ISCED 0-2	73,500	80,572	90,861
ISCED 3-4	179,633	184,048	204,596
ISCED 5-6	222,728	256,459	281,677
Age Group			
15-24	166,180	194,680	237,314
25-49	136,633	162,409	211,614
50-64	42,127	43,831	57,177

Figure 5.4.2: Average Lifetime Labour income per capita according to educational attainment and age group (source: Xjenza Online - Journal of the Malta Chamber of Scientists (2017) available at: https://www.um.edu.mt/library/oar/bitstream/123456789/25583/1/Xjenza%2c%205%282%29%20-%20A3.pdf)

Using the ISCED measurement system helps to compare the results obtained internationally. The following graph displays the lifetime income according to the education attainment level of Malta compared to other EU countries for the year 2006. It can be seen that although the lifetime incomes are higher than the ones in Romania and Poland, it is still very low compared to the other more prominent countries. Countries such as France and the Netherlands, give much higher wages to those who have an attainment level of ISCED 5-6 whilst Malta's range of annual income is said to increase somewhat proportionally.

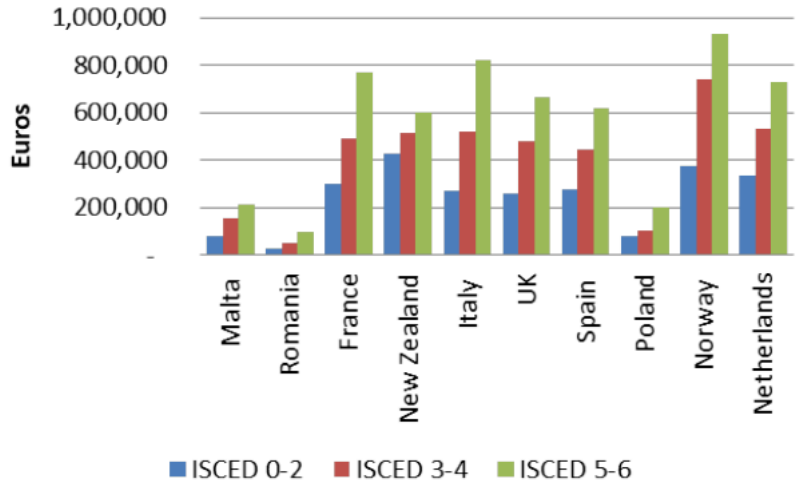

Figure 5.4.3: Lifetime incomes by educational attainment level in 2006. (source: Xjenza Online - Journal of the Malta Chamber of Scientists (2017) available at: https://www.um.edu.mt/library/oar/bitstream/123456789/25583/1/Xjenza%2c%205%282%29%20-%20A3.pdf)

The World Bank published a Human Capital Index ranking for Malta which placed it 39 out of 157 for the year 2017. This Research paper also concluded that a child born in Malta is most likely to be 70% as productive later on in life as she could be if she took advantage of maximum education and health. There is also a 99% probability that the child will survive to age 5 and if the child starts attending school at the age of 4, it is expected that she will complete about 13.3 years of school until her 18th birthday. (World Bank, 2018)

The questions and theories that I set out to answer in this thesis can be proven here. The data presented in this chapter comes to show that there is some sort of correlation and positive outcomes from the stipend program. However, causation cannot be confirmed. All data presented does in fact support a theory which is vital in examining the stipend program. Giving students educational funding as incentives should be promoted more so that even more countries take advantage of having a more educated population.

Conclusion

Without education, we wouldn't be where we are today. Education enables us to socialize and grow as human beings. It is important for governments to enforce and support this construct, not only for this reason, but because the government does benefit from education as well. As elaborated on in this dissertation, human capital development is a determinant of economic growth. If people invest in further education, their investment will pay off in a couple of years with a better job and higher income than if they terminated their education after completing compulsory schooling.

Malta has enabled students to not only pursue further education for free but also get paid to do so. As a student myself, who has benefitted from this program, I feel quite privileged when I know that there are students who are drowning in student loans and debt trying to make ends meet just so they can obtain a degree. Due to Malta's size, students are not known to go live on their own to be closer to campus and so live with their parents until they graduate and get a good job until they are financial stabile enough to buy their own place. Hence, this system gives students, the ability to feel a bit independent when it comes to monetary aspects. In my opinion, this freedom is one of the additional aspects that the stipend gives out other than being a form of incentive.

Some might say that students should just get a part-time job and the scheme wouldn't be necessary. However, this scenario should be looked at from both the perspective of the student and the employer. From the point of view of a student, I can say that it is not easy trying to juggle a part time job whilst still being a University student. This is because, apart from attending University lectures, I must make time to revise and do any assignments. In addition, University timetables vary from course to course. Some students do not have a fixed schedule and cannot inform the employer a week before their lectures their available timeslots and make it harder to place a shift. On the other hand, there are students that do have a fixed timetable, but their lectures vary from 8am to 8pm, hence they do not have an available time slots for work. No employer wants this type of hassle.

The stipend was also introduced to help students obtain any materials that are needed for their studies. University level books are known to be very expensive and are essential to obtain a

good grade in any exam. Lecturers are the first to point out that the notes and slides discussed in class are not always enough and should be backed up by literature and urge students to buy these University books.

The Maltese population's largest social class has to be the middle class, where it consists of middle-income earners. Some families do not afford to support their children financially especially when their children grow up and go to University. This scheme also indirectly supports families such as these and especially the ones less financially stable than this.

Like every aspect, the Maltese stipend has its strong suits and weak points. The best part about the stipend is that it is inclusive to everyone regardless of family background income, as this would have received some backlash. Not every parent financially supports their children and it would have been quite biased if the system was set up for only those who have a low-income household. The obvious benefit of the stipend is that it is given to students attending a free university where they bare no costs except the cost of their study materials such as books.

This dissertation empowered myself to not only research about something which I feel grateful for but also enabled me to unlock and to learn about the previous reforms that were enacted before coming to the present scheme. However, the future is unknown and there are endless possibilities of what could happen next. If I were to give my take on what reform should be endorsed next, I would suggest that for example in the students' final years they are given a student-worker opportunity, like the stipend in 1997, so that once they graduate, students will enter the workforce immediately thus decreasing the level of newly graduates unemployment. This initiative will also enable the students to put their knowledge into practice whilst they are still in University. A similar concept has already been adapted by 'The Malta College of Arts, Sciences and Technology', also known as MCAST, where students receive the monthly stipend whilst practicing the skills they are learning in the form of apprenticeships. Another downside to the stipend is the restriction of students not being able to work more than 20 hours per week in order to be eligible for the stipend. It should be the student's choice on how many hours he/she should work and so shouldn't be a University issue if the student is able to balance work and student life.

On another note, Malta, being the small country, it is, was quite limited when it came to the research and information available. With this being said, in the near future, if the opportunity

to revise the work done in this thesis comes up, I would conduct a statistical study with a randomized trial in terms of student enrollment and whether the stipend actually incentivized or effected such enrollment. Mainly I would opt to have a sample who will be informed that they will not receive any stipend and the data will reflect on whether the stipend does have an effect on enrollment. In this case the data can either be presented and analyzed in terms of gender or also divided according to the schooling level the students are in. Theoretically, I would also try to eliminate as many constraints as possible. By conducting this type of primary data to uncover any necessary statistical data, I would clarify and refine the answers and remaining questions that were presented in this thesis. However, this approach would be quite difficult to implement in practice due to political barriers.

Educational Funding is a way for governments to support students in the slightest way possible. From the data and statistics gathered in this thesis, I have come to the conclusion that there is some form of evidence to show that stipends do in fact work on increasing the number of students to continue their education. Malta is lucky enough to receive funding specifically for this program from the European commission, as mentioned in Section 5.2. This may be due to the geographical size of the Maltese islands or the small number of Maltese students that need funding. In my opinion, governments should try to implement a program like this or at least similar to aid students cover at least some academic costs. Further education is an investment for not only students but also for governments who in a few years' time have a more qualified human capital worker base.

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