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Economische Evaluatie van het Leenstelsel

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De analyses en beleidsadviezen in dit rapport zijn geschreven door studenten van de cursus Economic Policy and Public Finance aan de Radboud Universiteit in academisch jaar 2020-2021. De auteurs (studenten) zijn persoonlijk verantwoordelijk voor de inhoud van hun analyses. De Radboud Universiteit is niet aansprakelijk voor uitspraken en standpunten in dit document. Ondanks screening en begeleiding door de docent kunnen de analyses onvolmaaktheden bevatten.

Bij vragen, opmerkingen, of ander soort correspondentie kunt u contact opnemen met de cursuscoördinator en docent C. K. van Krevel, MSc. (charan.vankrevel@ru.nl).

1. Inleiding en achtergrond

Dit rapport presenteert een analyse van de economische effecten van de *Wet Studievoorschot Hoger Onderwijs*. In 2015 luidde deze wet een nieuw hoofdstuk in de financiering en organisatie van hoger onderwijs in. De zogenaamde basisbeurs werd vervangen door een studievoorschot: een goedkope en langlopende lening voor levensonderhoud en studiekosten. Anno 2021 is dit zogenaamde 'leenstelsel' alles behalve onomstreden. De kritiek vanuit sociale organisatie en politieke partijen zwelt aan. Zelfs keren enkele voormalige voorstanders zich tegen het leenstelsel. In de nasleep van de parlementaire verkiezingen van 17 Maart 2021 leeft de discussie op in het nieuws en vindt het haar plek aan de formatietafel van het komend kabinet. Deze maatschappelijke context vormt een uitgelezen kans voor studenten economisch beleid van de Radboud Universiteit hun inzichten te etaleren en zich te mengen in dit belangrijke debat

De auteurs van dit rapport streven om een helder, kort, en academisch gemotiveerd beleidsadvies uit te brengen over het leenstelsel. Elke groep studenten voert een kritische analyse uit op een segment van het beleid op basis van de meest recente wetenschappelijke inzichten. De studenten bediscussieerden hun bevindingen met enkele maatschappelijke partners tijdens de conferentie '*Leenstel: Good or Bad*'. Tezamen streven de analyses om een genuanceerd en gebalanceerd perspectief te bieden op de gevolgen van het leenstelsel. Een samenvatting van deze analyses treft u in sectie 2 van dit rapport. Sectie 3 distilleert de meest ondersteunde beleidsaanbevelingen. Sectie 4 presenteert de individuele analyses van groepen studenten.

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2. Samenvatting

De economische effecten van het leenstelsel op de Nederlandse samenleving zijn veelzijdig. De auteurs onderscheiden effecten in een aantal categorieën: (1) gevolgen voor studenten(welzijn); (2) economisch-maatschappelijke effecten, (3) implicaties voor overheidsfinanciering, en (4) vergelijkingen met alternatieve systemen om hoger onderwijs te financiering. De lezer van dit rapport dient ervan bewust te zijn dat deze onderwerpen niet volledig los van elkaar staan. Desalniettemin trachten de auteurs zo veel mogelijk binnen de kaders van deze categorieën te verblijven in hun uitspraken.

1.1. Studeren en studentwelzijn

De auteurs van dit rapport concluderen vrijwel unaniem dat het leenstelsel de studenten schaadt. Hoewel de toegankelijkheid van hoger onderwijs grotendeels blijft gehandhaafd, blijkt dat minder studenten een tweede diploma behalen (Quaedeckers, paper 4.13). Er is bijvoorbeeld minder doorstroom van HBO naar universiteit en minder aanmeldingen voor een master diploma. Dit effect is echter relatief klein. Voorstanders van het leenstelsel kunnen er tevens op wijzen dat studenten sneller afstuderen. Toch betogen Roemburg et al., (paper 4.2) dat de verkorte studietijd juist onwenselijk is. De beperkte tijd, energie, en aandacht van studenten wordt verlegd van extra curriculaire activiteiten naar het versneld afronden van de studie. Voor een groep studenten werkt de prikkel om sneller te studeren averechts. Door zogenaamde *leenaversie* spendeert deze groep studenten minder tijd aan de studie en meer aan de bijbaan, waardoor het risico op studievertraging juist toeneemt. Roemburg et al. attenderen beleidsmakers ervan bewust te zijn ten koste van wat de gemiddelde studietijd wordt verlaagd. De financiële last van een studieschuld gecombineerd met de toegenomen druk op studenten (extra werk, minder sociale activiteiten, prestatiedruk) verlagen het studentwelzijn significant (Landman et al., paper 4.8). Landman et al. stellen zelfs dat deze grotendeels onzichtbare kosten waarschijnlijk niet de baten van het leenstelsel legitimeren.

1.2. Maatschappelijke gevolgen

De belemmerende gevolgen van het leenstelsel beperken zich niet tot studenten. De ontmoediging van de weliswaar kleine groep studenten om een tweede diploma te halen kan een remmende werking hebben op economische groei (Dao et al., paper 4.9). Het leenstelsel vertraagt dus de opbouw van ons menselijk kapitaal: de grootste aandrijver van ontwikkeling en welzijn. De ongewenste gevolgen van het leenstelsel reiken verder dan traditionele economische indicatoren van ontwikkeling zoals het BBP. Beulen (paper 4.3) beschrijft dat de zwaarste lasten pas over vele jaren merkbaar worden. Desalniettemin schat hij dat deze lasten fors zullen zijn. Hij beschrijft een drukkende werking op innovatie, politieke stabiliteit, en andere sociale zaken die de randvoorwaarden scheppen van een gezonde samenleving. Bijvoorbeeld, het leenstelsel zal een rimpeleffect veroorzaken dat de gezondheid van toekomstige generaties zal schaden via meerdere kanalen (van Londen et al., paper 4.4). Kortom, ook de gewone burger blijft niet buiten schot.

De maatschappelijke lasten worden door voorstanders van het leenstelsel verantwoordt door een toename in eerlijkheid en efficiëntie. De populaire uitspraak waarmee het leenstelsel werd geïntroduceerd was dan ook: ‘De bakker moet niet voor de studie van de zoon van de advocaat betalen’. De voorspelde besparingen als gevolg van afschaffing van de basisbeurs dienden direct te worden geïnvesteerd in de kwaliteit van hoger onderwijs. In de praktijk lukt het politici niet om de beloofde investeringen in hoger onderwijs te bewerkstelligen. Politici zouden kunnen overwegen de voorgenomen investeringen bij wet vast te leggen (Beverloo & Navest, paper 4.6). De beoogde efficiëntiewinst wordt dus (nog) niet gerealiseerd.

Daarnaast is maakt het leenstelsel studiefinanciering juist oneerlijker. Blokland et al. (paper 4.7) betogen dat het leenstelsel de sociale mobiliteit vermindert. Het is moeilijker om van een lagere sociaaleconomische achtergrond op te klimmen. Bevoorrechte studenten hebben een lagere of helemaal geen studieschuld en starten met een nog grotere voorsprong ten opzichte van minder bevoorrechte studenten. Een bijkomend effect is dat vermogensongelijkheid sneller toeneemt (van Mourik et al., paper 4.11). Thomas Piketty waarschuwt voor de destructieve gevolgen van vermogensongelijkheid en Nederland is al het meest vermogensongelijke land ter wereld. Toch plaatst het leenstelsel de maatschappelijke lasten onevenredig gedragen op de zwakste schouders.

1.3. Financiering van Hoger Onderwijs

De voorgaande analyses beperken zich tot de hoger onderwijsuitgaven van de Nederlandse overheid en diens impact op studenten en maatschappij. Desalniettemin dient de lezer van dit rapport te weten dat de meerderheid van de kosten van hoger onderwijs worden betaald door de Nederlandse overheid — en dus niet de individuele student. Hoewel er geen expliciete koppeling bestaat tussen overheidsinkomsten en uitgaven, is het evident dat hoger onderwijs wordt gefinancierd door belastinginkomsten. Om een volledige maatschappelijke discussie omtrent financiering van hoger onderwijs te faciliteren, bespreken enkele auteurs hoe hoger onderwijs gefinancierd kan worden.

De overheid heft het grootste deel van haar belastinginkomsten over personen, goederen, en bedrijven, respectievelijk.[1] Vincken & Kuipers (paper 4.10) constateren dat bedrijven een relatief klein aandeel van overheidsinkomsten financieren. Desalniettemin plukken Nederlandse bedrijven aanzienlijke vruchten van het hoge opleidingsniveau van de bevolking. Een eerlijkere inkomensverdeling kan worden bewerkstelligd met een progressieve vennootschap- of winstbelasting. Veel auteurs van dit rapport zijn van mening dat belastingrechtvaardigheid de sleutel kan zijn. Door belastingontwijking adequaat te adresseren op Europees niveau kunnen genoeg fondsen worden vergaard om de toenemende groei van hoger onderwijs te faciliteren. Bicknell et al. (paper 4.1) agenderen van vermogensongelijkheid. Zij merken op dat de overheid nauwelijks belasting ontvangt op rijkdom. Tegelijkertijd vergroot de Nederlandse overheid actief de rijkdom ongelijkheid door middel van het leenstelsel (paper 4.11). Zij stellen dat een vermogensbelasting en een hogere erfbelasting zorgen voor een eerlijker stelsel.

[1] Op basis van website OECD. Onderscheid tussen soorten belastingen en volksverzekeringen voor het gemak genegeerd.

1.4 Alternatieve Systemen

Veel politici en maatschappelijk betrokkenen stellen dat het leenstel moet worden vervangen. Een veelbesproken optie is de terugkeer naar de basisbeurs. Pen et al. (paper 4.14) berekenen dat de basisbeurs voor de overheid waarschijnlijk duurder is zolang de rente op staatsschulden relatief laag blijft (onder de 7%) en monetaire autoriteiten hun inflatiedoel halen (2%). Eveneens dient de overheid de belofte te koesteren om rente niet door te berekenen aan studenten. Het is daarom waarschijnlijk dat de basisbeurs zorgt voor hogere overheidsuitgaven en impliceert dus extra belasting. Een inkomensonafhankelijk beurs geniet niet de voorkeur van de meeste auteurs.

Een voorwaardelijke en volledig inkomensafhankelijke studiebeurs is volgens den Dekker et al. (paper 4.5) een stap in de goede richting. Door de omvang van de beurs direct te koppelen aan economische achtergrond leidt dit tot een eerlijkere verdeling van belastinggeld en ontmoedigt het studentenparticipatie niet. Kortom, een inkomensafhankelijke, voorwaardelijke beurs kan zowel rechtvaardig en doeltreffend zijn. Tevens constateren Pol en Cao (paper 4.12) dat de ‘pechgeneratie’ (studenten onder het leenstelsel) rechtvaardig kunnen worden gecompenseerd door een eenmalige (vermogens)belasting. Kortom, alternatieve systemen kunnen de voordelen van het leenstelsel en de basisbeurs combineren.

3. Beleidsadviezen

Op basis van de analyses en discussies stellen de meeste auteurs voor het **leenstelsel te vervangen**. De meeste auteurs betogen dat **studiefinanciering progressief en inkomensafhankelijk** moet zijn zoals een (basis)**beurs aangevuld door een inkomensafhankelijke toelage**. Een basisbeurs heeft ook een ongewenst component: een herverdeling naar huishoudens die geen ondersteuning nodig hebben. De meningen zijn verdeeld over haar noodzaak. Daarnaast moet studiefinanciering zodanig ruim zijn dat extra curriculaire activiteiten niet worden ontmoedigd. Nevenactiviteiten behoren tot de studio ervaring, maar worden onder het huidige systeem bestraft. Tevens dient er altijd een mogelijkheid te bestaan voor studenten om zonder schulden te kunnen studeren.

Daarnaast wijzen de auteurs politici graag op hun morele verplichting om de belastingen die hoger onderwijs financieren onder de loep te nemen. **Bedrijven kunnen meer bijdragen aan de financiering van hoger onderwijs**. Waar hoger opgeleiden genieten van een hoger salaris, genieten bedrijven van innovatie en winst door het aannemen van hoger opgeleiden. Dit uit zich onvoldoende in het belastingstelsel. Tevens vragen de auteurs voor aandacht en spoed om rechtvaardige belastingen te agenderen. Immers zijn er enkele bedrijven die profiteren van Nederlands onderwijs en miljarden aan belasting (legaal) ontwijken.[2]

Veel auteurs onderschrijven de cruciale maatschappelijke rol van hoger onderwijs in de maatschappij. Hierdoor dienen politici kritisch te reflecteren op de ongewenste gevolgen van het leenstelsel. Auteurs zijn het eens dat **de neveneffecten van hoger onderwijsbeleid op welvaartsongelijkheid onvoldoende in acht worden genomen**. Onderwijs moet expliciet worden beschouwd als middel om ongewenste ongelijkheden te bestrijden.

Tot slot wordt er aandacht gevraagd voor de **mentale gezondheid van studenten**. De aandacht voor mentale gezondheid in het hoger onderwijs is ondermaats en behoeft actiever beleid. Zo zou toegankelijkheid van hulp door middel van studentpsychologen, voorlichting, en randvoorwaarden kunnen worden verbeterd.

[2] Dit is een conclusie van de conferentie *Leenstelsel: Good or Bad?*

4. Papers

4.1. The differences between income- and wealth-based tax to fund higher education (pp. 11-22)
Auteurs: **Laura Bicknell, Jesse Derks, Willem Derks, en Merijn van der Leeuw**

4.2. Study advance system and time until graduation (pp. 23-37)
Auteurs: **Amber van Roemburg, Puck Peters, en Kim Otte**

4.3. The influence of the study advance on the collective benefits of higher education in the Netherlands (pp. 38-50)
Auteur: **Mart Beulen**

4.4. How does consumption of higher education affect health? (pp. 51-63)
Auteurs: **Brandon van Londen, Pietro Locatelli, Emma Atkins, en Merle Pfitzner**

4.5. Getting rid of the leelstelsel: what about lump-sum student grants? (pp. 64-77)
Auteurs: **Thijs den Dekker, Stef van Hulst, Ferri Bruijnen, en Morrison Vervaet**

4.6. The reinvestments of higher education funds by (future) politicians (pp. 78-87)
Auteurs: **Lucas Beverloo en Melvin Navest**

4.7. Inequality in social mobility due to the education system in the Netherlands (pp. 88-98)
Auteurs: **Kelly Blokland, Sam Durlinger, Heleen Kooij, Mannus de Leede**

4.8. The effect of the current study advance system on the individual benefits (pp. 99-109)
Auteurs: **Julius Landman, Ruben Flierman, Sarah van Dijk, en Nathalie Bak**

4.9. The efficiency and fairness of the effects of enrollment (pp. 110-120)
Auteurs: **Joan Dao, Fleur van Grinsven, Niels Molenaar, en Elaine Schendstok**

4.10. Using corporate taxation to finance higher education in the Netherlands (pp. 121-132)
Auteurs: **Babs Vincken en Hanneke Kuipers**

4.11. The effect of the study advance on wealth inequality in the Netherlands (pp. 133-145)
Auteurs: **Rob van Mourik, Alden Chazan, Bernardo D'Agostino, en Tijn Outvorst**

4.12. Compensatie voor de "pech generatie" (pp. 146-155)
Auteurs: **David van der Pol en Ricky Cao**

4.13. The study advance system and equality of opportunity in higher education (pp. 156-168)
Auteur: **Daniëlle Quaedackers**

4.14. The hidden costs of the leenstelsel (pp. 169-176)
Auteurs: **Wouter Pen, Annet Colenbrander, Eline Meiberg, en Kathleen Heijmer**

4.15. De verschillende effecten van zowel de invoering van het sociale leenstelsel als de invoering van de basisbeurs (pp. 177-188)
Auteurs: **Jip Grooten, Milou Gaertner, Nora Huijgen, en Sanne Bours**

4.1. The differences between income- and wealth-based taxation to fund higher education

Laura Bicknell, Jesse Derks, Willem Derks, en Merijn van der Leeuw

Abstract

This paper aims to explore the possibilities of an additional tax in order to finance the removal of the Dutch study advance system. Differences in efficiency as well as the degree of fairness in society are explored and with these evaluation criteria advantages and disadvantages of wealth- and income-taxation are compared. After the analysis, it is concluded that a wealth tax is to be favoured over an income tax. The Dutch wealth inequality is the highest in the whole world and a progressive wealth tax could be a powerful and fair tool in reducing this inequality. In addition, when the wealth tax focuses on the very richest in society, or is imposed on inheritances, the decrease in people's welfare is minimized and the wealth tax can be considered efficient.

1. Introduction

Since 2015, Dutch students have to pay a yearly tuition fee for their education (Erdogan & Folia, 2021). This yearly fee amounts to approximately €2000 per year, excluding other student living expenses like housing, food and leisure time expenses. Many students or their parents do not have the savings or income to cover this (De Vries, 2021). Therefore, many students turn to the study advance system (Erdogan & Folia, 2021; De Vries, 2021). Unfortunately, this new system does not work as well as initially envisioned and there are many calls for a reform, from students but also from political parties (AD, 2021; NOS, 2020). It has been estimated that it would cost the government approximately €10.000 per student per year to finance their higher education completely. This number differs depending on the study programme and study phase (Nieuwscheckers, 2017). The government currently already pays a big part of this sum, but to completely erase the leenstelsel the government would need approximately €2.000 per student per year extra. This paper will evaluate two types of tax - a wealth tax and an income tax - in order to possibly increase the revenues of the Dutch government and pose an alternative to the current system.

The conflicting disadvantages and advantages of the two different tax systems will be analysed and compared based on the two major criteria of equity and efficiency. To this end, this research will be guided by the following research question: *What are the effects of and differences between introducing an income- and wealth-based tax to fund the Dutch higher educational system?*

2. Theoretical background

In the design of tax systems, policymakers face trade-offs between concerns of equity and efficiency (Mirrlees, 1971). The following sections will discuss what equity and efficiency are and elaborate on criteria that can be used to evaluate policy on both accounts.

2.1 Equity criteria

Equity is concerned with to what extent the total amount of income or wealth is evenly distributed in a society, now and across generations (Burbidge, 1991). Literature makes a distinction between horizontal and vertical equity (Musgrave, 1990). The concept of horizontal equity stresses that people that are comparable in income or assets should be taxed in the same way. When a horizontal equity approach is favoured, a proportional system is preferred. It would be unfair to tax people more if they work more and it therefore advocates equal treatment. If one person is better off before the taxation, he or she should also be after the taxation. In contrast to horizontal equity, a vertical equity perspective progressively increases taxes with the amount of income. This is perceived as fair, because the ones with the ability to pay more taxes also do so. Consequently, this will have effects for how the total amount of income or wealth is distributed and how much inequality there is in a society (Sen, 1973).

Whether or not a form of taxation is fair ultimately depends on the individual's perception of fairness. It is thus a subjective criterion to a certain extent and in the eye of the economist. A social welfare function is a way of ordering different social outcomes in terms of preference. The framework by Mirrlees (1971) posits the policymaker as a utilitarian, which tries to maximize the greatest amount of good for the greatest number of people. Alternatively, the Rawlsian function, or maximin criterion, measures social welfare by looking at the person or group with the lowest means or happiness and focuses on increasing welfare there. Thirdly, welfare can be examined as a function of inequality in a society by looking at how the total amount of income or wealth is distributed in a society (Sen, 1973).

2.2 Efficiency criteria

Even though a policy option may be considered fair by applying the criteria outlined above, it may not necessarily be efficient. A government has the ability to improve the lives of citizens by offering a number of fundamental services, like education, infrastructure and healthcare. However, to pay for these, it has to collect revenues, one very important revenue source is taxing people. When a tax is implemented, the situation of how the economy would function without intervention from the government is distorted (Rosen & Gayer, 2014). Taxes affect the wellbeing of citizens directly through a reduction in income or wealth, or indirectly because the tax has implications for the available quantities or prices of goods that the citizen wishes to consume (Burbidge, 1991). In this way, it is said that the market is not operating efficiently and as a result economic welfare is being lost. Efficiency criteria are used to compare these losses of different possible policy options. Both quantity and price may change as a result of a new tax. To maximize efficiency, distortionary effects as these should be as low as possible. In addition to the losses, it is also important to consider the positive effects that can be obtained by the revenue raised through taxes. For example, positive effects can be attained by funding higher education, infrastructure and social security.

A tax rate can either fall, rise or increase at a proportional rate together with income or wealth. Mankiw et al. (2009) have modelled the effects of these three different approaches in order to determine which tax is economically optimal. Building on the work of Mirrlees (1971), the paper shows that a tax rate that decreases as people earn or possess more could be most efficient. The assumption is that high-income workers are more elastic towards working as tax rates increase (Kahn, 2011). This means that they will be less willing to work if they have to pay an increasing tax on their income. If this were true, a declining marginal tax rate would be most efficient since a government would not want to not discourage those people that are earning the most and

consequently are paying the most taxes. To maximize the revenues while minimizing the impact on citizens' wellbeing, a government will need to make a tradeoff. How the tax rate varies with low- and high-income earners is a principal policy question affecting the efficiency in an economy.

3. Analysis and Evaluation

The previous section has laid out a number of criteria on how to rate potential tax measures on their efficiency and fairness. The next section will analyze how income-based taxation and wealth-based taxation score on these criteria and evaluate their merits with respect to efficiency and fairness.

3.1 Income-based tax

The Netherlands currently applies a progressive tax system on income, meaning that as income rises the income tax rate also rises. This is in line with the concept of vertical equity. From a utilitarian point of view, wishing to maximize the welfare for most people, a more progressive tax rate would also be fairer. This is due to the fact that the happiness of people tends to increase less and less with every unit of additional income or wealth. Therefore, it would be acceptable to tax higher incomes increasingly as this portion of their income does not give society as much increase in welfare as the same amount of money given to someone with a lower income would. In theory, this would lead to a situation where the distribution of income has achieved a level where everyone experiences the same welfare. The Rawlsian view would also be in support of an increase in tax of the higher incomes, as these revenues can be given to societal groups with lower incomes where it would raise their income considerably. In effect, this would increase the welfare of the lowest income group, which is the ultimate goal of the maximin perspective. Lastly, a more progressive income tax would reduce income inequality in a society, which strokes with improving the Gini coefficient towards more equality. The benefits for society are also discussed in the book by Wilkinson &

Pickett (2009), they state that everyone in a society, including the richest, benefits from a society that is more equal.

Whether a more progressive income tax would be efficient depends on what assumptions are made with regard to the elasticity of labour. Contrary to the assumption made by Mankiw et al (2009), labour is also observed to be rather inelastic (Aaberge et al., 1999). This means that by increasing the tax rate on higher incomes, the revenue collected by the government would rise, in spite of people wanting to work less hours because they are now facing a higher tax rate. However, at some point the incentive to work is bound to be sufficiently decreased to stop working. When too many people feel this way, this could be undesirable for the economy, due to the fact that it decreases overall productivity. In addition, the income inequality in the Netherlands is already at a relatively stable level (UNU WIDER, 2021). Unless a country adopts an economic system in which everyone is perfectly equal in terms of compensation, there will always need to be an acceptable degree of inequality. This begs the question whether we should be raising taxes even further if it leads to people leaving the workforce.

3.2 Wealth-based tax

On the contrary, The Netherlands ranks number one as the country with the most unequal wealth distribution in the world (Credit Suisse Research Institute, 2019). The same arguments that are made in favour of having a more progressive income tax, could be made in favour of a more progressive wealth tax. Wealth taxation has a high vertical equity, since wealth tends to be more unequally distributed in societies than the other two bases for tax, namely income and the goods we consume (Scheuer & Slemrod, 2021). More progressive taxation would go a long way in reducing the inequality in this country, and a fairer distribution of wealth could be established as a result. However, the efficiency of a wealth tax is subject to fierce political debate.

Opponents like Mankiw (2009) claim that it would yield little revenue and severely distort the economy, while proponents like Saez and Zucman claim that it would be highly effective in addressing the growing wealth inequality, as well as collecting substantial tax revenues every year (World Economic Forum, 2019).

Firstly, opponents state that a wealth tax will be inefficient, as millionaires and billionaires will try to evade the tax by moving their capital abroad. Yet, in the years between 2005 and 2017 fewer than 100 individuals with a net worth greater than $100 million were reported to have left the United States (Organ, 2020). This intuition was confirmed by Young et al. (2016) which concluded that US millionaires are heavily embedded in their respective communities and only a small share of them migrates in response to new tax measures. Those that did migrate mostly did so across state borders rather than migrating abroad. It can be argued that the migration effect described in the former hypothesis would be even weaker for Dutch millionaires. Taxation does not differ between provinces and moving abroad across the border would come with the high transaction costs of different institutions in a country with another culture and language. Therefore, making wealth taxation more progressive is unlikely to be significantly offset by millionaires moving their capital abroad. Instead, they might be more likely to spend portions of their wealth since saving large amounts would lead to a higher tax liability (Saez & Zucman, 2019). This would increase consumption, which would be good for the economy as it increases GDP.

Secondly, a problematizing factor is that wealth in some cases may be illiquid. This means that these individuals are very wealthy on paper due to business ownership or other assets that have a high financial worth, but cannot necessarily be turned into cash money to pay for the tax. In 2017, France abolished its wealth tax due to gross economic inefficiencies, especially hindering successful entrepreneurs creating multiple successful enterprises (World Economic Forum, 2019). To be truly efficient, the wealth

tax thus will need to be installed at an adequate threshold, meaning that it will only target those people with wealth above a certain level (Scheuer & Slemrod, 2021). The paper examines the wealth tax proposals made by US presidential candidates Bernie Sanders and Elizabeth Warren which had such a high threshold that only 180,000 households and 75,000 households would be targeted respectively. Warren's highest tax scale would only target those with wealth of more than a billion dollars, this number being limited to 600 households only. By concentrating the impact of the wealth tax on those that belong to the richest strata of society, policymakers have the highest probability that those that are being taxed are in a comfortable enough position to be able to pay.

Alternatively, Piketty, Saez & Zucman (2013) argue for more progressive wealth taxation by raising inheritance tax, this point of reasoning touches upon equity as well as upon efficiency. Piketty et al. (2013) use arguments based on merit to discuss the fairness of an increase in inheritance tax. In the Netherlands for example, when funds are inherited from a significant other or parent, the first €671,000 or €21,000 respectively are not taxed at all (Belastingdienst, n.d.). When the inheritance exceeds that amount, partners and children pay 10% tax over approximately the first €130,000 and 20% on everything above that amount. Contrasting these tax rates with the income-based tax rates provides an interesting comparison. Piketty & Saez argue that, since the person is directly responsible for earning income, this should be reflected in relatively lower tax rates as compared to the inherited funds that we do or do not receive based on pure chance of being born in a fortunate family. In the last ten years, inheritances have increased in size and considering the graying of the Dutch population this trend is expected to continue (CBS, 2021). With a lot of funds changing hands, the inheritance tax would be a sizable starting point for more wealth-based taxation in order to raise funds for the next generation's higher education while redistributing in the process, making it a point for equality as well.

4. Conclusion and Policy Proposal

Taxing income and wealth with a tax rate that increases with income can be considered a fair policy option. However, whereas income inequality in The Netherlands is relatively stable, wealth inequality is the highest in the whole world. The transfer of accumulated wealth in the form of inheritances cannot be considered fair since it is dependent on pure chance. When the wealth tax focuses on the very richest in society or is imposed on inheritances, the decrease in people's welfare is minimized and the wealth tax can be considered efficient. Thus, based on this comparison of the equity and efficiency of income- and wealth-based taxation, this paper proposes to make wealth-taxation in The Netherlands more progressive in order to present an alternative to the current debt-based financing of higher education. With a special focus of taxing the extreme ends of wealth, meaning that the increase in progressive tax rate will primarily burden the extreme rich in the Netherlands.

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4.2. Study advance system and time until graduation

Amber van Roemburg, Puck Peters, en Kim Otte

Abstract

This paper investigates whether the 'study-advance' system has affected time until graduation of Dutch students. Owing to inconclusiveness of datasets on study duration since the implementation, the focus is on the relevancy of theoretical determinants of time until graduation. The argument is that higher private costs of education and a general aversion to borrowing will push students to minimize debt. As a response, students could focus more on paid work, decrease their effective study time, and risk delays. However, most evidence seems to suggest that students who finance their degree via loans shorten time until graduation. The higher costs of higher education form an incentive to study shorter and more 'effectively', at the expense of personal development and increased financial stress among students. This article argues that the intended effects of shortening time until graduation are marginal, and do not outweigh the societal burden of the 'study-advance' system. Therefore, we propose reintroduction of grants and increased financial support for students.

1. Introduction

The implementation of the 'study-advance' system caused great stir among Dutch students, and many wonder why the government would implement such a controversial change in the education financing policy. One of the selling points was the promise that the study-advance system would deliver shorter times until graduation (Caminada, 2020). By increasing the out-of-pocket costs of following higher education, the incentives to limit the time until graduation were expected to increase (Zomer, 2014). However, the policy need not always have the effects and impacts as intended. And regardless of the effectiveness in reducing time until graduation, the policy is also expected to have numerous unforeseen side-effects. Students experience increased financial anxiety, not only limited to current decisions about financing their education and daily living, but extending to worries about their future financial position. For most people, the prospect of leaving university in debt to the government is not the most appealing. For students who experience strong loaning aversion, especially students with a less privileged socio-economic position, the idea of facing higher private costs and the necessity to loan is expected to cause anxiety and to impact their choices.

This article aims to determine to what extent the government effectively incentivises shorter time until graduation with the 'study-advance' system. Analysis of the impact of the system is to be based on the preliminary data available, as well as the applicability of theoretical determinants of time until graduation. Furthermore, the evaluation of the study-advance system questions whether shorter duration of higher education is even a fair aim of the government. After all, doesn't the 'study-advance' system put such financial stressors on students that they are discouraged to pursue social and personal-development activities which have always been seen as valuable parts of a student's life? And to what extent do these adversities primarily target those students who already come from a position of less privilege and more financial stress?

2. Theoretical Background

Despite all the complexities of the aims and effects of the 'study-advance' system on the national level, the direct consequence for (prospective) Dutch students is clear-cut; higher out-of-pocket costs for attaining a university degree. The prospect of bearing higher costs is expected to influence student's choices before and during their education, especially in light of assumed unwillingness to create high levels of student debt. This phenomenon is known as loan aversion and will evoke differing reactions in students based on how much they are impacted, what financial means they have, and how they wish to finance their degree. As will be laid out, one line of reasoning is that students take up more side-jobs and working hours, decreasing their effective study time, lowering results, and risking study delays. On the other side of the spectrum are the students who do finance their degree via loans but focus on shortening their time until graduation by choosing a particular degree, by not advancing to further studies or by limiting associated activities, as to not reel up enormous amounts of debt.

The concept of loan aversion is one of the many biases that show that, as much as standard economic theory would like us to be, humans are not fully rational entities (Loewenstein, 1999). According to this standard economic theory, students starting their degree will base their financial decisions on a complete, deliberate cost and benefits analysis. Costs of the degree are straightforward; tuition fees, room and board, foregone earnings of years spent in further education, et cetera. As long as these costs do not exceed the 'discounted benefits' of their degree, which mainly encompass expected lifetime earnings, students should feel no hesitation to take on loans to fully finance all the costs and to take all the time they need at university (Boatman et al., 2017; Caminada, 2020). The net results are positive after all.

However, this standard, neoclassical economic reasoning has a glaring psychological blind-spot; students are not rational beings. Instead, they base their financial decisions not only on rational expectations and calculations, but also on

subjective considerations. For example, there are societal stigmas associated with being in debt as well as grounded stress and uncertainty about future repercussions of high student loans (Sociaal-Economische Raad, 2019). Real behaviour thus embodies far more than standard rationality assumptions allow. In extreme circumstances, students might even be fully unwilling to take on debt to finance their degree since the objective and subjective costs outweigh their estimated benefits of higher education (van den Berg & van Gaalen, 2018). Effectively, despite knowing rationally that financing a university degree via a student loan is highly likely to be 'worth it', one cannot expect the prospect of piling student-debt to have no significant influences on student's decisions during their degree (Burdman, 2005).

The degree to which one is affected by loaning aversion is dependent on countless social, environmental and personal factors. A particularly concerning and impactful determinant is the socio-economic background of the individual student. Studies have shown that students from disadvantaged socio-economic backgrounds are more likely to change their behaviour due to costs and risk of long-term indebtedness. Generally, these students are more likely to underestimate the long term value of higher education, and have fewer familial resources to fall back upon (Price, 2004). Students from more wealthy backgrounds on the other hand, appear more willing to take on some debt (Barr, 2010). Presumably, they have less experience with financial stress and more confidence in future earnings. This discrepancy introduces the returning questions of the fairness and equality of the 'study-advance' system.

But, what are the behavioural responses to loan-aversion in a time where student's bear more responsibilities to privately finance their degrees and how could these decisions influence time until graduation? This article presents two possible reactions with opposing consequences for the average duration of completing a university degree. For some students, loaning aversion could manifest as an incentive to raise funds via alternative ways, most notably by doing more paid work outside their

degree. However, this can lead to some students treating their degree as a part time activity, negatively impacting academic performance and risking significant study delays (Glocker, 2011). This response is expected to be most prevalent in cases of extreme debt aversion, which is likely correlated with less privileged socioeconomic positions (Oosterbeek & van den Broek, 2009). Intuitively, if this response were most prevalent, average time until graduation is expected to increase after the implementation of the 'study-advanced' system.

Alternatively, there are the students who decide to take on loans. While these students are not completely unwilling to go into debt to finance their degree, many still experience drawbacks of their loaning decisions. For these students, loan-aversion manifests as feelings of financial stress and incentives to complete their degree as fast as possible to minimize their debt, impacting their experience as a student and graduate (FNV Young & United, 2020; Bruckmeier et al., 2015). In determining the impact of the 'study-advance' system, one should not underestimate these social costs associated with the burden of student loans (Tran et. al., 2018).

3. Analysis

This paper thus analyses the behavioural responses of Dutch students to the financial incentives of the 'study-advance' system. As theorized, data from the Dutch Statistical Agency (CBS) shows that the mentioned concerns are especially relevant for students from lower socio-economic backgrounds. Since they cannot rely on financial parental support and do not experience the same financial safety-net from their direct support system as students from more affluent backgrounds, both their necessity to borrow and their aversion to debt are likely to be higher (Turkenburg et al., 2013). This report also indicated that, while enrolment effects of the 'study-advance' system seem limited, Dutch students appeared to make different choices regarding their approach to 'student-life' after the private costs of university were made to increase.

The first of the hypothesized choices is that, contrary to the government's goals, the 'study-advance' system can potentially increase time until graduation, for students can less effectively use their time to study if they work more hours to finance their degree. To analyse the relevance of this hypothesis in the Netherlands, one can look at the change in hours worked by Dutch students since the implementation of the 'study-advance' system. This data was presented by a policy letter written by the Centraal Planbureau (CPB), the main institute analysing the real-world impact of government policies in the Netherlands. In this letter, the CPB updates on the effects of the 'study-advance' system they found in the student population until 2020. Included is a diagram from that publication, which shows the effect of the 'study-advance' system on the ratio of students who work or have a loan to finance their degree (Bolhaar et al., 2020).

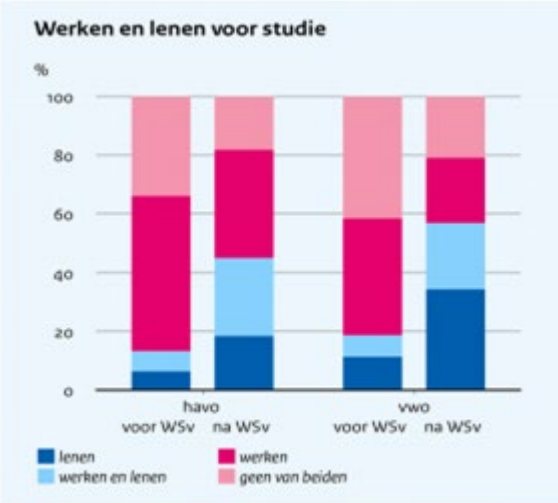

Figure 1: Working and Lending to finance education, from the Centraal Planbureau

Figure 1 shows that, overall, the number of students who work besides their study did not increase after the implementation of the 'study-advance' system. Furthermore, one can see that the proportion of students who only work, and have no loan, has shrunk, while the contrary is true for the group of students who only loan and do not have a side-job (Bolhaar et al., 2020). This might indicate that Dutch students do not appear to respond to the 'study-advance' system and associated financial incentives

by taking up more work. Therefore, the first hypothesis is expected to have limited relevance in the Netherlands.

Instead, the expectation about the effect on the behaviour of Dutch students aligns with the reasoning that the government proposed when implementing the 'study-advance' system. By increasing private costs of higher education, the financial incentive to limit one's time at university increases. It pays out to study shorter and more efficiently, as it decreases overall costs enormously (Stoel, 2011). There are some signs in the data that indicate that this might indeed be the appropriate conclusion in the Dutch case. A recent publication shows that fewer students follow through with a degree from the university of applied sciences after secondary vocational education (van den Broek et al., 2020). Furthermore, there is a decrease in the number of students who attend a post-graduate master's program since 2015, as shown in figure 2 (van den Berg & van Gaalen, 2021).

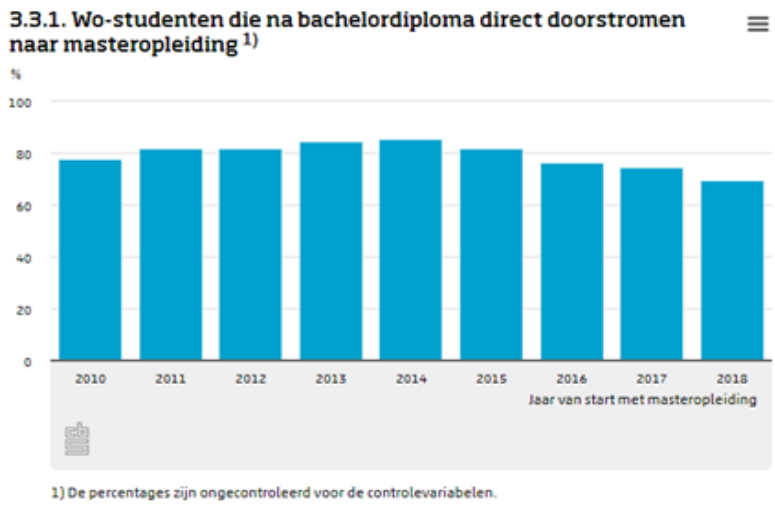

Figure 2: Percentage of students who directly start their master's program after finishing their bachelor's degree.From CBS

Nevertheless, this article argues that one should not rely solely on the data that is currently available since the conclusions are only preliminary and the longer term effects of the 'study-advance' system are very much unknown. The remainder of this

section will thus take a deeper look into a series of factors that determine the time until graduation and how these are impacted by the government's decisions, as to analyse potential lasting effects.

Decreasing study time might be a justifiable response to loan aversion in the Dutch case, especially in light of the uncertainty surrounding the future impact of student loans. This uncertainty arises for a number of reasons. For starters, while interest rates are effectively zero percent currently, the actual lending rate is established once a student completes their degree (DUO, 2021). It pushes students to study as short as possible and to set their lending rate before any potential increase. However, since significant increases in the interest rates are unlikely and confined by a set range, associated risks are fairly limited.

A more detrimental concern is the future effect of high student debt, since students are now likely to leave university with debt amounts higher than at any point in Dutch history. Concretely, most students are worried about their ability to attain a reasonable mortgage to buy property in the future (van Gaalen, 2018). Due to the novelty of the 'study-advance' system, nobody can predict what the consequences for students will actually entail and how the debt might burden students on the housing market, for their loans are likely to not be fully paid by the time they want to buy their own house and start a family. Theoretically, and as promised by the government, banks are not allowed to take student debt into account when making the decision to provide a mortgage (DUB, 2021). However, the new student-debt-registration-obligation suggests that banks very well do include student debt in their calculations (van Gaalen, 2018). The Autoriteit Financiële Markten (AFM) even advises to make it compulsory to take the student debt into account while providing a loan (DUB, 2021). All these concerns coincide with an already overheated housing market, leading many people leaving university insecure about their (financial) future. As with most financial burdens, the stress surrounding mortgages and debt falls primarily on students and graduates

from lower socio-economic backgrounds. Since more affluent students can rely on parental support while studying and when buying a house, the housing crisis is expected to target the more vulnerable parts of society disproportionately. The nature of the 'study-advance' system thus may disturb the housing market even more and exacerbate existing inequalities. As will be elaborated upon in the evaluation, this may well be one of the most negative side effects of the study-advance system.

A third element of concern goes beyond the purely academic view of a university education but rather looks at other formative experiences of 'student-life'. Data shows that, since the implementation of the 'study-advance' system, fewer people dedicate a year of their time at university to doing a 'board year' for a study association or society. Less and less students are willing to 'sacrifice' one expensive college year to dedicate this to a board year (van Gameren & Schouten, 2019). Possibly because the costs of such a gap year increased enormously, since tuition fees are still to be paid while less time is spent following actual courses. Even though being an active member of associations is often cited as being a good addition on your resume, it became a lesser priority for most students. Additionally, there has been a definite difference between the interest in joining formal versus informal boards. A possible explanation for this is that a formal board year positively impacts their future career and financial position, resulting in an especially large loss of interest in joining informal boards and societies. A formal board year is more likely to be compensated as the formal associations meet more likely the criteria for a subsidy from the government (DUO, 2021). In short, it appears that students constantly circle back to their current, and future, finances when making decisions.

4. Evaluation

Data thus indicates that, as the pressure on students increases within the 'study-advance' system, less and less time and money is spent on social activities or developments that have no direct positive effect on the financial situation. It thus makes sense to predict that the average time to complete a degree will decrease, and that students are more keen to leave formal education to enter the workforce. Some might argue that this is a positive development, as more people are working and contributing to national wealth. However, as this article argues, the marginal decrease in study time might come at great social and developmental costs.

As was briefly hinted towards, responses to the 'study-advance' system might increase inequalities between the rich and the poor in a multitude of ways. Not only are less privileged students the ones who are most seriously affected by current and future financial stress, it may go so far that people from less affluent backgrounds are discouraged to take on study-loans to continue their education at a university or university of applied sciences. In effect, fewer people from less privileged socio-economic backgrounds may thus benefit from the so-called university wage premium. Concerns arise that this development pushes university education to only be considered by students of privileged backgrounds, creating a sort of 'elite' status of higher education (van den Berg & van Gaalen, 2021). Preliminary data appears to validate these worries. For instance, the aforementioned decrease in post-graduate master's education is especially prevalent in people from lower socio-economic backgrounds (van den Berg & van Gaalen, 2021). Thus, one of the unintended, but very relevant, undesirable consequences of the loan aversion riled up by the 'study-advance' system may be the inhibition of less privileged students to continue their education at universities, deepening inequalities at many levels.

Additionally, it can be questioned whether a more 'efficient' study time is beneficial for students who do attain a degree. Shorter time until graduation and less

participation in social occasions and activities might lead to unintended consequences. The social development of students is highly important, and the government even stresses how studying has a positive influence on personal growth. As the new policy pushes time until graduation downwards, it effectively prioritizes efficiency overlooks this importance of the personal development aspects of student-life (van den Broek et al,. 2020). This could lead to unhappy people, higher levels of burn-out, ill-defined career choices and social arrears. As the 'study-advance' system is relatively new, the long term consequences are not yet known. However, it can be argued that the potential financial burden of increased psychological stress among students should be considered in policy design. Additionally, social development plays a big role in the future professional life of students, and as career switching is even more expensive than before, this might lead to lock-in problems (Liebowitz & Margolis, 1995). Hence, the 'study-advance' system may result in a future where it becomes more normal to switch careers at a later age, for the current system fails to provide incentives to follow dream jobs and ambitions from the get-go. The efficiency of job-market preparation might thus be put under pressure.

All in all, one might wonder whether this shorter and more efficient way of studying is indeed the best long-run outcome. Many ethical considerations come into play while forming an opinion. Therefore, everyone will somehow have a different view on this topic. We would like to stress that this system has a lot of potential negative side-effects for all students and that these side-effects are likely to affect less privileged students more severely, increasing inequality. These drawbacks include stress caused by loan aversion, lower participation in master's education, fewer housing possibilities, and neglected social development, as less personal time is spent on the student-life. The question remains whether the decrease in costs for the government outweighs all these negative side-effects for students. We think it does not.

5. Conclusion and Policy Proposal

Preliminary evidence suggests time until graduation is decreasing due to the 'study-advance' system. However, the question is at what cost. There are significant non-monetary social burdens that are created as a side-effect of the study advance system, leaving us to strongly question its desirability in the long-run. Especially the stress of financial burdens and how this affects different socio-economic groups is a major force of concern. This article argues that the societal burdens are not outweighed by the benefits of the 'study-advance' system. Therefore, we propose reintroduction of grants and increased financial support for students.

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4.3. The influence of the study advance on the collective benefits of higher education in the Netherlands

Mart Beulen

Abstract

This study examines how the study advance influences the collective benefits of higher education in the Netherlands. Higher education has a positive effect on, for example, a country's political stability, crime rates, experienced health, volunteer work, labor productivity, unemployment rates, innovation, and pollution. Higher education influences these collective benefits in the long term (e.g., 20 years). In contrast, the study advance has been implemented relatively recent in 2015 and, therefore, it is very hard to measure the current influence of the study advance on the collective benefits of higher education. Nevertheless, this study predicts that the study advance will have a small, negative effect on the collective benefits of higher education in the long term because remarkably less students proceed from a Bachelor's degree to a Master's degree. Dutch policy makers should consider to abandon the study advance in the short term and return to a more public system (e.g., basic study grant) in order to increase the collective benefits of higher education in the long term.

Section 1. Introduction

Since the start of the academic year 2015/2016, students who started with a bachelor or a master could not apply for a basic grant anymore because of the implementation of the '*Law Study Advance Higher Education*'. For students with parents who earn a low income, the supplemental grant has been kept and has been increased by roughly 100 euro per month to guarantee the accessibility to higher education for these students (CPB (a), 2020, p. 4). Nevertheless, there has been, and still is, a lot of discussion going on about the general accessibility of higher education and the increased pressure students could experience by implementing this new financial system (CPB (a), 2020, p. 4).

Regardless how the financial system in higher education has been designed, many collective benefits of higher education have been identified, which include the public, or social, benefits that flow to others including future generations. These benefits are vital to the development and well-being of individuals, communities, and nations (McMahon & Delaney, 2021, p. 1). Higher education has positive effects on, for example, total factor productivity, economic growth, political stability, life expectancy, poverty reduction, lower crime rates, environmental sustainability, higher tax revenues, more new ideas, and the evolution of civic institutions providing for democracy (McMahon, 2018, pp. 90-101; McMahon & Delaney, 2021, p. 1).

Important to note is that the influence of higher education on the collective benefits becomes apparent in the long run (e.g., 20 years) (Brennan et al., 2013), while the study advance has been introduced recently in 2015. Therefore, the influence of the study advance on the collective benefits of higher education is really difficult to measure at this moment and its influence on the collective benefits could be versatile as well. Nevertheless, this study cautiously estimates the influence of the study advance on the collective benefits of higher education in the long run. As a result, this study will focus on the following research question:

'How does the study advance influence the collective benefits of higher education compared to the previous study grant in the Netherlands?'

Section 2. Theoretical Background

Education as the basis of society plays a crucial role in the development of knowledge and the quality of human capital, which are sources of new ideas and projects leading to innovations (Webb et al., 2018, pp. 980-981). In turn, innovations have significant positive effects on economic growth (Galindo & Méndez-Picazo, 2013, p. 506). According to the Solow growth model (1956), continuous technological change is a necessary condition for an economy to achieve persistent growth in the long run (Zhao, 2019, p. 64). In addition, Romer's endogenous growth theory (1990) highlights the importance of technological progress in sustaining economic growth and development. Thus, the government can spur economic growth by promoting the development of science and technology, which can be achieved by investing in higher education (Zhao, 2019, p. 65). More investments in higher education is likely to increase the collective benefits of higher education in the long term.

Collective benefits of higher education are the public, or social, benefits that flow to others including future generations and are those benefits above and beyond the private (monetary) benefits realized by the student and his family (McMahon & Delaney, 2021, p. 1; McMahon, 1982, p. 1). These collective benefits include "such hard-to-measure but observable values as the role of higher education in preserving functioning democratic institutions and their attendant freedoms, the role of mathematical literacy in improving the functioning and adaptation to technical change of markets, and the effects on the neighborhood when children have better education" (McMahon, 1982, p. 1). Therefore, collective benefits are vital to the development and well-being of individuals, communities, and nations (McMahon & Delaney, 2021, p. 1).

Many collective benefits of higher education have been identified in the academic literature. Hermannsson et al. (2017, p. 1079) have found that higher education has a positive effect on total productivity of workers due to knowledge and productivity spillovers, lower crime rates, democratization, and civic society. In addition, McMahon (2018, p. 101) has found that higher education has positive effects on a country's political stability, life expectancy, poverty reduction, lower murder rates, less water and air pollution, less forest destruction, the generation of new ideas and the adaptation to changing circumstances as well.

Moreover, higher-education graduates tend to have better health and incur lower public health costs, rely less on government social programs (e.g., lower unemployment compensation), are more likely to engage in civic activities, realize better outcomes for their (healthier) children and achieve overall greater social happiness (CBS, 2020; Cunningham, 2006, p. 1; McMahon, 1982, p. 5; Palfreyman, 2011, p. 100). Regarding the engagement in civic activities, Cunningham (2006, p. 1) has found that a college education promotes civic engagement, including participation in community service, voting in local and national elections, and increased understanding of other racial and ethnic groups. The Central Bureau for Statistics (CBS) has found a positive relationship between the level of education and the likelihood that a person will perform voluntary work as well (CBS (a), 2020).

Thus, many collective benefits of higher education have been identified. It is important to note, however, that the collective benefits will be influenced by higher education in the long term (e.g., 20 years) (Brennan et al., 2013). In contrast, the study advance has been implemented relatively recent in 2015, which makes it really hard to measure the changes in the collective benefits in the short run. In the next section, this study will predict cautiously the influence of the study advance on the collective benefits of higher education in the long run.

Section 3. Analysis and Evaluation

Since the implementation of the study advance in 2015, there have been developments in several collective benefits from higher education, as discussed in the previous section.

First, regarding the political stability, the political stability index has shown a decrease for the Netherlands from 0.93 in 2015 to 0.86 in 2019, whereby a lower score indicates a decrease in political stability (The Global Economy, 2021). Moreover, lower-educated Dutch citizens have a lower interest in politics in 2018 (34%) compared to 2015 (47%), while higher-educated citizens have a higher interest in politics in 2018 (81%) compared to 2015 (69%) (SCP, 2018).

Second, less crimes have been committed in the Netherlands as the number decreased from roughly 980,000 in 2015 to roughly 810,000 in 2020 (CBS (b), 2021). In contrast, more murders have been registered between 2015 (120) and 2019 (125) (CBS (c), 2020).

Third, there have been developments in experienced health, life expectancy, social happiness, and volunteer work for Dutch citizens since 2015 as well. Both higher- and lower-educated citizens have experienced less often good health in 2018 (high: 84.0%; low: 58.4%) compared to 2015 (high: 84.7%; low: 59.9%) (Volksgezondheid en Zorg (a), 2020). The life expectancy of Dutch citizens has increased from 81.4 years in 2015 to 82.0 years in 2019 (CBS (d), 2020). Interestingly, higher-educated citizens are expected to live 4.5 years longer than lower-educated citizens in 2019 (Volksgezondheid en Zorg (b), 2020). Higher-educated citizens have experienced a decrease in social happiness in 2020 (88.4% happy) compared to 2015 (92%), while lower-educated citizens have experienced an increase in social happiness in 2020 (83.9%) compared to 2015 (82.8%) (CBS (e), 2021). Regarding volunteer work, there has been a general decrease in the participation of Dutch citizens as a volunteer. In 2017, 40.3% of lower-educated Dutch citizens performed volunteer work and 58.55% of higher-educated citizens, while in 2019, 38.4% of lower-educated Dutch citizens and 57% of higher-educated citizens performed volunteer work (CBS (a), 2020).

Fourth, several developments in economic factors have been identified since 2015. The Dutch labor productivity between 2015 and 2019 has remained stable, while the labor productivity of the USA and other European countries have been increased (Bedrijvenbeleid in Beeld, 2020). This could potentially harm the Dutch economy and welfare in the long run. Regarding unemployment, higher-educated Dutch citizens have seen a decrease in the unemployment rate in 2021 (2.5%) compared to 2015 (3.9%). The unemployment rate has been decreased for lower-educated citizens as well in 2021 (6.4%) compared to 2015 (10.6%) (CBS (f), 2021). Furthermore, since 2015, there has been increased innovation in the Dutch economy because the number of granted patents has increased from 1377 in 2015 to 1911 in 2020 (Octrooicentrum Nederland, 2021).

Finally, regarding water pollution, the quality of Dutch surface water is still under pressure and needs to be improved in the upcoming years (Groen Kennisnet, 2020) and air-polluting emissions have remained relatively stable at a damaging level between 2015 and 2019 (CLO, 2021).

As aforementioned, the study advance has been implemented in Dutch higher education in 2015. It is very hard to determine the short-term influence of the study advance on the collective benefits of higher education because the effects of higher education on collective benefits can only be measured in the long term (Brennan et al., 2013). In addition, these collective benefits are influenced by many factors besides higher education. Therefore, it is very hard to implicitly find any causality at this moment between the introduction of the study advance and its current influence on the collective benefits of higher education. Nevertheless, it is possible, with caution, to find indications how the study advance could influence the collective benefits of higher education in the long term.

The CPB (*Centraal Planbureau*) and DUO (*Dienst Uitvoering Onderwijs*) collaborated to investigate the first effects of the implementation of the study advance on the accessibility of higher education and students' behavior during their studies (CPB (b),

2020, p. 1). Regarding the accessibility of higher education, they found that, since the implementation of the study advance, there is no negative effect on the chance for students to proceed from secondary education to higher education (p. 11). In addition, the implementation of the study advance had, regardless a student's family income, no negative effect on the opportunities for advancement from secondary education to higher education (p. 12).

The implementation of the study advance also has no effect on students' decision to register at universities and does not influence their choice for a specific field of study (pp. 14-15). In addition, the Dutch Ministry of Education has forecasted that the total number of students in higher education will increase from 817,000 in 2020 to 885,400 in 2027 (Rijksoverheid, 2021, pp. 67-78). In 2015, the total number of students in higher education was 701,000. Each successive year, the total number of students has grown, which indicates that the number of new students has increased each year and higher education's accessibility is unaffected by the study advance (Onderwijsinspectie, 2021, p. 14). The CPB concludes that, regarding higher education's accessibility, there are no reasons to abandon the study advance (CPB (b), 2020, p. 15).

Furthermore, the implementation of the study advance has no influence on the study success of students (CPB (b), 2020, p. 23). Male students and students from low-income families still have a higher chance to drop out of college. This finding is unaffected since the implementation of the study advance (p. 24).

A major concern has been identified in the latest study of the CBS on the 18th of May (2021) about the effects of the study advance (CBS (g), 2021). It has been found that students proceeded remarkably less frequently from a Bachelor's degree to a Master's degree in 2018 (69.6%) compared to 2015 (82.0%) and this downward trend is very likely to continue in the upcoming years. The CBS thinks that students, after receiving their Bachelor's degree, are less willing to increase their study debts even more when they would proceed with a Master's study. This could possibly have detrimental effects on the future of the Dutch economy and the collective benefits of

higher education because its level of innovativeness could be deteriorating as well. Graduates will, on average, have a lower education level if they only receive a Bachelor's degree compared to a Master's degree.

In the long run, it could be cautiously predicted that the study advance will have small, negative effects on the collective benefits of higher education. Even though the accessibility and study success of students is currently unaffected since 2015, remarkably less students currently proceed from a Bachelor's degree to a Master's degree.

Section 4. Conclusion and Policy Proposal

It is very hard to estimate the current influence of the study advance on the collective benefits of higher education. Higher education influences the collective benefits in the long term (e.g., 20 years), while the study advance has been implemented in Dutch higher education relatively recent in 2015. It is, however, possible to formulate an indication how the study advance will influence the collective benefits of higher education in the long term. Even though the accessibility and study success of students have been unaffected since the implementation of the study advance, remarkably less students have proceeded from a Bachelor's degree to a Master's degree and this downward trend is estimated to continue. The main reason is that students are less willing to accumulate even a higher amount of study debt. Therefore, in the long term, the findings indicate that the study advance is predicted to have a small, negative effect on the collective benefits of higher education because the average education level of graduates is likely to decrease. Thus, Dutch policy makers should consider to abandon the study advance in the short term and return to a more public system (e.g., basic study grant) in order to increase the collective benefits of higher education in the long term.

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4.4. How does consumption of higher education affect health?

Brandon van Londen, Pietro Locatelli, Emma Atkins, en Merle Pfitzner

Abstract

This paper examines the effects that higher education debt has on the health of the individuals who consume it. This paper looks at more than simply physical forms of health but also mental and social health. Debt causes students to work alongside their studies, which has precautionary effects on health. We will be examining these precautionary effects through the externalities produced by debt, not only in the immediate present but also in the future of these individuals. In relation to the difficulties that persist in the housing market etc. Lastly, an analysis of different levels of government intervention in the education market will be carried out to analyse both the negative and positive externalities that persist in each of the different systems. Finally, we will conclude which system the Dutch government should ideally take on in terms of the least negative externalities to students, and which likely adaptations could be made to the system chosen for the most optimal results not only for the students but also for society.

Section 1. Introduction

On average, the Dutch government invests a total of 12.6% of government expenditure on education (Trends in the Netherlands, 2018). Of this, a total of 1.4 million individuals acquire student debt, which is on average 13700 euros at the end of their studying, totalling to 19.3 billion euros, through the leenstelsel (Erasmus Magazine, 2019). The Dutch government believes that "Education is the essential foundation for prosperity and opportunity" (NL Times, 202). However, there is a social debate regarding the educational system provided in the Netherlands. Why do people want a change? The governmental grant has been abolished and has left students with no other options but to acquire more debt. Debt affects an individual's ability to borrow even more money in the future. This increased student debt therefore has ramifications on the ability of students to obtain housing mortgages (Antonides & van Haperen, 2016). This system is being reconsidered but the issues that stem from the quantity of debt and its effect on the students who obtain this debt, is becoming a more heated debate. Well-being and particularly mental well-being is becoming an increasingly important and investigated topic. Student debt puts an enormous amount of pressure on students. It forces a majority of students to work on the side of their studies. This could cause them to obtain lower grades and also affect the extracurriculars that these students take up, and therefore stunts their development (Cooke & Barkham, 2004). Some argue that it is not debt that causes issues with well-being or health but rather the attitude of students towards this debt (Cooke & Barkham, 2004). Regardless, obtainiting higher education in general produces externalities (Beesley, 2016). Majority of these externalities are positive when approached separately from debt. Those that consume higher education, on average earn about twenty five thousand dollars more than those who do not obtain it (Stobierski, 2020). There are some secondary positive externalities that higher education produces. Increased life expectancy and better self-perceived health are such examples (McMahon, 2009).

It is therefore that our research question is as follows:

How does student debt affect student health?

Which will be answered through the sub question:

How does consumption of (higher) education affect health?

Section 2. Theoretical Background

→ Health

There has been a growing academic interest in the relationship between higher education and general health. To which many authors arrive to state that education is a prerogative to be healthy, since healthy means "a state of mental and social well-being'' (Ross et al., 1995). Apart from the general understanding of the word “health”, there are a lot more layers that contribute to someone being “healthy”. There are different types of health that can be identified. For the purpose of analysis, we will focus on the main four forms, being physical, metal, social and emotional. In which we will regard it as being healthy.

→ Health and higher education

There are several means through which obtaining a higher education, translates into increased “health”, for those that consume it.

Fletcher and Frisvold (2009) argue that health care choices are influenced by better access to medical care as well as prestige benefits as a result of higher status, which is often achieved with higher education. Furthermore, those with a higher education correspond to a higher level of consciousness determining self-evaluation of health conditions (Ferraro & Farmer, 1999; Idler & Benyamini, 1997). That means that less educated people tend to underestimate serious health conditions in comparison to higher educated individuals (Ferraro & Farmer, 1999; Idler & Benyamini, 1997).

This therefore causes them to seek medical care at an appropriate time and therefore may result in an increased life expectancy. (McMahon, 2009, p.236). This is made evident in the paper by Van Kippersluis, O'Donnell, and Van Doorslaer (2011). It suggests a strong relation between education and general health, resulting in reduced mortality (Van Kippersluis et al., 2011). Regarding the Netherlands, graduates have a life expectancy up to six or seven years higher compared to citizens who do not have a university or college degree (Van Kippersluis et al., 2011). It is therefore that uneducated individuals tend to have lesser health simply due to lack of education they have received.

Alder & Newman (2002) suggests that income as well as the socio-economic group one belongs to, influence health status due to peer networks and lifestyle. The study also argued that obesity and the level of education may be negatively correlated. (Webbink, Martin, & Visscher, 2010).

Mental health seems strictly related to the level of education. Mental health is as important as physical health when determining an individual's well-being, and school seems to be the most efficient tool for the government to guarantee both. It is proved that psychological illnesses like chronic depression are related to poor school achievements (Hahn & Truman, 2015). Moreover, greater work achievement reduces psychological disorders such as anxieties and stress (Hahn & Truman, 2015).

Research from CDC (2009) shows another vital connection between education and health regarding behaviour because the higher the education of an individual, the lower the chances of having risky behaviours like being addicted to alcohol and drugs or having a criminal record. It is believed that higher education contributes to the spread of community values but also knowledge on the drawback of unhealthy lifestyles (Cutler et al., 2010).

When a citizen fails to achieve a higher education position, the state's direct consequences are social and economic. That means that if the government invested more money in education, the cost-reducing of social burdens such as criminality, health and psychological diseases would determine a net gain between 1.5 to 3.5 of the initial investment (Levin, H., 2005)**.**

→ **Debt and health**

Studies hint at a negative relationship between having debt and health. There seems to be a link especially between debt and mental health (Richardson et al., 2013)**.** Financial concerns could cause worse mental health with an increase of financial pressure driving additional stress factors (Richardson et al., 2013**)**. Particularly the increased risk of depression due to debt seems to be a common mental health problem (Richardson et al., 2013). This finding is supported by Jessop et al. (2005) who also found that financial concern affects mental health in addition to other health aspects being negatively affected by financial worry. Additionally, debt negatively impacts students' mental wellbeing (Pisaniello et al., 2019), such as reported increasing levels of feeling more anxious, tense, and nervous (Cooke et al., 2004).

A study by Northwestern University compared individuals with high debt to individuals with low debt within the ages of 24 to 32. It confirmed that debt does influence mental health. The study resulted in significantly different outcomes between the two groups. The group of individuals with a high debt reported higher levels of perceived stress that were 11,7% higher than the mean and they reported a 13,2% increase in depressive symptoms in comparison with individuals with low debt (Sweet, 2013). Applying this to student debt, the study of Cooke et al. (2004) shows that students face growing financial concern during their education. One of the outcomes was that financial concern among students only grows over time. First year students had a more positive perception of their student debt but were still slightly concerned about it. But the financial worries

only grow as they progress through university due to the accumulation of student debt and the thought of not being able to pay it off (Cooke et al., 2004). And like stated before, financial concern affects mental health and other health aspects of an individual (Jessop et al., 2005).
Sweet, (2013), argues as well that individuals with a higher level of perceived stress showed more depressive symptoms.

Besides mental problems, debt could also lead to a worse physical health according to the previously mentioned study from Northwestern University. The individuals that were in the higher debt group had a diastolic blood pressure that was 1,3% higher. While it is a small increase it is clinically significant because a 2% increase of diastolic blood pressure is associated with a 15% higher risk of hypertension and 13% increase of risk of a stroke (Sweet, 2013). The finding that debt also affects physical health is supported by Dossey (2007). Dossey presented the results from an article that was published in the Archives of Internal Medicine in 2006 that found a connection between heart diseases and graduated medical students. Students of low-income households had more debt than graduates from higher income households. The graduates from low-income households had double the risk of coronary heart disease before the age of 50 (Kittleson, 2006). It shows that having a debt could affect both the mental and physical health of students.

Section 3. Analysis and Evaluation

In this part three hypothetical scenarios will be analysed to better individuate the most efficient policy regarding higher education.

→ First scenario: Free education

In this scenario the Dutch government would fully fund higher education for the population. That means that college would be completely free for every student. All the

secondary expenses such as rent, public transport and foods would be covered by a monthly contribution of around 800 Euro entirely covered by the state. This would guarantee economic independence for the student and no personal debt.

In a student perspective that would represent a significant decrease of expenditures on education and a net gain in psychological health. As shown in the literature Sweet, (2013), students without these debts would experience less psychological stress. They will also increase their financial expectations for the future while the mental pressure to return the initial debt would be eliminated. They will also have easier access to the housing market. Overall students would increase their economic independence and their psychological stability. More people would probably decide to continue education independently from the family income and this will eventually decrease income inequalities.

Morally speaking such a policy would be in accordance with Dutch principles on the importance of public education. Such an investment could be presented as a simple extension of education expenditures for higher-level education.

The government would incur higher expenses in the short run to finance this policy but would gain in the long run, due to the positive externalities of an increased educated and healthy population as stated in the theoretical background.

Doubts will persist in students' graduation time once university costs would be fully covered by the state.

→ **Second scenario: Dutch leenstelsel system**

The current debt system produced several externalities. First, it is calculated that 70% of Dutch students developed an average debt of 13.7 thousand euros.

In 2019 it was shown that more than 85% of the students had a side job, increasing stress factors and pressure to finish studying. With the introduction of the leenstelsel both the number of students that have debt, as well as the average debt have increased

(CBS, 2019). Statistics from the CBS show that the accessibility to higher education is not affected by the transition to the new system. However, what is affected by the leenstelsel is the number of applications for Master's degree programmes. Between 2014 and 2018 the percentage of master students decreased by 15%. That is also in line with the fact that mental pressure regarding debt arises only in the last years of studying, when the debt starts to accumulate (Cooke et al., 2004). This decrease in Master students probably impacted the overall population's wealth. CBS data shows that the students that finish a master's programme within the original given time are most often the students from a lower income household. The possible underlying reason for this could be that students from a lower economic position feel more pressure to graduate in the given time and reduce the accumulation of debt. Overall we can hypothesize that with the leenstelsel, where student debts are increasing, the chance that more students will have mental health issues will also increase.

→ **Third scenario: Completely private education**

In this scenario we consider a situation where college education is completely private. In the Netherlands, the government currently pays almost 80% of the total costs of higher education. The average costs for studying in the Netherlands are approximately 2.914 euros per year including tuition and books. The government spends 9.627 euros per student on average (Poel, 2015). Without government interference the total costs of 4 years college tuition and books alone would be over 50.000 euros. Considering that the 4 years of tuition fees are already incorporated into average student debt of 25.000, the total debt of a student would be around 62.000 euros.

The first major outcome of this policy would probably be a decrease in college applications. That is due to an overall higher direct cost of education for students. Students that come from higher income families will still have access to higher education, while for medium and low-income households', they may not have the ability

to obtain it. Many students would ask for loans directly from the bank but will eventually pay higher interests' rates which would produce a higher final debt. The poorer students will not even be able to access bank loans and would probably be excluded from higher education applications. The increase in the overall student debt would lead to externalities regarding mental health such as depression and anxiety. That is due to the fact that the pressure to pay money back will eventually increase and perspective for the future will decrease. Many students would also be forced to have side jobs in order to decrease the debt pressure. This would put more pressure on their social lives and decrease their academic performance. Since poorer families will not be able to afford education, the overall level of education of the population would decrease. That would lead to all the negative externalities (listed above) on the economy but also on the overall health of the population. Finally, the state would decrease its expenses on higher education but most probably increase them in other sectors such as healthcare.

Section 4. Conclusion & Policy Proposal

Public spending in higher education has several health benefits. The Netherlands profits as a whole due to spill over effects. The new leenstelsel substantially increases student debt. It already affects them during their studies by increasing stress factors and potential mental issues that are affecting academic performance. Due to the fear of more debt, students do not pursue a master's degree which will affect the overall level of education.

We therefore advise the government to follow the first scenario and embrace a full public education with some adaptations. Expenses of higher education will be paid by the government only in the time period that is given to graduate. So, in case of a Bachelor and master's degree it would be 4 years. Students that require a longer period of time to graduate will have to take a loan as is the case in the current leenstelsel. This policy would lead to a decrease in student debt, which would have positive externalities

in the overall health of the students with a decrease in stress and in the chances of developing mental issues. The accessibility of higher education would not be altered and there would be more master's students in the absence of debt. Due to a predetermined period of paid-for higher education, students will still have an incentive to graduate in time leading to improved university performance.

However, there is no system without its shortcomings. Such a policy is increasingly expensive. It will increase the fiscal pressure on the government and on the taxpayers in the short run. Despite this, in the long run, an increase of the overall education level of the population will result in higher revenues for the state and the initial investment of public education will be partially compensated.

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4.5. Getting rid of the leelstelsel: what about lump-sum student grants?

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Abstract

Societal friction and endless political debates in the Netherlands; was the implementation of the sociaal leenstelsel the appropriate choice? This paper delves deeper into the concepts of the current sociaal leenstelsel and lump-sum student grants, after which their effect on income and consumption has been evaluated. Our recommended lump-sum student grant comes down to 500 euro. We predict various effects of the introduction of such grants. Most importantly, there are slight increases in student enrolment and performance while average student debt is reduced. The strongest drawbacks of our proposed grant are that there will be less students that work and that students with relatively wealthy parents receive the same grant as students with less wealthy parents. By reading our paper, one will however find that the benefits of a lump-sum student grant of 500 euro outweigh its drawbacks.

1. Introduction

In 2015, the Dutch higher education financing system was changed significantly as the so-called basisbeurs was replaced by the sociaal leenstelsel (leenstelsel in short). This meant that thousands of actual or potential students of higher education were no longer entitled to universal student grants, and had to loan this money from the government. Ever since these reforms were introduced and implemented, they have been subject to discussion and unrest. Over time, more and more stakeholders and people started to argue that reforms should be done to the leenstelsel, as they believed this system was not functioning properly. In this paper, one of the proposed alternatives of the leenstelsel, namely that of universal lump-sum grants, is compared to the current leenstelsel. This comparison is two-sided; we compare changes in: (1) consumption of higher education and (2) consumption of all other goods as a result of the introduction of lump-sum student grants. Consumption of higher education can be thought of as the amount of education as hours spent in the classroom. Consumption of all other goods can be seen as the amount of consumption of every good or service excluding higher education.

As the efficiency and adequacy of the leenstelsel have been doubted since its introduction, societal debate on possible reforms of the leenstelsel eventually reached a boiling point after the first critical performance reports were published (Van Vreden & Tijssen, 2019; Van den Broek et al., 2020). These critical reports strengthened the existing criticism, with student associations calling the leenstelsel ‘a failed experiment’ (Schoenmaker, 2021). Eventually, societal sounds, backed by scientific arguments, convinced political parties to reconsider their stance on financing public education. In March 2021, after the general elections, the majority of the elected parliament opposed the current leenstelsel, proposing reforms (Meijer, 2021). Given the vast political attention the subject has gained, it is likely that reforms of the leenstelsel will be part of new coalition negotiations. To assist, a paper comparing the sociaal leenstelsel with

a finance system making use of universal lump-sum grants could help to understand the dynamics and differences regarding these two systems and their outcomes. By means of comparison, a final policy recommendation is made on whether replacing the leenstelsel with universal student grants would be beneficial.

Next, the theoretical framework is provided. This framework consists of clear definitions of the sociaal leenstelsel and lump-sum student grants, followed by an estimation of the most desirable height of a lump-sum grant. Finally, an explanation is provided regarding the framework that is used in our analysis. Moving on from theory, the effects of the introduction of our proposed grant are analysed and evaluated on the basis of the framework we provide. Finally, we offer a conclusion that includes a specific policy recommendation.

2. Theoretical framework

Defining sociaal leenstelsel and lump-sum grants

The sociaal leenstelsel, introduced in 2015, consists of four parts: a loan, supplementary grant, studentenreisproduct and tuition credit, as described by the Dutch government. For our paper, relevant are the loan and supplementary grant. The loan is a self-selected amount of money that can be borrowed by students from the government each month, the amount that can be borrowed per month has a set maximum. While the loan is optional in theory, in practise it is required for many in order to be able to study. If received, the borrowed amount is paid back with a low interest rate of zero percent at the moment of writing this paper. The loan must be paid back within a relatively long period of 35 years at most. The second relevant part of the leenstelsel is the supplementary grant (aanvullende beurs in Dutch), this is a gift that is given to students whose parents or caretakers have a relatively low income, which is a maximum of 413.78 euro, according to DUO (2021).

There will still be the possibility for students to take up a loan when a switch were to be made to universal lump-sum grants. Furthermore, in both systems, grants play an

important role. Lump-sum grants differ from the current leenstelsel as the lump-sum grant will be given to every student, independent of factors such as income of parents and whether students do or do not live with their parents. This differs from the old Dutch system, the basisbeurs, as the height of the basisbeurs' grant did depend on whether students did or did not live with their parents. A second point of distinction is that the lump-sum student grant that we discuss is larger than the grant the basisbeurs provided.

Estimating the lump-sum student grant

For our analysis it is required that we determine the height of the lump-sum student grant. It can be expected that the ideal height cannot be determined universally, but may also depend on contextual variables, such as the GDP per capita. Dynarski and Scott-Clayton (2007) show that the ideal height of grants depends on political decisions and overarching goals of higher education. Dynarski and Scott-Clayton suggest that the most effective grant system would be a progressive one, in which grant height decreases with family income. The highest possible grant would be over 4000 dollar and the lowest would be only 300 dollar. However, one must note that a progressive grant has always been a part of the sociaal leenstelsel. Given that this leenstelsel was heavily critiqued, this implies that a progressive tax in practise might not be preferrable. Research from Nielsen, Sorensen and Taber (2008) suggests that increasing grants are less effective for increasing enrolment, as a 1000 dollar increase in student grants would only cause a 1.35 percentage points increase of enrolments. St. John (1999) concludes that a 100 dollar increase in financial aid would lead to a .38 percentage point increase of student enrolment, suggesting grants to be more effective than Nielsen et

al. (2008) do. Student persistence also increases with an increase in grants, indicated by Figure 1.

Summarising these results, it can be assumed that a positive correlation exists between the height of a student grant and enrolment. Thus, assuming we should try to increase

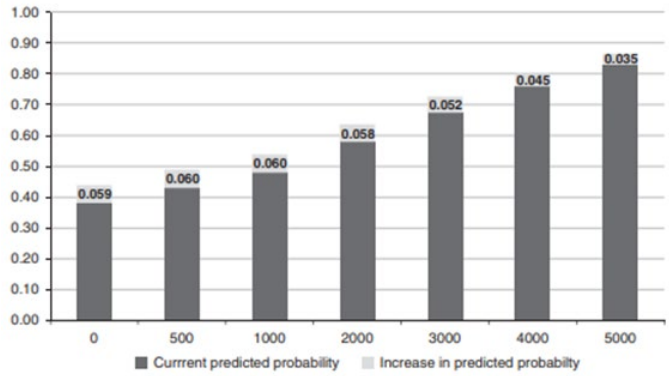

Figure 1: the growth in the probability of First-Year Persistence to a Redistribution of Funds: Lowest-Middle-Income Quartile Students
Source: Alon (2011)

enrolments, a higher student grant should be desirable. As the main goal of higher education in the Netherlands is to provide as many people as possible with high-quality education, in order to use their intellectual and economic capacity, the government should consider introducing a more radical student grant. We have chosen a lump-sum grant of 500 euro for our study, surpassing the grants that the basisbeurs provided in the past. Despite this number seeming in part arbitrary, this enables us to study the effects of such a lump-sum grant on the current Dutch situation more precisely.

Microeconomic framework

With the height of the lump-sum student grant in mind, we now require the framework for studying the effects of its introduction. For the students who have chosen to continue their study beyond secondary education, changes in costs of higher education have, along with income, an effect on consumption. Microeconomic analysis can be used to estimate this effect. The framework we use is based upon the works of Rosen, Gayer, Abdülkadir (2014) and Perloff (2018).

In this framework, the preferences of one student are taken into account. This student represents all students of higher education, on average. This student has a budget that is spent in its totality on two goods: higher education, good A, and all other goods, good B. Given that we assume the student's budget is completely spent on these goods, when less of good A is consumed, consumption of good B increases, the inverse holds true as well. Furthermore, for each extra unit that a good is consumed, the student gains less extra utility (which can roughly be translated to benefits or well-being). Thus, consumption of only one of the goods is unlikely. All ratios of consumption of both goods that yield the student equal utility are depicted on an "indifference curve": a curve that depicts each combination of consumption that the student feels indifferent about. It is assumed that more consumption of a good is always better. Therefore, an indifference curve to the right of another indifference curve is valued as better. To conclude, the student's budget is depicted by the "budget line". This budget line depicts all possible combinations of good A and B that the student can afford, given his income. The best possible indifference curve that touches this budget line, provides the ratio at which good A and B are consumed.

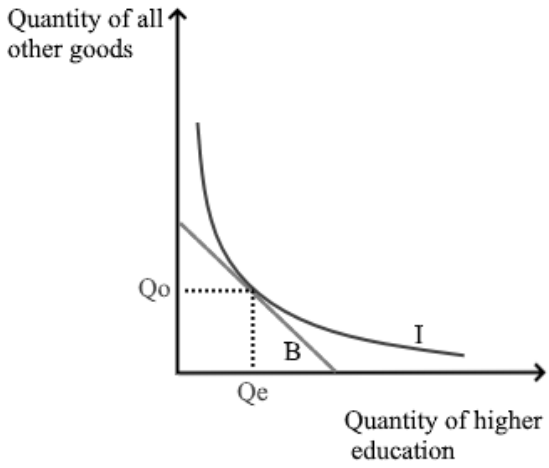

Figure 2: the budget line and indifference curve for the average student. Qe *and* Qo *represent the amount of consumption of higher education and consumption of all other goods respectively.*
B *represents the budget line,* I *represents the indifference curve of the student.*

A lump-sum student grant would equal a rightward shift of the student's budget line of the amount of the grant; monthly, holding everything else equal, the student is able to spend the exact amount of the grant more on goods A and B. This change in budget thus has effects on the total amount of goods

that is consumed. The indifference curve of the student, and thus the student's preferences, determines these effects.

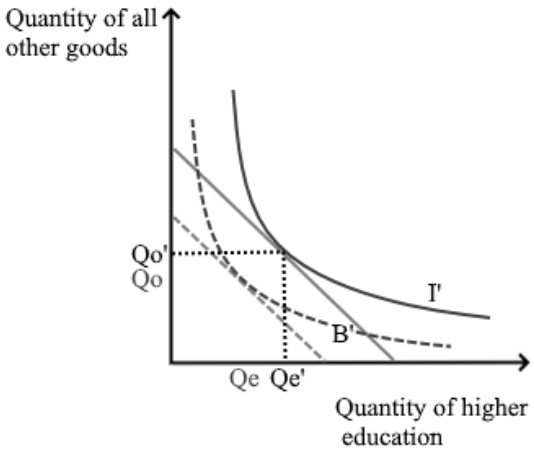

Figure 3: a shift of the budget line because of the introduction of a lump-sum student grant. *Qe' and Qo' represent the new amount of consumption of higher education and consumption of all other goods respectively. B' represents the new budget line, I' represents the new indifference curve of the student.*

Source: author (2021)

We find that, in theory, introduction of a lump-sum student grant would lead to a large increase of the consumption of both higher education and all other goods. This is represented in figure 3: consumption of higher education increased from Qe to Qe', consumption of all other goods increased from Qo to Qo'. As students consume on a "better" indifference curve, we can conclude that the total utility of the average student increases when lump-sum student grants are introduced.

3. Analysis and evaluation

Practical effects of leenstelsel

With the theory regarding what lump-sum student grants should do in mind, we aim to find whether this theory applies in practice as well, using case studies. First off, Paulsen and Toutkoushian's (2008) findings are in line with theory; the perceived utility of students of higher education would remain the same in a system of loans and grants, but the budget constraints would likely differ, depending on the height of the grant.

Theory assumed that, holding everything else equal, introduction of lump-sum grants would lead to an equal increase in budget. To verify whether this assumption is accurate, we study if and how students change their behavior in reaction to changes in the way higher education must be financed. In order to do this, we must estimate the budget of the student after the introduction of the sociaal leenstelsel. In 2015, before the leenstelsel's introduction, the average student's monthly budget was 768 euro. In 2017, this was 919 euro per month, made up of the components disclosed in Figure 4.

	2015		2017	
	%	€	%	€
Geld ouders	57	179	58	165
Studiefinanciering *2015 (n=1.282) en 2017 (n=967)*	93	469	94	559
Bijbaan *2015 (n=1.917) en 2017 (n=960)*	71	332	70	409
Teruggave belastingaangifte *2015 (n=811) en 2017 (n=554)*	48	33	61	33
Overige inkomsten *2015 (n=2.382) en 2017 (n=1.164)*	89	138	91	161
Totaal ***2015 (n=2.723) en 2017 (n=1.383)***		**768**		**919**

Figure 4: Percentage students with a certain source of income and average income per source of income (in euro's, monthly), per year

Source: van der Werf, Schonewille & Stoof (2017)

From the work of van der Werf et al. and their table, we can make some conclusions that are of importance for our analysis. Since the introduction of the sociaal leenstelsel: (1) less students moved out of house, leading to a lower amount of money received from parents, this is in line with the finding of Daniels and Smythe (2018); (2) there has been a strong increase in the amount of money that is borrowed by students; (3) students have worked more hours, Ziskin et al. (2014) indicate that students often perceive loans as necessary evil to finance their studies and experience a lot of pressure to pay off these loans. Higher loans logically result in increased working hours besides study. Furthermore, note that the amount students that borrow money or receive it

from their parents has remained roughly stable, as has the amount of students that work.

Practical effects of lump-sum grants

If a lump-sum grant of 500 euro is introduced, we expect the inverse of the above effects: (1) more students will move out of house, leading to a higher amount of money received from parents; (2) there will be a strong reduction in how much students borrow, the amount of students that borrow will likely remain the same. This implies that average student debt will decrease; (3) students will work less hours and thus earn less, the amount of students that work will likely remain the same. On the basis of this, the total average budget of student's will slightly increase. Importantly, however, we find that an increase in grant will not lead to a one-to-one increase in budget that theory predicts. Given that our proposed lump-sum grant is slightly more than double the size of the grant the basisbeurs provided, we expect this increase in budget to be larger than the decrease that was caused by the leenstelsel's introduction.

To summarise, comparing theory and practical data, we find that lump-sum student grants indeed increase the budget of consumers, represented by a rightward shift of the budget line. Yet, we found that this increase in budget is not equal to the size of the introduced grant. Furthermore, we concluded that students do not change their preferences regarding the consumption of higher education and all other goods. This implies that consumption of these goods increases, albeit substantially smaller than theory would predict. As, with a lump-sum grant, more hours of education are consumed by students, we expect students to perform better. Alon (2011) confirms this. She states that persistence of low-income students correlates with the height of provided student grants. Similarly, Webber and Ehrenberg (2009) also conclude that increasing student grants would have a positive effect on low-income student persistence, suggesting a positive correlation between grant height and student performance.

Enrolment and inequality

What was excluded in the above analysis were the effects of grants on higher education enrolment. In general, it can be expected that a higher student grant correlates with higher participation, St. John (1990) suggests. He concludes that a 100 dollar increase in financial aid would lead to a .38 percentage point increase of student enrolment, after doing a case study on grants in the US. Converting the purchasing power of a dollar back then to the present, a 500 euro grant as suggested in this paper would lead to a 3 percentage point increase of student enrolment. Nielsen, Sorensen and Taber (2008) also expect a positive correlation, although a weaker one. They state that a 1000 dollar increase in student grants would only cause a 1.35 percentage points increase of enrolments, after studying higher education reforms in Denmark. On the contrast, a study on the Dutch financing system concluded that a loan system rather than a grant system would reduce the enrolment by 1% to 2.5% (Oosterbeek and Webbink, 1995).

It remains unclear how much enrolment would precisely be affected by a lump-sum grant of 500 euro, it however seems clear that there is a positive correlation between student grant height and student enrolment. The results on the effect of student grants on enrolment vary between 0.13% per €100 of grants and 0.6% increase per €100. A student grant of 500 euro as suggested in this paper would in this case lead to an increase of higher education enrolment of 0.65 to 3 percent. Nonetheless, one should be careful interpreting such results, as St. John (1990) for example suggests that such increases can often be differentiated for different social groups. According to him, an increase of grants would lead to a much stronger increase of enrolment for lower-income groups and ethnic minorities than for other social groups.

A common critique on lump-sum student grants is that there is no distinction made between students with parents with different incomes. One would wonder why a student with relatively wealthy parents should receive the same grant of 500 euro as a student with relatively less wealthy parents. One would expect inequality to increase,

given that people who study earn more on average, later in life. This suggest that the grant should be depending on income of parents. However, as discussed previously, this has been part of the sociaal leenstelsel which has failed Dutch students. Given that higher grants increase enrolment of students with relatively less wealthy parents more than enrolment of students with relatively wealthy parents, we argue that this could in fact could combat inequality. St. John's work is in line with this sentiment.

4. Conclusion and policy proposal

Our study of the sociaal leenstelsel and the effects of an introduction of lump-sum student grant of 500 euro has provided us with various insights that can be classified as benefits and drawbacks. These benefits and drawbacks are listed in the table below.

Benefits of 500 euro lump-sum student grant	**Drawbacks of 500 euro lump-sum student grant**
More students move out	Students work less
Student enrolment in higher education increases, especially of students with relatively less wealthy parents	Students with relatively wealthy parents receive the same grant as students with less wealthy parents
Students consume more hours of higher education, increasing student performance	The grant is inefficient as it is not fully spent on consumption of higher education
Students have less average debt	
Students consume more of all goods excluding higher education	

Comparing the benefits and drawbacks while interpreting the argumentation provided in the previous section, we confidently advice the Dutch government to introduce the lump-sum student grant of 500 euro. We acknowledge that there are more means of financing higher education in the Netherlands and that we have only discussed one.

Some of these means might have better results than the one we provide, therefore further studies on these different means are required. Furthermore, how a 500 euro grant is financed requires attention, this has been beyond the scope of our paper. Whether or not we have found the best possible solution, however, one thing is absolutely certain: the sociaal leenstelsel must be repealed.

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4.6. The reinvestments of higher education funds by (future) politicians

Lucas Beverloo en Melvin Navest

Abstract

"Politicians are the same all over. They promise to build a bridge even when there is no river." This quote, from former Soviet-Union leader Nikita Khrushchev, shows that all politicians make promises. Politicians often make promises about financing decisions. However, it always takes multiple years before decisions are made and it is doubtful if promises are fulfilled. This has also been the case for the leenstelsel, because the Dutch government did not keep its reinvestments promises. As a consequence, our policy proposal for guaranteeing reinvestments in higher education would be to introduce a law. This law requires politicians of the next government to commit to reinvestments in higher education for the next period of government.

Section 1: Introduction

"Politicians are the same all over. They promise to build a bridge even when there is no river." This quote, from former Soviet-Union leader Nikita Khrushchev, shows that all politicians make promises even when it does not make sense. Imagine that government A was in power but is being replaced by government B. Government B can stick to the policies of government A or government B can fulfill its promises by changing government A's policies. It is then doubtful if government B will keep its own policies over time and thus will fulfill its policy promises. This has also been the case for the Dutch higher education financing system, called the leenstelsel. The main promise with regard to the leenstelsel, namely to reinvest all its proceeds back into higher education, is still not fulfilled. Therefore, the research question of this paper is: Can future politicians be reasonably expected to commit to the reinvestments of higher education funds during a crisis?

Section 2: Theoretical Background

2.1 Time inconsistency problem

Time inconsistent policies show that the economy is worse off than it could be because the government is incentivised to cheat on their policy promises (Rogers, 1986). They do so in a context whereby citizens and government make sequential decisions (Rogers, 1986). The government announces a policy which will lead to citizens committing themselves to contracts based on this announcement. Governments will then be tempted to tax these actions taken by citizens through unannounced policies (Rogers, 1986). This leads to a non-optimal situation in which rational citizens would not trust what the government says, hence making the strategy of listening to the government worthless (Calvo, 1978). A famous example in economic literature is the treatment of inflation. While policymakers have a responsibility to keep inflation reasonably steady, they can default in their promise for political gain at a later point in time (Calvo, 1978). The important characteristic when it comes to policies made by politicians is the timing of decisions made by politicians and the public (Broadway, Marceau & Marchand, 1996).

For example when the government announces that every citizen will receive a sum of money in a certain amount of time because the government wants to increase public spending. Citizens can increase their spending now based on this announcement, because they expect to receive money later. When citizens anticipate this policy rationally and the policy comes through, an optimal and efficient policy outcome has been reached (Broadway et al, 1996).

The present-day government (government A) can make policies regarding higher education which will influence policies of a future government (government B). Economic literature shows that this is possible because government A can make laws which affect government B's ability to make future policies (Crain & Tollison, 1993). In order to achieve this, government A has to accept laws which are not necessarily optimal for the public, but which will prevent government B from reversing government A's policies (Fischer, 1980). This is to prevent that preferences of politicians change over time, which is known as dynamic inconsistency (Fischer, 1980).

2.2 Factors affecting political decision-making

It is difficult to predict what compels future politicians to act a certain way. That is because political decision-making is a dynamic process with continuously changing mechanisms (Xing, 2015). Therefore, the decisions of politicians can be affected by multiple factors. This is especially the case for decisions of future politicians, as some of these influencing factors probably change over time. Besides these factors, it is also possible that external shocks affect political decisions.

The geographical environment and the available resources are important for the choices of politicians (Xing, 2015). The geographical environment affects policies, which are dependent of the geographical location (Xing, 2015). The available financial resources for politicians are the budgets and are affected by a country's fiscal policies

(Grob & Wolter, 2007). These budgets are furthermore dependent on the economic situations, choices of politicians and rules (Psacharopoulos, 2008). Because politicians cannot change the geographical location and cannot completely control the available resources, they need to take them into account when making decisions.

The demographic distribution of a society is an important component for politicians and for the budget allocation choices (Grob et al., 2007). For instance, a higher share of the elderly in a country's population leads likely to relatively more public health expenditures (Klomp & de Haan, 2011). This shows that the demographic distribution of a society probably influences the budget allocation (Grob et al., 2007). This is a specific issue for the financing of higher education in developed countries, as the number of aged people is relatively increasing while the number of children and adolescents is relatively decreasing (Grob et al., 2007). When the number of higher education students in society relatively declines, it could be that politicians and a majority of the society could reduce their support for the financing of higher education. Personal characteristics are another important factor with regard to political decisions. Each politician has different personal characteristics. As a consequence, politicians with different personal characteristics will make different decisions (Rosen & Gayer, 2014). These personal characteristics are related to ideology, personality and leadership (Rosen et al., 2014). Furthermore, every country has its own national cultural characteristics, which form the identity of a country (Xing, 2015). These national cultural characteristics determine how the population of a country reacts to political decisions (Xing, 2015).

The last factor that could have an impact on political decisions is the existence of interest groups and research organizations (Xing, 2015). Their advantage is that they have a lot of information about a certain topic, which is often more than politicians have (Xing, 2015). These groups often have different interests and could advise or convince

the politicians about their opinions. By doing this, these groups can influence the political decision-making process.

Section 3: Analysis and evaluation

On the 5th of November 2019, the Minister of Education, Culture and Science sent a letter to the parliament (van Engelshoven, 2019). In this letter, the minister addresses that the state proceeds of the leenstelsel should go to quality improvements of higher education (van Engelshoven, 2019). The idea of the minister is that educational institutions form goals in terms of quality improvements, which the minister can then accept or reject. When a proposal for quality enhancement is accepted the institutions can receive part of the leenstelsel proceeds to achieve the quality improving goals regarding higher education (van Engelshoven, 2019).

As there is no law blocking the next government from using the leenstelsel proceeds for financing other expenditures, it seems as this current system is time inconsistent. The question which then arises, is whether the allocation of the extra funds is a time consistent policy or not. The government can cheat on their promises by using the proceeds of the leenstelsel for a different goal than the quality enhancement of higher education without facing legislative consequences. Indeed, the incentive has opened the door to breaking promises. This is exactly what happened in the Netherlands with the leenstelsel: a large portion of the proceeds did not go to the promise of quality enhancements of higher education (NOS, 2019). Another way in which the Dutch government did not commit to the reinvestments of higher education funds was more subtle. Instead of not using the leenstelsel proceeds for reinvestments, they saved on the lumpsum payments to higher education, de facto offsetting the leenstelsel investments in higher education. This shows that the theory which stated that policymakers would deceive citizens by changing future policy holds in the case of the leenstelsel.

The idea with the leenstelsel was to have students benefitting from a higher quality of education, by having their base grant taken away and using this money for quality improvements in higher education. This was thus effectively forcing the students to commit to a policy, whilst the government had the option to change their policy at any time after the base grant withdrawn. The crucial flaw here was that there was no system requiring the next government to commit equally as the students did to this policy.

The Netherlands is one of the developed countries with a relatively aging population. As a consequence, the expenditures for the elderly are relatively more increasing than the expenditures for students. However, this could be complicated, because in 2020 an all-time high number of students is studying in the Netherlands which also need to be financed (Bronkhorst, 2020). This shows that the minister's decisions are also influenced by the demographic distribution, because the demographic distribution has an impact on the budget allocation. Therefore, politicians could behave differently than promised.

A crisis like the COVID-19 crisis could also make it so that politicians behave in a different way than what they had promised in their announced policies prior to the crisis. This is because a crisis will have politicians focusing more on the short term which may impact policies that involve a long-term contract. The Leenstelsel is a policy with a goal of improving the quality in higher education and is thus more long term based. When such a crisis then occurs, governments are even more incentivised to cheat students by saving on higher education expenditure to recover the economy. If the current government can make amendments to the Leenstelsel to keep the next political leaders focused on the long term regarding this system, a future crisis would not have effects on the Leenstelsel.

The Minister of Education, Culture and Science is responsible for higher education policies. The higher education policies of the Netherlands are partly affected by its

geographical location, as it is a European country and a member of the European Union (EU). The members of the EU are responsible for organizing higher education in their own country but are supervised by the EU. For example, the EU has criticized the introduction of the Leenstelsel, because it would decrease the accessibility of higher education and increase the educational inequality. Besides, the EU also checks if its members invest enough in higher education. This shows that the EU is involved with the decisions of the minister.

Multiple organizations have criticized the decisions of the minister with regard to the financing of higher education. Student organizations, like LAKS and LSVb, demonstrate against the Leenstelsel, while the university organization VSNU demonstrates for more investments in higher education. This could exert pressure on the minister to make decisions in favor of students and universities.

The Leenstelsel is inefficient when future politicians are time inconsistent. That is because money that is supposed to be reinvested in higher education is not reinvested. This means underinvestment in human capital. Underinvestment in human capital limits economic growth. The reason for this is that investments in human capital lead to higher skilled people thereby increasing their productivity. This is important for economic growth. The inefficiency of the Leenstelsel could increase when time inconsistent politicians face unexpected economic events in the future. For instance, an unexpected increase in the interest rate would lead to less investments in human capital. This will lead to less skilled people, a lower productivity and less economic growth. This could be prevented if enough money is reinvested in higher education.

Section 4: Conclusion & Policy Proposal

The analysis shows that the Leenstelsel in its current form is not a suitable policy, as the government has not kept its policy promise over time. The government abuses part of the proceeds of this system. Furthermore, there is a danger that future politicians will not keep the promise and further abuse the revenues from the Leenstelsel. Our policy recommendation is to introduce a law requiring politicians of future governments to commit to reinvestments of higher education. This will solve the issue in which there is uncertainty whether government B will keep policy promises made by government A. The law would thus state that all proceeds from the Leenstelsel system are used for the improvement of the quality of higher education for the next government period.

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4.7. Inequality in social mobility due to the education system in the Netherlands

Kelly Blokland, Sam Durlinger, Heleen Kooij, Mannus de Leede

Abstract

This article addresses the importance of social mobility and why social mobility and the new study advance system in the Netherlands go hand in hand. By studying, gaining knowledge and (academic) skills, students acquire an advantage over non-students. Students born in a "highly educated" environment seem to have a head start compared to students whose parents do not have all the (financial) abilities to finance higher education themselves. Studies show that, as a result of the study advance system, higher education is not as easily accessible as expected for all students. Therefore, the authors suggest an extension of the already existing supplementary grant for all students based on their parents' income to reduce the financial inequality between students.

1. Introduction

In 2015, the Dutch government changed the way higher education in the Netherlands is financed. The basic grant of €279 for non-resident students, a potential supplementary grant and a subscription for public transport were replaced by a loan system. This includes an advance at a very low interest rate and a reimbursement of 35 years. The subscription for public transport was retained, provided that a student graduates within 10 years. One of the goals of the new system was to create more equality. Resulting in criticism in abundance since the moment the *Wet Studievoorschot Hoger Onderwijs* was adopted. One of the ideas behind the system was that the baker's son no longer has to pay for the lawyer's son's education. For, the 9,6 billion euros spent on education were mostly in favor of those enrolled in higher education (The Fact Club, 2012). The new system should thus end this phenomenon.

This paper investigates how this new system affects social mobility. Social mobility and education are more closely linked than people may expect. Recent research in the economics of human development and social mobility stresses the importance of accounting for (i) multiple periods in the life cycle of childhood in the formation of skills, (ii) multiple skills for both parents and children which extend traditional notions about the skills required for success in life and (iii) multiple forms of investment. These three components have a significant impact on the relationship between parent-child, mentor-child and parent-teacher-child and thus on the child's learning capacities. This creates and implicates an econometric framework that unifies the study of family influence and the consequences of external interventions in child outcomes (Heckman & Mosso, 2014). The expectation of higher education is to promote the goal of social mobility. For example, higher education should make it possible for anyone with ability and motivation to succeed (Haveman & Smeeding, 2006).

In the next chapter, this phenomenon and its components is explained more extensively. Social mobility is inextricably related to inequality. Therefore, we consider

the following research question: *"How does the study advance system affect social mobility in the long-run?".*

2. Theoretical Background

2.1 Social mobility

Social mobility can take two forms, absolute social mobility and relative social mobility. Absolute social mobility can be described as more people rising on the social ladder, for example the increase of the size of the middle class. Relative social mobility is that individuals with a low socioeconomic status replace individuals with a high socioeconomic status (Marginson, 2018). When relative social mobility advances, the structure of the society changes and becomes more equal (Marginson, 2018). Social mobility is typically measured by the intergenerational elasticity in earnings (IEE) (Rycroft, 2017).

2.2 Relation origin, education and socio-economic outcome

Goldthorpe (2014) has stated that there's a triangle which shows the relationship between the origin of an individual, its education and its socio-economic outcome; the OED triangle. In this paper the mediator effect of debt is also researched as a result of the Study Advance System. This figure shows that education is the main mediator variable in this relationship, which states that education is an important factor between the origin and the destination of an individual. Therefore education is a main factor in social mobility. Besides education debt also plays a part in the destination of an individual. Goldthorpe (2014) and other researchers have studied several theories that could explain this relationship.

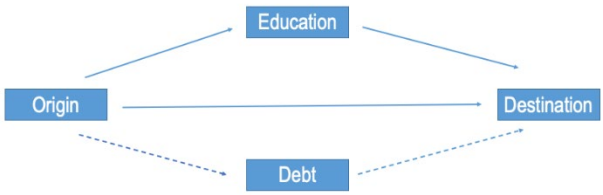

Figure 1: relationship education, origin, destination and debt

Origin of the individual

Goldthorpe (2014) states that the origin of an individual has an effect on their socio-economic outcome. The destination of an individual is affected through parental educational attainment by 2 forces. The first force is that the higher-income parents invest time and money to ensure their child's academic success during their entire educational lifetime. Children of higher income parents have more resources available for them and have for both genetic and sociocultural reasons a greater academic potential (Goldthorpe, 2014). The second force is that the less-educated parents with fewer resources begin this "college education game" later (Haveman & Smeeding, 2006). Family backgrounds are a significant factor of the socio-economic outcome of the children. Other research states that the origin of the family is even more important than the achievements during education (Marshall & Swift, 1996) (Saunders, 1997). However, the most important part of the origin is the advantages it gives during the education of the individual.

2.3 Effect education on destination

Education has multiple functions in social mobility. The most important function is a source of human capital. Becker (1964) states that individuals want to invest in themselves to increase their capacities and therefore their potential earnings. However, to what extent is going to college important for the socio-economic outcome and thus social mobility? Does going to college lead to a significantly higher income than individuals who don't have a degree? There are two hypotheses to determine whether education will lead to higher earnings. One is the human capital hypothesis, which

states that schooling creates skills that enhance productivity. This assumes that increases in earnings are due to increased productivity. However, another function of education is the screening and signalling function. When an individual has completed their education, they send out a signal to employers that they possess the right qualities and skills for a potential job. This hypothesis states that employers select workers with the higher qualification (Patrinos & Psacharopoulos, 2018). So, when an individual is higher educated this person has better employment opportunities and higher earnings. Individuals with tertiary education earn 57% more than the individuals without upper secondary education (OECD, 2019). The potential to earn more and see those earnings increase overtime is an incentive for individuals to pursue education. Overall research shows that education increases social mobility even when the opportunities are equal.

2.4 Effect education on destination

In the upcoming section the study advance system will be analysed to what extent it is an efficient policy to boost social mobility. For many individuals in the Netherlands the current system leads to high debts at the end of their studies. However, what is the effect of this study loan debt on the destination? Research states that having a student debt is associated with a lower rate of homeownership and with lower wealth holdings (Cooper & Wang, 2014). This states that having a study loan debt results in a lower social status and it does not boost social mobility. Besides, research states that students from less wealthy families have less incentive to take a higher loan, because of loan aversion (Ministerie van Algemene Zaken, 2020). Therefore, these individuals have even fewer resources because of the Study Advance System.

3. Analysis and evaluation

3.1. Current situation in social mobility in the Netherlands

When we look at the current situation of social mobility in the Netherlands compared to the rest of the world, the Netherlands is in the top 10 of all countries according to the Global Social Mobility Index 2020 (World Economic Forum, 2020). Figure 1 shows

that children with higher educated parents achieve a higher level of education in high school (in Dutch: middelbare school) more often. This shows that parental education attainment is important for the level of the child's education, just as the theory has shown.

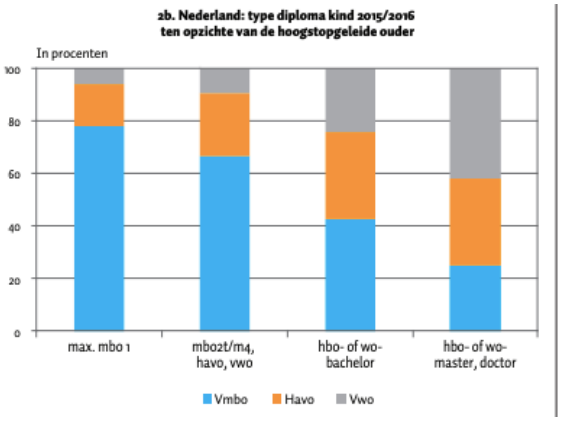

Figure 2: Type of diploma with respect to their highest educated parent

3.2 Effect of education on socio-economic outcome in the Netherlands

The theoretical background states that when an individual has completed higher education their socio-economic outcome improves, because of higher potential earnings. CBS (2011) states that there's a difference in income between the low and high educated individuals in the Netherlands. The graph on the right shows that high educated men and women earn more income than low educated individuals (CBS, 2011). Therefore, adolescents have an incentive to want to follow the highest education possible and to invest in themselves to earn the highest possible income, just like the theory of Becker (1964) proposes.

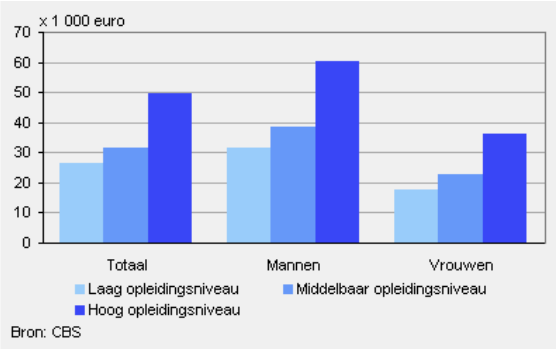

Figure 3: Level of income

3.3 Effect of building a debt on socio-economic outcome

Building up a debt is bad for social mobility, as the theoretical framework stated. This is for students an incentive not to build up their debt, because according to theory individuals want to maximize their wealth. However, CBS (2019) states that students nowadays take higher loans and more individuals build up a study loan debt. This shows that more individuals have less wealth holdings and more individuals become not wealthier because of their education. However, the background of the individual also plays a part in the destination of the particular individual.

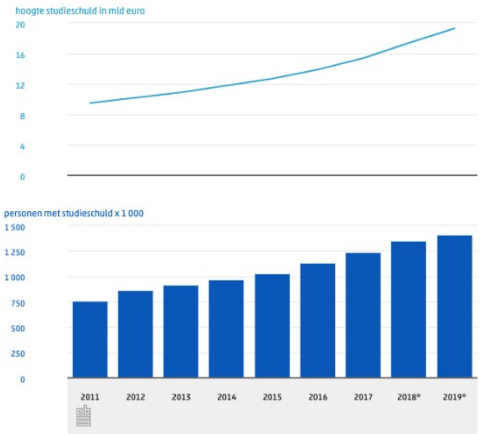

Figure 4: Level of debt and number of persons having a debt

3.4 Effect of origin on building up a debt

The previous section stated that building up debt has a negative influence on social mobility. In this section the effect of the origin on building up a debt is discussed. When

an individual has a less wealthy family with fewer resources to invest in their child's education, the particular individual has to lend more in the Study Advance System. However, the previous section stated that a higher study loan debt is associated with less wealth holdings. Therefore, the opportunity of an individual from a less wealthy family to reach a better socio-economic outcome is smaller in the Study Advance System.

Besides, the theoretical framework stated that students from a less wealthy family have to deal with loan aversion. These potential students may not enroll in higher education or not extend their higher education due to the Study Advance System, because of the high debts. CBS (2021) shows that students from a less wealthy family who extend their higher education with a master's degree, finish their education sooner than someone from a wealthier family. Besides, CBS (2021) states that the flow through from bachelor to master has decreased substantially after the introduction of the Study Advance System in 2015.

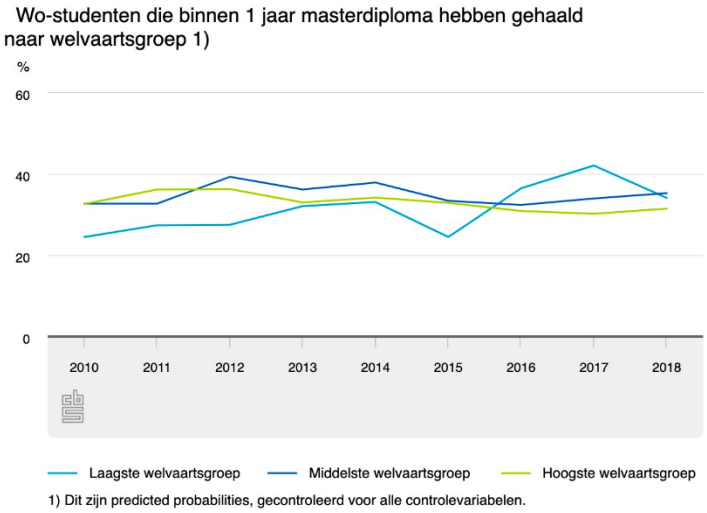

Figure 4: Students who obtain a master degree within one year

4. Conclusion and policy proposal

The study advance system does not boost social mobility. The loan system has a negative effect on students who originally come from a less environment. Those students have a reduced ability to get educated. This hampers their later earning potential. The goal of this paper is looking at social mobility and the study advance system. Therefore, it's not stated that the Netherlands should remain in this system or not. Moreover, application for higher education has not decreased drastically. This paper is limited to giving advice regarding improvement of social mobility. As stated in this paper, people born in a wealthier environment seem to have an advantage over those who were not lucky enough to be born in such an environment. Higher education is expected to promote social mobility. As a result of the new study advance system, this goal is at stake. Students from less wealthy environments face the risk of starting with arrears compared to those who did not build up a great amount of debt because of their background.

As such, policymakers that are concerned about social mobility should diverge the gap between wealthy and less wealthy students. Or even make sure that less wealthy students get more compensation. Therefore, we strongly encourage policy makers to rethink the current system with respect to the existing supplementary grant. Nowadays, it is really hard to obtain such a grant. However, The Dutch Ministry of Education has the duty to take care of the students from less wealthy environments. The authors suggest that policy makers extend the supplementary grant. The grant should be given to all students based on their parents' income. It is true that this action comes with additional (transaction) costs, but immediate action is required. In the short term, this has the consequence that the government has to invest in students coming from low(er) environments such that they're able to contribute to society alongside students coming from wealthier environments when they have graduated.

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4.8. The effect of the current study advance system on the individual benefits

Julius Landman, Ruben Flierman, Sarah van Dijk, en Nathalie Bak

Abstract

In 2015, the government decided to implement a new study advance system. This system was initiated to decrease the years of studying. However, this new system created several (unintended) challenges for students. As the basic grant was removed, students have relatively higher student debts. These debts led to students having several financial and mental problems. For example, many students choose for studies with a higher expected salary instead of a study that they really wanted to do. This led to potential underperformance of the students and a lower life satisfaction. The negative effects outweigh the reasonable considerations of the government and therefore, changes need to be made. The government should consider a new study advance system that focuses on mitigating the effects of student debt, as by doing this the benefits of higher education will be enhanced.

1. Introduction

In 2015 the current study advance system was initiated; this system replaced the original system where students had the right to a basic grant. The new system has, logically, led to a significant increase in student debt. This increase in student debt has placed more pressure on the benefits of higher education, as these benefits now face the downside of increased debt. High school graduates have to consider this trade-off and contemplate whether they think going into higher education is worth it. The academic year of 2015-2016 saw a considerable decrease of first-year students, especially from poorer families. This also raises questions about the fairness and equality of the current study advance system, as comparatively this system obviously has a less negative effect on rich families. Despite this decrease in students, the vast majority of high school graduates still pursue higher education. This paper will analyse this trade-off. More specifically, it will illustrate how the benefits of higher education get hampered by the increasing student debt for an individual. The paper will be built around the following question:

Do the financial disincentives, which are a result of the current study advance system, influence an individual's benefits from higher-education?

As stated, the objective will be to focus on the effects on the individual person. Both the psychological and physical effects of the study advance system will be considered. The paper will be structured as follows: first the theoretical background will be introduced, next an analysis and evaluation and lastly a conclusion will be formed.

2. Theoretical Background

Individual benefits of higher education

Higher education has several benefits for an individual. The most obvious one is that it increases the chance of employment. In 2016, the unemployment rate of individuals at age 25 with only a high school degree was twice as much as the unemployment rate of individuals with a bachelor's degree (Pender & Welch, 2016). Even if individuals have the same background, the individuals with a higher degree will end up at the higher end of the income distribution. In addition, this leads to higher earnings, which also increases government revenue as these individuals have to pay more taxes (Pender & Welch, 2016).

Pender & Welch (2016) also mention that individuals with a bachelor's degree will end up higher on the socioeconomic ladder. Their research shows that only 4% of the bachelor's degree individuals lived in poverty, whereas this percentage for high school graduates is way higher (13%). Therefore, individuals with a bachelor's degree will not need to rely on social assistance much. Moreover, higher educated individuals are also more likely to have healthier lifestyles. Cutler & Lleras-Muney (2010) found that lower educated people are much more likely to be obese and drink too much alcohol. Also, they concluded that better educated people are less likely to be smokers and more likely to use preventive care and drive safely. The reason for this can be found in the importance of the cognitive ability of the individual. A better cognitive ability leads to healthier behaviour and is just as important as the resources available for this behaviour.

The effect of the current study advance system on the individual benefits of high education

But the increasing student debt has negative effects on the well-being of students. Cooke et al. (2006) analysed the effect of student debt on student's mental health. The

mental health was measured by CORE-GP scores, which analyses an individual's well-being. The results showed that the students with a significantly higher debt, had a lower mental well-being. The paper concluded that the students with a higher debt felt more stressed and were more worried. Surtees et al. (2002) conducted a survey at Cambridge university which revealed that emotional suffering of the female students was strongly correlated with their academic performance. Richardson & Ellott (2011) add to this by illustrating that besides mental health issues, the financial burden placed on students also leads to emotional instability, problems with physical health and social dysfunctioning (Jessop et al., 2005).

The consequences of these mental health problems remained prominent for many students, even after their studies. Robertson et al. (2000) showed that students that dropped out of university, because of the high financial burden, would suffer from the psychological problems long after. In addition, students in debt are more likely to be acquainted with people that commit crimes, use or sell drugs or engage in any other illegal activity to be able to meet their payments.

Thus, the increased amount of student debt worsens mental health and overall well-being of students. This results in lower grades or even dropping out of university and more need for psychological support (Richardson & Elliott, 2011). These financial problems forced students to work more side-jobs during their study time. Meaning that they could focus less on their courses (Andrews & Wilding 2004). Moreover, Walsemann et al. (2015) also found a relationship between a higher amount of student debt and a worse psychological functioning. This worse psychological functioning not only exists in the period that the student is enrolled in school, but also in early adulthood. As adults, students with a loan have a lower possibility of getting married and having children, which has an impact on their life satisfaction (Gicheva, 2012).

Another psychological effect is the reduced life satisfaction of households with student debt. These households are less likely to be completely satisfied with their lives and more likely to be not satisfied at all, compared to households without student debt (Korankye & Kalenksosky, 2021). The choices regarding studies also influence life satisfaction. For example, Sieg & Wang (2018) find that the loan ensures females to choose lower ranked and cheaper law schools and this reduces the chances of finding a better spouse and having children at an earlier age and therefore influences life satisfaction in a later stage. Additionally, to the affected study choices, students are more likely to study for high salary jobs instead of lower-paid public jobs, even if they are passionate about something else. This is especially true for students whose parents are financially less fortunate (Rothstein & Rouse, 2011). Not only mental health is affected by the student debt, but also the other economic outcomes for the individual. A higher student debt is associated with having a lower wealth (excluding the debt) and reduces the likelihood of homeownership (Cooper & Wang, 2014).

3. Analysis and Evaluation

This section will link the current study advance system to the previously explained benefits of higher education and the consequences of student debt.

With the current study advance system, the government aimed to speed up the study duration of Dutch students. As Oosterbeek & Broek (2006) explain, the nominal duration of higher education in the Netherlands is equal to four years, while the average actual study duration is equal to almost six years. This is because students often tend to see their studies as a part-time activity, taking up paid jobs to earn extra money. The Dutch ministry of education wants to encourage students to study faster and, if necessary, to take up more and/or larger loans. As previously mentioned, this has caused a multitude of negative consequences (such as a worse mental health, lower life satisfaction, and reduced likelihood of house ownership) that had not been

foreseen, which is why almost all of the Dutch political parties want to go back to the system where students are able to apply for study financing (NOS, 2020).[3]

The study advance system also unintendedly affected study choices. Some students have altered their decisions, because of financial burden. For example: assume individual A who wants to be in fashion. Would this person still choose to study in fashion when he or she has to take out a loan to finance it? Whilst knowing that there is little money to be made in fashion generally speaking. It could also be that a person wanting to do a second master chooses not to do so, as under the study advance system he has already accumulated 4-6 years of debt. Would he have done the same if he did not have (as much) debt as he has now? These situations will be further analysed using the empirical analysis of Karreman et al. (2020).

For students whose parents are financially less fortunate the study advance system may force them to finish their study as fast as possible, as they have no or little money handed to them by their parents. This may also cause them to choose for studies with a higher (starting) salary. Students who finished high school with barely passable grades run into a similar situation. Expecting that, just as in high school, they will perform worse than their classmates, they may anticipate on a longer study period, which then results in a higher student debt. This can result in opting for a study where the future jobs prospects have higher expected salaries. In figure one and two below a comparison between these two groups is given (Karreman et al., 2020, p.552). Here is illustrated that there is a significant change of on average 3.1 percentage points for students who finished havo. This shows that the study advanced system has caused havo students to choose studies with a higher starting salary over other studies. As the figure shows, the impact of a high starting salary grows larger as the income of the parents decreases, which is also assumed. For students who graduated vwo there seems to be no significant impact. When looking at past school performance again there can be seen that there is a significant impact for students who finished havo. The

[3] Kret, 2020

difference of impact between the lowest scoring students (<6.0) and the best scoring students (>7.0) is 1.1 percent, indicating that the study advance system has indeed caused low scoring students to choose for studies with a higher expected starting salary.

Another relevant factor for prospective students is how many academic institutions are present in their surrounding area. If this number is small, students will generally study further away from their home, leading to increasing traveling costs. On top of that, these students typically try to find a room to rent as soon as possible in the city they are studying at, meaning they have to pay rent for longer than the average student that studies closer to their home. As illustrated by the graph below, the study advance system has indeed caused students with a lack of academic institutions nearby to choose for studies with higher expected starting salaries.

Gender is also an important determinant. Interestingly, from the graph below it can be seen that specifically a lot of female havo students have chosen for studies with higher expected starting salaries as a result of the study advance system. After the loan system was introduced, the number of female havo students who chose for this increased by 5.5 percentage points, which correlates to an increase of 20.4 percent. Similar to most other factors however, the study advance system did not seem to have as much of an impact on vwo students.

To conclude, the analysis showed that particularly havo-oriented females have made different study choices since the introduction of the study advance system. For them the financial aspects of their chosen study and the matter of stability of those financial aspects seem to have become a lot more important. This could be an emancipating process, as women have some catching up to do in these fields since they used to primarily choose social education (Centraal Bureau voor de Statistiek, 2019). For fairness and equality this could definitely be a good thing.

We also see the same thing happening for students who come from households with a low income, which again increases equality in the long run. Additionally, while

the study financing got removed, the ‘supplementary’ study financing did not. This was extra money that was given to students from poorer households. This means that with the study advance system, only students from poorer households will receive free money from the government. Consequently, the government now only sends money to students who truly need it, as opposed to the old system where even very rich students were sent money from the government. This yet again reinforces the argument that the study advance system helps with equality, as well as efficiency.

Furthermore, the benefits of higher education listed in section 2 (increased employment, higher earnings) still apply, even with the study advance system. The extra income from higher education graduates helps pay the student debt back more easily, and once this is done these graduates will enjoy higher pay without any more drawbacks for the rest of their lives. This makes higher education still worth it (at least monetary wise) for the vast majority of students, even with the study advance system.

Regardless, the study advance system brings forth several problems. The several negative psychological effects have already been outlined in section 2. But other effects of the new system, such as more future students choosing for studies with higher income, can also be problematic. Not following your interests can potentially result in lower grades and more re-schooling, but unfortunately there is not enough research on this subject to draw any significant conclusions about this. Another problem is that the study advance system changes students' choices based on aspects which are out of the student’s control, such as gender, income of household, and proximity to higher education. This could be seen as immoral as it is a form of discrimination, even though it may potentially increase equality.

Figure 1

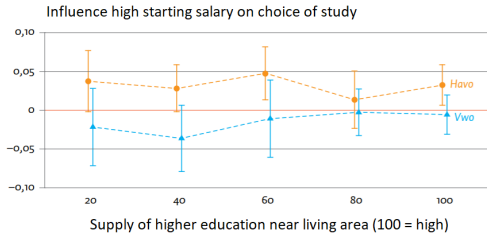
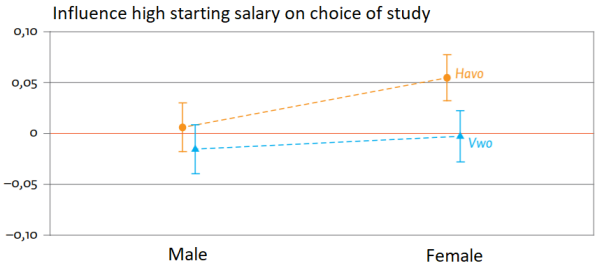


Figure 2



Note: adjusted retrieved from *"Door leenstelsel kiezen havisten vaker studie met hoog verwacht salaris"*, by Karreman et al., 2020, ESB, 105(4792), p. 552 (https://esb.nu/esb/20060197/door-leenstelsel-kiezen-havisten-vaker-studie-met-hoog-verwacht-salaris)

4. Conclusion

The theoretical framework showed that an increase in student debt potentially leads to severe mental health problems and underperformance of students. Adding to this, the previous section explained the burden on individuals as a result of the current study advance system. Even though the considerations of the government regarding this system are reasonable, it does not offset the consequences students are facing. Therefore, the Dutch government is strongly urged to revise the system and move to one with less financial burden for students. For example, a system that builds on the old system with a basic grant could be recommended. Or a system that enhances equality, by taking parents and personal wealth into consideration. There are several possibilities to improve the current situation of the students. In conclusion, the government should focus on mitigating the effects of student debt, as by doing this the benefits of higher education will be enhanced.

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4.9. The efficiency and fairness of the effects of enrollment

Joan Dao, Fleur van Grinsven, Niels Molenaar, en Elaine Schendstok

Abstract

The study advance system increased concerns about a decline in the accessibility of higher education in the Netherlands. This policy paper analyzes this policy's effects on student enrollment through frameworks of efficiency and fairness. Considering human capital theory (Barro, 2001, pp. 12 – 17), a decrease in the consumption of higher education will, in the long run, lead to a decline in economic growth. Our research shows that the study advance system is fair, but suboptimal regarding efficiency. No effects were seen with students transitioning from secondary education to higher education. However, less students transition from MBO to HBO, and less students start education on a master's level after completing a bachelor's degree. Despite these specific groups of students consuming less education, the overall distribution of students considering their parents' economic background has not changed. Targeted policies creating an incentive for these specific groups to consume more education are needed and will be beneficial for economic growth in the long run.

1. Introduction

The *Wet studievoorschot (Law study advance)* was received with mixed reactions. Many action groups have argued for amending or even abolishing the law. However, most of this pushback was based on speculations and modeled forecasts. One of the main concerns, voiced by the *Landelijke Studentenvakbond (National Student Union*, LSVb), was a predicted decline in accessibility (2016). After five years of active policy, there now is enough evidence to analyze the effects.

The results from recent research seem to contradict each other. The effects on accessibility appear to be limited overall (Bolhaar et al., 2020, p. 1). By contrast, the *Centraal Bureau voor de Statistiek (Central Bureau of Statistics*, CBS) found that, under the new loan system, fewer students started their master's degree after completing their bachelor's degree (2021, para. 6). Considering these findings, the concerns regarding accessibility may be valid, but limited to subgroups. Consequently, the question remains whether these effects are acceptable losses (i.e., an overall win) for the entire Dutch population, in terms of efficiency and fairness.

In this policy paper, the effects of the new study advance system on the accessibility of higher education will be analyzed in terms of efficiency and fairness. The accessibility of higher education can be measured by using the available statistics about student enrollment, leading to the central question in this paper: How does the study advance system affect student enrollment? Using qualitative research methods this policy paper will provide a so-called “ex durante” evaluation (i.e., *during* its operative period) of the effects of the *Wet studievoorschot*.

This policy paper will discuss the underlying assumptions of this policy, the relevant economic theories, and the assessment frameworks of efficiency and fairness. In order to obtain the numbers on student enrollment, several data sets from the CBS and the *Dienst Uitvoering Onderwijs (Service of the Execution of Education*, DUO) were used. These data sets contain information about first year enrollment on a per-academic-year basis. This data will then be analyzed through the lens of the economic theories, by

focusing on the concepts of efficiency and fairness. The resulting findings will form the basis of the policy proposal, with which this paper will conclude.

2. Theoretical Background

The new Dutch study advance system was introduced in 2015. Its biggest change was abolishing the basic grant. The government claimed to pursue three main goals: first, decreasing the costs of higher education; second, increasing the quality by reinvesting the freed-up funding; and third, maintaining accessibility (Van den Broek, Warps, et al., 2020, p. 18). The last goal was problematic because a decrease in accessibility was one of the foremost predicted effects of the *Wet studievoorschot*. This prediction was based on the premise that needing higher loans would decrease students' willingness to start or continue their higher education (LSVb, 2016).

Economic growth can be linked to the physical capital per worker, the amount of labor, technology, and human capital. The most obvious way to look at human capital is through education. Additional education will enable people to be more productive, and since the wages reflect the marginal productivity of a worker, their income increases. An increase in income will lead to a higher GDP per capita, which in turn leads to economic growth. An illustration of this is that a 1-year increase in average upper-level schooling for males is associated with higher economic growth of 0.44% per year (Barro, 2001, p. 14). If the new study advance system leads to a decrease in people's level of higher education, it will, in the long run, have a negative effect on economic growth.

There is more nuance to the academic debate, but that falls outside this paper's focus. Barro notes that while the years of received education do matter, other researchers have argued that the quality of education is much more important than its quantity (p. 17). Consequently, if the new study advance system does indeed increase the quality of education, the decline in economic growth from people being less highly-educated could be counterbalanced. However, due to limits of space and time, this

paper focuses only on enrollment, and therefore the quality of education will not be taken into account.

Assessment framework

This policy paper will analyze the study advance system by looking at student enrollment via the concepts of efficiency and fairness. In terms of policy evaluation, efficiency refers to the amount of distortions created by (changes in) policy. This can be defined as misallocation of financial resources, or as suboptimal consumption choices. In the context of education, it would be inefficient to acquire skills that are not used later. This thus includes students who start in one program and then drop out or switch, as well as educational programs that waste time teaching unused skills. By contrast, it would be efficient to acquire valuable skills quickly, so that more income can be earned over a lifetime – as a result, the education can be deemed to have been more valuable. Applying efficiency to enrollment means that there should be minimal distortions in it. Therefore, the most efficient outcome would be for the government to spend less on students, while students continue to study as they did before. Thus, the efficiency of the financing scheme can be measured by seeing whether enrollment has decreased.

The second concept is fairness. For a law to be fair, it has to treat people equally. In the context of the *Wet studievoorschot* and study enrollment, fairness could mean that everyone has to pay the same price for education, or that they have equal access to it. This split in possibilities indicates that there is a problem with equality as a concept; there are different versions of it (e.g., costs, accessibility, or outcomes). Which of these is prioritized, is influenced by an individual's moral principles. That discussion falls under the concept of justice, and is covered by another group. Nevertheless, one practicable definition of fairness is "that 'personal and social circumstances – for example gender, socio-economic status or ethnic origin – should not be an obstacle to achieving educational potential'" (Field, Pont, and Kuczera, 2007, as cited in Bøyum, 2014, p. 862). Fairness in relation to enrollment can thus be analyzed by comparing the

differences in study enrollment between the old and the new financing systems. This can be done by comparing groups, which can be created on the basis of differences in background (e.g., parental education, parental income, and immigration/ethnicity). Thus, this paper employs the framework of "do the pre-existing differences between groups worsen?" (rather than "does the law lead to equal outcomes for all groups?").

3. Analysis and Evaluation

Efficiency

In a report about direct and indirect transfer to higher education, the possible educational pathways were divided into three, namely HAVO, MBO and VWO (Van den Broek, Warps, et al., 2020, p. 35). These are the three that groups meet the prerequisites to enroll in higher education. The first notable trend in the data, shown in figure 2.5 in the report, is the relative increase in direct transfers to higher education in 2012 and especially in 2013 (p. 35). Since 2013 was the last year that students could have enjoyed the old regulations, this indicates a strong aversion to the new rules. After 2013, the percentages for HAVO and VWO return to the prior trendline (p. 35), which means that the new system did not affect enrollment for HAVO and VWO students – apparently, for them, education is inelastic. However, for MBO, direct transfers initially rise and then fall, causing a sway in total transfers of nearly 10% (p. 35). Since the baseline for total transfers was around 50%, this means that MBO faculty saw a swing in the variance of the number of new applicants of roughly 20% in just 4 years (p. 35), which probably resulted in a challengingly rapid succession of first-shortage-then-excess of staff and facilities (p. 35). Afterwards, the numbers remain very stable at the lower value afterwards for direct transfers, which the indirect transfers only compensate for the first two years, after which they start to decline linearly (p. 35).

An even starker distortion can be seen in the percentage of graduates who took a gap year. If people took a gap year just before the new law went into effect, the regulations of the new law would be in effect upon their return, making them lose their

basisbeurs. Consequently, taking a gap year would de facto have cost a lot more money, and became less desirable. This is depicted in the report in figure 2.6, which shows the total average rising from 6% to 8% for the 2011-2012 graduates, and subsequently drop to 5% for the 2013-2014 graduates (Van den Broek, Warps, et al., 2020, p. 36). The VWO students were hit hardest, going from about 12% up to 14% and then down to 6% (p. 36). Afterwards, the numbers quickly stabilize and then remain pretty constant, which they also were before (p. 36).

The reason for the MBO to HBO decrease was studied by ResearchNed. Of those who did not transfer from MBO to HBO, 45% indicated that they felt uncomfortable taking on loans, because they did not want to have long-term debt (Van den Broek, Cuppen, et al., 2020, p. 10). Apart from financial arguments, other factors also play a role, such as preparation, choice guidance, and self-confidence (p. 10). It is difficult to quantify the influence of the new study system because many other factors also influence the transfer to HBO, but there is little doubt that the new study system has contributed to the decline.

The percentage of bachelor students who enrolled in a master directly after obtaining their bachelor was studied by the CBS. Like the previous studies, there is a relative increase in 2013 and 2014, which is probably due to those students still receiving the benefits of the old study finance system (Van den Berg & Van Gaalen, 2021, “3.3 Doorstroom naar masteropleiding”). After 2014 there is a decrease in the percentage of students who directly continued with a masters ("3.3 Doorstroom naar masteropleiding"). The lowest percentage in the old system was 77.8% in 2010, and in 2018 it had dropped down to 69.6% ("3.3 Doorstroom naar masteropleiding"). The only major change in that period was the new study financing system, so it is probable that the new system caused most of this effect.

Unfortunately, no data is available yet on the indirect transfer to master's programs. Therefore, it cannot be excluded that, after the new study financing system went into effect, more students started taking a gap year after their bachelor but still

continue studying after that. This would cause a drop in the enrollment numbers initially, but it should recover over time, as the number of people starting their gap year evens out with the previous batch returning. Likewise, it is also still too early to have data about whether fewer students are doing a second master's degree.

Fairness

To analyze the fairness of the current study financing system, the equality of the system needs to be evaluated. The *Centraal Planbureau (Central Planning Bureau,* CPB) performed a study about the effect of the financing system on the accessibility of higher education between different income groups. The study divided students into four quartiles (i.e., 4 x 25%). It found that students from a lower income group study less than students from a higher income group (Bolhaar et al., 2020, p. 2). However, the ratio between low-income students and high-income students did not change with the new financing system (p. 2). Therefore, it can be said that the new study system has no negative influence on the differences between different income groups. In conclusion, the same relative numbers of HAVO and VWO students continue with higher education.

A different study, this time done by the CBS, analyzed student transitioning from HAVO to HBO within two years. In the graph *Doorstroom havo-hbo binnen 2 jaar na diploma*, a sharp increase of students enrolling in HBO can be seen in the year 2013, which was the last year of the old study financing system (CBS, 2019). Relatedly, it shows a small decrease after 2013, which eventually normalized again. The CBS also investigated the transitioning of students from VWO to WO. As shown in the graph *Doorstroom vwo-wo binnen 2 jaar na diploma*, the lowest-income group even attends university more often since the new study financing policy (CBS, 2019), which is a positive sign.

Another study addresses the share of students per income group and per education level. This study split income into three categories, namely below-median, median, and above-median. As shown in figure 2.48, *Percentage eerstejaars hoger*

onderwijs met ouders met een modaal of lager inkomen naar voorlopleiding, there appears to be no significant overall change in the distribution of students with parents from different income groups (Van den Broek, Warps, et al., 2020, p. 57). From this, it can be concluded that the same proportions of percentages of students from each income group start or continue their studies. Notably, the accessibility of the low-income group to higher education stays roughly the same, but it increases for students going from MBO to HBO (p. 57). One possible explanation could be that these students still receive a supplementary grant in the study advance system. This premise is strengthened by the middle-income group, which does not have access to the supplementary grant and also has no sharp decrease after the adoption of the new system (p. 57).

4. Conclusion and Policy Proposal

This policy paper focused on how the study advance system affects student enrollment, in terms of efficiency and fairness. First, in terms of efficiency, the study advance system does not influence the behavior of students transitioning from secondary education to higher education. It does, however, influence the behavior of the students transitioning within levels of higher education, leading to a decrease in students transitioning from MBO to HBO, and fewer students starting a master's degree after having completed a bachelor's degree. Consequently, this policy is less efficient because within specific groups of students the consumption of education has decreased. Second, in terms of fairness, there is no difference between the old and new system when it comes to the distribution of percentages of students starting higher education, while considering their parents' income. Therefore, it is concluded that this policy is fair.

Considering these findings on efficiency and fairness, our policy proposal consists of two options which each follow their own argumentation. The first option is to revert back to the previous student financing system. Returning to this policy will likely lead to students regaining the incentive to transition from MBO to HBO, and to start a master's degree. This policy option will allow for a growth of human capital

through education, which in the long run will increase GDP. However, considering the governments' budget constraints this would likely lead to less investments in the quality of higher education. Considering how Barro remarked that the quality of education might be more important than the years it was consumed (2001, p. 17), it is uncertain whether this option will lead to the optimal outcome.

The second proposal focusses on maintaining the current study advance system but incorporating targeted incentives. The two transitions that fell behind, and could be given additional incentives, are the transitions from MBO to HBO, and from a bachelor's to a master's degree. One illustration of these targeted incentives is partial debt cancellation or receiving one year's worth of tuition after having completed the degree. This would largely still allow the government to invest in the quality of higher education, while simultaneously addressing the efficiency problems created by the current study advance system. Thus, option two allows for both investing in the quality of education while maintaining the quantity of education, and in the long run will lead to a higher increase in GDP than option 1 might.

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4.10. Using corporate taxation to finance higher education in the Netherlands

Babs Vincken en Hanneke Kuipers

Abstract

The government of the Netherlands pays for higher education with a lump sum of money gained with taxes. However, the taxes lead to differences in how much everyone pays for education, which begs the question if the division in payments is fair. Therefore, the research question of this proposal is: What type of taxation should finance government expenditure on higher education? To answer this question, we analyzed different taxes based on two guidelines. The first guideline is the tax should uphold the benefits-received principle. The second guideline is that the issue income inequality should be addressed. From the three taxes (corporate taxes, commodity taxes & payroll and income taxes), only corporate taxes follow the two guidelines. Thus, corporate taxes should be used to pay for higher education.

1. Introduction

The Dutch government finances all forms of education in the Netherlands. They achieve this by donating a lump sum of money, which means that one entire amount is paid at once. While the government pays for all education within the Netherlands, the focus of this proposal will be on higher education. According to the Rijksbegroting, in 2019, the Dutch government spend a total 293,3 billion euros, of which 38,5 billion euros on education (Rijksoverheid n.d.-d). Around 10,5 billion euros of this amount are reserved for tertiary education (CBS, 2021). Before spending this great sum of money on higher education, the government will first need to obtain this money. The two most used ways of financing government spending are debt and taxation. The focus on this proposal of financing government expenditures is taxation.

Taxation means that a government levies or imposes an obligation, financially, on its citizens (Kagan, 2021a). The government will collect taxes and use this to finance its expenditures. While this seems straightforward, it is quite complicated in practice. There are many different types of taxes, including sales tax, income tax, property tax and corporate tax (CFI, n.d.-a). Furthermore, these different tax instruments affect different people. This means that when levying corporate tax, other people will have to pay compared to when the government levies an income tax. This is often the cause for many discussions as questions arise such as what is considered fair, who should carry the burden, and who will gain from this?

To investigate what taxation instrument(s) the government should use, this proposal focuses on answering the following question: *What type of taxation should finance government expenditure on higher education.* When answering this research question, we will be looking at what is considered fair, we will look at who gains from higher education, and we will consider what we find is the most equal way of levying taxes to finance higher education.

2. Theoretical Framework

First of all, it is important to look at the ideas behind the different types of taxes. Concerning the target, there will be a thorough investigation into the following types of taxes: income tax and payroll tax; commodity tax and pigouvian tax; corporate tax. Below there is an overview of the total tax received by the Dutch government within the year 2019.

Type of Taxation	Total Income (Billions or Euros)	Percentage(%)
Income and Payroll tax	65,8	21.8
Value Added Tax (VAT)	57,7	19.1
Health Care Premium	42,7	14
Corporate tax	25,9	8.6
Employee Insurance Premium	25,6	8.5
Other	84,7	28
Total	302,4	100

Table 1: Taxation in the Netherland (Based on the Rijksoverheid (n.d.-c). Translated and adjusted by authors).

Income Tax and Payroll Tax

Income tax is a tax paid over the total earnings you receive in a year. In the Netherlands, there is a progressive income tax, meaning that when income increases,the average percentage of tax paid on income increases. Furthermore, the income tax is divided into three boxes. Box 1 concerns income from work and home, box 2 covers income from substantial interest, and box 3 deals with the income achieved through savings and investment. Within these boxes, there are scales in which one has to pay different

amounts of taxes based on the amount of income one has received (Belastingdienst, n.d.-a).

Payroll tax and income tax are very closely related to one another. Payroll tax is withheld from the salary of an employee, by its employer, as a levy for income tax (Belastingdienst, n.d.-c). This means that every month, the salary received by the employer is the total salary, minus the payroll tax, so the gross salary minus the payroll tax, leading to the net salary. Within the year 2019, the Dutch government received a total of 65,8 billion euros of income and payroll tax. This is around 21.8% of their total tax revenue (see table 1).

Commodity Tax and Pigouvian Tax

A commodity or sales tax is a type of consumption tax that is imposed on the sale of goods and services. It is levied when the product is sold, then it is collected by the retailer, after which it is passed on to the government (Kagan, 2021b).

A pigouvian tax is a tax that is introduced on economic activities which produces negative externalities. These types of externalities often result in the market becoming inefficient, and so a pigouvian tax is introduced (CFI, n.d.-c). The costs of these externalities are then paid by unrelated third parties. The pigouvian tax will cause the marginal private costs to increase and so the final costs of the product will reflect the social costs of the activity. In the Netherlands, the pigouvian tax is implemented via excise duty (*accijns*). Alcoholic products such as beer and wine, tobacco products such as cigarettes and fuel such as gasoline and diesel are all products over which excise duty is paid. Within 2019, the government received 2,6 billion euro's due to excise duty (Rijksoverheid, n.d.-c). This is only 0.86% of the total tax income in 2019.

Corporate Tax

When you are an owner of a (private) company or a public limited company, you are required to pay taxation over the profit of the company in the Netherlands. It is taxed over the taxable profit in a financial year and it is also divided in scales. The first scale is 15% over the first €245.000 and the second scale concercing 25% taxes over the remaining amount of money (RVO, 2020). Within the year 2019, the corporate tax levied by the Dutch government came to a total of 25.9 billion euros, which is around 8.6% (see table 1).

The Taxpayer

Next to looking at the different types of taxation and their meaning, it is important to look at who will be the taxpayer, when these taxes will be implemented. Within these three different types of taxation, different people are expected to pay the tax. When levying income and payroll tax, it affects all people earning an income, either from work or social benefits. This means that within these taxations, there is no excluding people from paying this tax.

Contrary to this, both pigouvian and commodity taxation are raised on products, and not on people. This means that it limits the taxpayer to only people who buy the product that is taxed, and therefore many people will not be influence by levying either of these taxations, as they do not buy the products.

Finally, when levying corporate taxation, the corporations need to pay. This means that a corporation is held accountable for paying the tax, and not individuals. Furthermore, the larger the profit, the higher the tax is that needs to be paid, and so some firms pay more, while their size or location does not differ from other firms.

The problem often encountered with corporate taxation is tax avoidance, making this a difficult type of taxation to control. Many multinationals can choose where they locate themselves and therefore choose in which country, they wish to pay taxes. Therefore, when implementing corporate tax, some multinationals might just leave the country, while domestic firms are forced to stay and pay.

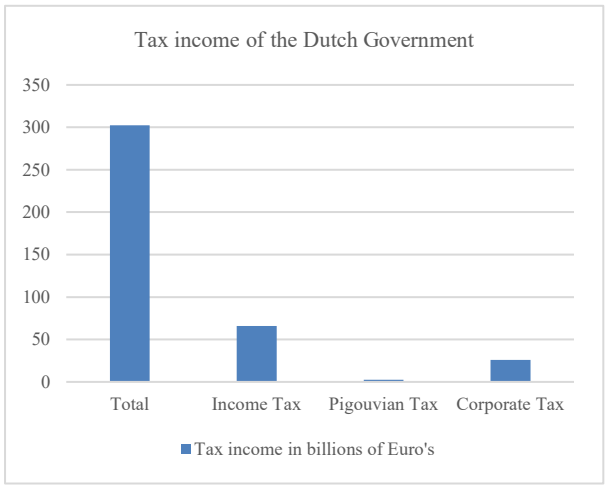

Figure 1: Tax income in billions of Euro's (Based on the Rijksoverheid (n.d.-b). Translated and adjusted by authors)

A final overview can be found in figure 1 on the right. As can be seen, the average tax income of the Dutch government lies around 300 billion. When put in perspective, pigouvian tax produces very little income for the government, while income tax produces a fair amount and corporate tax lies somewhat in the middle.

3. Analysis & Evaluation

Determining which tax should be used to pay for higher education is based on political considerations. For this policy paper, we have two guidelines. The first one is that the ones who reap the benefit of the government expenditure, should also be the ones that pay for it. This is also called the benefits-received principle. As the current generation benefits, they have to pay for the services with the help of taxation (Rosen & Gayer, 2014).

At the moment, the benefits-received principle is applied in a way that government expenditures are paid for by the current generation for the future generation (Rosen & Gayer, 2014). This leads to people accumulating debt to pay for these costs. Due to this debt, students have a harder time to have their own houses depending on the size of their debits (Andres, 2010). Therefore, we plead to apply this principle differently so that the government expenditure is paid for by the current generation instead of the future generation as this could lead to economic growth. In this case, the current generation would pay the government expenditures for its own benefit.

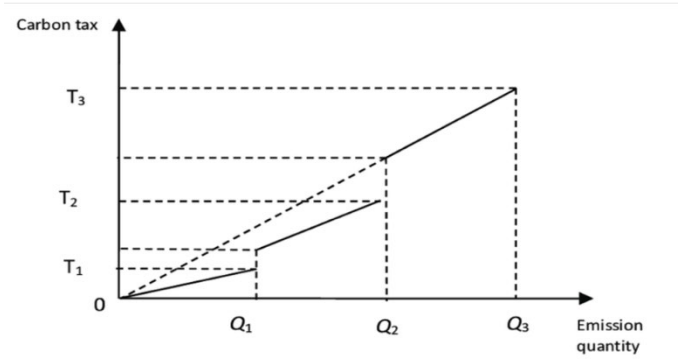

Figure 2: Progressive Carbon Tax Rate (Tsai et al., 2016)

The is a second guideline is that income inequality should be addressed. In order to do this, it is important that the implemented taxes are progressive. According to Duncan & Peter (2016), progressive taxes decrease income inequality. Thus, the more one earns, the more one has to pay in taxes. In the graph on the side, one can see how this tax works. When comparing the different taxes, it can be seen that there is one tax which is applicable to both guidelines.

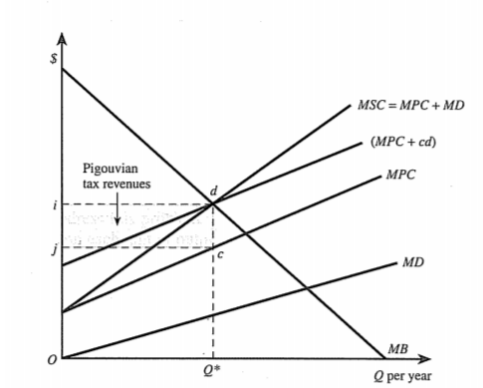

Figure 3: Analysis of a Pigouvian Tax (Rosen & Gayer, 2014)

When looking at corporate taxes, businesses would be the ones responsible to pay for the taxes as they pay a certain amount over their profits. As the businesses want to make sure that they hire competent workers, they will pay the taxes to make sure that the future employees are able to receive a good education. In case the employees receive a good education, there is a higher chance that the companies will innovate. In turn, this gives the businesses a change to compete with foreign companies on the global market (Barnett, 1997). Due to this competing position on the world market,

there will be a higher demand for the products made by the home companies. This in turn will lead to more economic growth. Furthermore, the bigger the size of the company, the more tax they pay. First, companies pay 19 % over their first 200,000 euros income. If they have earned more than this, they have to pay 25% in taxes (Belastingdienst, n.d.-b). Thus, both guidelines can be applied to the corporate tax.

Commodity taxes are applied to different kinds of products such as tobacco (Belastingdienst, n.d.-b). However, these taxes are also often used to lower consumption because of the health implications (Elder et al, 2010). For example, there are anti-smoking campaigns which led to a decreasing demand for this product (Leu, 1984). As there is a negative externality, it is possible to levy a Pigouvian tax on cigarettes to decrease smoking levels and to encourage people to study (Rosen & Gayer, 2014). However, most people that smoke are between 25 and 65 years old (CDC, 2019). Thus, they have already finished their studies. So, in this case, the benefits-received principle cannot be applied. Furthermore, the amount of tax one pays does not depend on the amount of cigarettes one buys, as the price for cigarettes consists for 75% of taxes (Metro, 2020). Thus, these taxes cannot be used to pay for higher education.

Pay and income taxes are levied on everyone who has some sort of income, including capital gains. The tax itself is progressive as one has to pay 37.10% till 68,508 euros and if one's income is more than this, the tax rate becomes 49,50% (Belastingdienst, n.d.-b). However, as the working people need to pay for the future employees, the taxpayers themselves do not receive any benefits from paying the tax. Therefore, the benefits-received principle cannot be applied to this tax.

Thus, the answer on research question '*What type of taxation should finance government expenditure, with a focus on higher education?*' is that corporate taxes should be implemented as both guidelines can be applied to this tax.

4. Conclusion & Policy Recommendation

The government of the Netherlands pays for higher education with the help of a lump sum of money. The money is collected by the government with different kind of taxes. However, these tax instruments affect different people, which begs the question if the division in payments is fair. Therefore, the research question of this proposal is: *What type of taxation should finance government expenditure on higher education?*

To answer this question, we analyzed different taxes based on two guidelines. The first guideline is the tax should uphold the benefits-received principle; The ones who benefit from a government expenditure are also the ones who pay for it. In this case it means that the current generation should pay taxes in order for people to study. The second guideline is that the issue income inequality should be addressed. This can be done the help of progressive taxes. This means that the more money one has, the more taxes one has to pay.

The analyzed taxes are corporate taxes, commodity taxes & payroll and income taxes. The corporate taxes are paid by companies over their profit which they made in one year. When the businesses pay for taxes, they invest in their future employee's education. Thus, they uphold the benefits-received principle. Furthermore, as the taxes are progressive, corporate taxes reduce income inequality. These taxes uphold both guidelines.

The commodity taxes are imposed on certain goods and services. Moreover, if producing the good leads to negative externalities, a Pigouvian tax can be introduced to fight against it. Most people that smoke are between 25 and 64 years old. This means that they most likely have already done their studies, which means that the benefits-received principle cannot be applied. Moreover, the tax on cigarettes is the same for everyone, no matter how much one buys of a product. Therefore, this tax does not follow any guidelines.

The payroll tax is part of the salary of an employee which is withheld by the employer, which is levied for the income tax. The latter is a tax which is paid over the total amount of earnings one receives in a year. The current employees pay for the studies of future employees. As the people who pay do not benefit of this construction, it does not uphold the first guideline of the benefits-received principle. However, the tax is progressive which means that the income inequality issue is challenged. Thus, this tax follows one guideline.

To conclude, there is only one tax which follows both guidelines. Thus, the answer on the research question is that corporate taxes should be introduced to pay for higher education.

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4.11. The effect of the study advance on wealth inequality in the Netherlands

Rob van Mourik, Alden Chazan, Bernardo D'Agostino, en Tijn Outvorst

Abstract

Will the current Dutch study advance system increase the wealth inequality in the Netherlands? This question has been on the minds of Dutch policymakers seeking to find the best study advance system for the Netherlands. Knowing what the effects of the system are on wealth inequality helps policymakers make better decisions about this system in the future and will ultimately help students achieve a better education and financial position. To help solve this important question we have analysed the wealth inequality derived from the Dutch study advance system with the help of economic insights. Past research shows that an increase in debt, results in a lower financial position and an increase in wealth inequality. Our results show that debts have increased which leads to an increase in wealth inequality in the long run. We conclude that the Dutch government should create a system where debts of students are as low as possible. We therefore recommend lowering tuition fees or/and increasing subsidies for students.

1. Introduction

Wealth inequality is an important subject in economics today. The possible increase in wealth inequality is a subject that many economists and nations want to keep an eye on, because very high wealth inequality can increase health and social problems for the lower classes. Government systems to reduce the financial burden that universities give to students could also play a role in lowering or increasing wealth inequality. The new study advance system could lead to larger study debts. Larger study debts can lead to a backlog on the housing market for graduates with the new system (Wind, 2021). The reason for this is, because with a higher debt you will get a lower mortgage from your bank. This could lead to less home ownership for these graduated students and therefore less capital accumulation. With wealth not only debts, but also all the possessions that an individual has are taken into consideration. You then can make a calculation of somebody's net worth: possessions minus debts.

The Dutch study advance system gives an opportunity to finance the studies of people from a lower income class, but many voices are still not satisfied with this system for the amount of debt that the students finish with (Wind, 2021). Changing or keeping this system is a controversial issue for the Netherlands. The controversiality of this system is a reason to study this specific study advance system more carefully, because it might give future economists and government planners a better idea of which system to pick in terms of the effects on the wealth inequality of their nation. The main research question will therefore be the following: how does the Dutch study advance system affect household wealth inequalities? The focus is on the Dutch study advance system, since this system was implemented only five years ago (Centraal Planbureau, 2020).

2. Theoretical background

To create a better understanding of the situation of the current student debt holders an overview of their overall debt and equity is required. The paper by Juster (1999) gives

insights into household wealth and the net worth of holders of degrees. The paper finds that the net worth of college degree holders in 1994 (the most recent date) was on average $ 295.800. This is significantly more than people with only a high school degree who were only worth $ 107.000. These amounts are now probably much higher because of inflation, but probably the same difference in net worth can be applied to the current situation. This paper therefore increases the credibility of the argument that obtaining a college degree is indeed very useful in regards to later net worth attainment.

Total wealth income of degree holders was also significantly higher than non-degree holders meaning not only the net worth was increased. Next to that the savings rate of college degree holders was significantly higher which might allow them to pay off their debts more easily. On the other hand the paper found that the richer percentiles of a certain society invest a lot less of their cash in savings and checkings. Therefore the increased savings rate could coincide with a drop in the wealth bracket and does not necessarily mean these consumers are part of a wealthier household (Juster, 1999). A relation between household wealth and educational attainment was also drawn in the paper by Filmer & Pritchett (1999). It describes the average grades of children from three income groups (high, medium and low) within certain african countries. The differences between the grades of the highest income group and the lowest income group are very large and show that a larger household wealth certainly has an effect on future educational success. As a relationship between high education and high household wealth was already established it seems that the situation in these countries can be compared to the Netherlands. There is a circular relationship between high household wealth and a better education. Also household wealth and better education both improve the likelihood of obtaining the other.

The paper of Hasan et al (2020) displays the effect of numerous variables on wealth inequality. Not only does education have an effect on wealth inequality, both education and income redistribution have a heavy alignment with the reduction of

wealth inequality. This relationship is positive, meaning that if education or redistribution increases, the reduction of wealth inequality also increases.

They thereby confirm the findings of Dabla-Norris et al (2015) who state that more fiscal policy, including education spending has a huge impact in decreasing inequality. The reason for the decrease of inequality is due to the fact that education becomes more accessible and because the increased education spending increases the average loans employees will get paid in a country. The increase in loans originates from the fact that graduates are better schooled to use modern technology and therefore reach higher productivity. This means that graduates also have a better labor opportunity. When the years of studying increases, eventually it's benefits will diminish until the costs will exceed the effects of education (Dabla-Norris et al., 2015).

This is corresponding with Hartog & Oosterbeek (1998) who concludes that in the Netherlands higher secondary education leads to the strongest increase in future wealth compared to all the other education levels. Although It is closely followed by university education. The paper of Ravazzini & Chesters (2018) analyses the wealth gap between genders and concludes that a higher level of education leads to a higher amount of wealth and income.

Social welfare theories

There are a couple of theories that can be used to analyse the consequences of wealth inequality. Four theories that are used often in economics will now be explained briefly. The first one is the social welfare function. This theory states that we should maximize the total personal benefits (Bergson, 1938). The second one is the maxmin theory. This theory states that we should maximize the wellbeing of the group that is the worst of (Neumann, 1959). The third one is egalitarianism. This theory exists out of two parts: equality of outcome and equality of opportunity. Equality of outcome states that everyone's wellbeing should be the same and equality of opportunity states that everyone should have the same opportunity in achieving wellbeing. The equality of

outcome is regardless of the initial distribution of opportunities. So you could help a certain group more than others, because they are far behind in achieving the same outcome (Phillips, 2004; Rawls, 1999). The last theory is the capability approach. This theory states that the wellbeing of a person cannot be expressed in goods and services. Therefore we need to look at the capabilities that a person has in life. Capabilities are for instance access to health and having social contacts (Sen, 1989).

Economic mechanisms

There are multiple mechanisms in the economy that affect people with a lower net worth. According to Filmer & Pritchett (1999) There are several consequences of household inequality for education. Children from poor households enrol less often into school or drop out more often. This is a self-reinforcing effect between generations. Because of your parents having less wealth your chances of going to study are lower. This leads to less income for the rest of your life. Wealth inequality also leads to income inequality. The richer a person is, the faster the income growth is (Piketty & Saez, n.d.)

Wolff & Zacharias (2007) states that wealth inequality can even lead to some groups obtaining a negative net worth. This can then lead to a bad credit reputation which in turn will make it harder to borrow in the future. If this person is not able to borrow then he or she cannot buy a house. Obtaining a house leads to a big jump in wealth since you now can repay a part of the debt every month which leads to wealth build up. Groups which have a high net worth on the other hand profit from dividend and interest income.

Galor & Zeira (1993) use models from the economic branch of macroeconomics to determine the effect of wealth inequality on the economy. They come to the conclusion that countries with less wealth inequality have a higher economic growth and in the long run these countries increased due to less inequality in income level. Furthermore in more equal countries more laborers have starting wealth that affords them to invest in education and capital.

3. Analysis and evaluation

Five years after the implementation of the study advance system or the 'wet studievoorschot' the effects are limited (Centraal Planbureau, 2020). The biggest difference is that students show an increase in borrowing. Origin of the increased borrowing is the dissolution of the student finance gift and the students compensating for that. As seen in figure 3 students in the Netherlands from all income classes increased their borrowing rates, yet it works diminishing from lower to higher income groups. For students originating from vwo, the difference in borrowing between the lowest quartile and the highest quartile income group was around 10% for the lowest income group (Centraal Planbureau, 2020).

These higher debts decrease the holder to a lower net worth. As the debt increases the education years gained is not directly reflected in the borrower's assets. Education will start to pay off when the graduates enter the labor force (Juster, 1999). Meanwhile the debts limit the holder financially. As displayed in Wolff & Zacharias (2007) a bad credit score will make lending and in turn acquiring a house harder. In the long term this prevents these individuals from building up wealth. Building up wealth is a major factor influencing wealth inequality. If a part of the population is limited in wealth build up, wealth inequality can increase (E. Wolff & Zacharias, 2007).

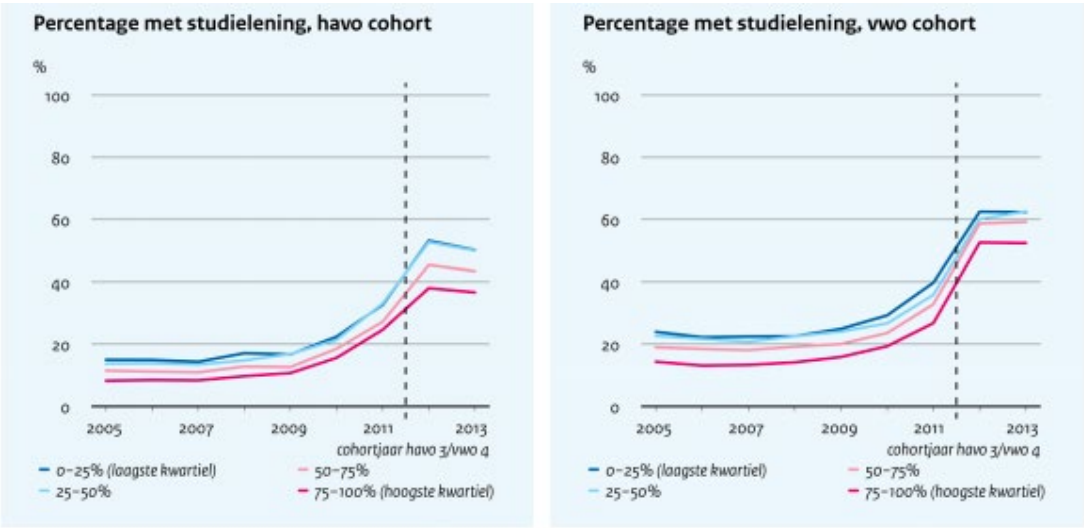

Figure 3: Increasement of borrowing by percentage of students in the Netherlands.

Students are divided into 4 income groups from lowest to highest quartile. Debts beyond the dotted line fall under the study advance system. Source: (Centraal Planbureau, 2020)

Table 1: spending and costs of the Dutch government related to study finance. Amount times 1000x. Source: (Broek et al., 2020)

	2011	2012	2013	2014	2015	2016	2017	2018	Verschil 2011-2018
Verplichtingen	**4.131.887**	**3.807.055**	**4.150.351**	**4.846.345**	**4.367.687**	**5.828.062**	**4.563.829**	**6.200.225**	**2.068.338**
Uitgaven	**4.131.887**	**3.807.055**	**4.150.351**	**4.846.345**	**4.367.687**	**5.828.062**	**4.563.829**	**6.200.225**	**2.068.338**
Inkomensoverdracht	**2.688.924**	**2.270.346**	**2.446.647**	**3.011.892**	**2.261.813**	**3.202.597**	**1.496.930**	**3.251.767**	**562.843**
• Basisbeurs	**1.041.952**	**1.176.404**	**1.226.945**	**1.363.422**	**1.307.103**	**1.014.122**	**741.403**	**503.228**	**-538.724**
- Gift (R)	873.052	915.853	1.001.245	989.938	1.045.073	1.075.460	1.108.885	1.210.960	337.908
- Prestatiebeurs (NR)	168.900	260.551	225.700	373.484	262.030	-61.338	-367.482	-707.732	-876.632
• Aanvullende beurs	**583.500**	**612.222**	**616.913**	**683.797**	**736.390**	**757.761**	**777.233**	**808.533**	**225.033**
- Gift (R)	489.800	499.865	528.140	537.091	579.340	585.282	608.481	672.109	182.309
- Prestatiebeurs (NR)	93.700	112.357	88.774	146.706	157.051	172.479	168.752	136.424	42.724
• Reisvoorziening	**803.237**	**292.937**	**450.303**	**819.053**	**167.521**	**1.420.507**	**-41.301**	**1.631.598**	**828.361**
- Bijdrage aan vervoersbedrijven (R)	996.331	539.319	681.165	1.124.222	384.717	1.605.171	122.391	1.723.502	727.171
- Gift (R)	463.234	497.253	541.148	521.861	594.044	639.958	668.643	718.370	255.136
- Prestatiebeurs (R)	-656.328	-743.635	-772.010	-827.030	-811.239	-824.622	-832.335	-810.274	-153.946
• Overige uitgaven	**260.235**	**188.783**	**152.485**	**145.620**	**50.798**	**10.207**	**19.595**	**308.408**	**48.173**
- Overige uitgaven relevant	69.108	96.589	100.891	170.521	97.552	117.723	285.356	77.750	8.642
- Caribisch Nederland (R)	1.340	1.868	2.809	2.129	3.013	3.320	3.491	3.210	1.870
- Overige uitgaven niet-relevant	189.787	90.326	48.785	-27.030	-49.767	-110.836	-269.252	227.448	37.661
Leningen	**1.354.449**	**1.423.416**	**1.576.661**	**1.713.785**	**1.974.217**	**2.500.210**	**2.934.328**	**2.832.535**	**1.478.086**
- Rentedragende lening (NR)	1.252.579	1.300.675	1.434.492	1.551.003	1.771.421	2.238.174	2.612.321	2.480.180	1.227.601
- Collegegeldkrediet (NR)	101.870	122.741	142.169	162.782	202.796	262.036	322.007	352.355	250.485

In table 1 the total spending of the Dutch government on loans (leningen), basisbeurs (basic student grants) and aanvullende beurs (additional student grants) is given. The system change in the Netherlands in 2015 is visible by looking at the government spending in certain areas in 2015 and 2016. The large difference in loans between 2015 and 2016, 2017 is likely a consequence of this change, furthermore the change in spending on the basisbeurs in these years is probably also as a result of this measure. With this table we can illustrate what effect the implementation of the new Dutch system had on students and their financial situation. The last row of the table shows the difference between 2011 and 2018, we would however decrease the 2018 amount by 10% as a general way to counteract some of the effects of inflation. The basic student grants decreased by € 452.905.000 in the period 2011-2018, however in the same period the amount of loans increased by € 1.194.832.500 (Broek et al., 2020).

While governmental spending on education decreased, literature shows that this influences education level and in the long run wealth inequality (Dabla-Norris et al.,

2015; Hasan et al., 2020). As stated before fiscal policy on education influences wealth inequality through multiple factors, with an increase in government spending resulting in a decrease of wealth inequality.

The large increase in loans, especially the ones with interest (rentedragende lening) shows that the financial situation of students has likely deteriorated partly due to the change in the study financing system as more grants are substituted for loans leading to more overall student debt. Some other effects of the study advance system are present especially for the poorer parts of society.

Since the implementation of the study advance system the income of youth from social services income has decreased. The study finance system is part of the social service income and especially the lower income groups make use of it. In 2016 the lowest income group, 20% of the Dutch population, held the highest student debt. Consisting of an average of 2500 euro after that it proportionally increased. While debt holds a huge influence on inequality, student debts are only a small amount of the total amount of debts. In 2018 around 2.1% of all debts, 847 billion euro in the Netherlands is student debt. In comparison the mortgage debt is 85.7% of the total debts (CBS, 2020).

Lower household incomes take loans more often but in smaller amounts then when a high income household takes a loan (Broek et al., 2020). The last data before the implementation of the study advance system shows that 38% of the students had a study loan. In 2018 this has increased to 53% of all students, the amount of money borrowed has also increased. Not only due to the absence of the financial gift has the amount of loans increased, also financial support from parents have increased. For students that do receive financial support from their parents little change is made in their financial situation. For students that do not receive parental financial support difficulties have increased (Broek et al., 2020).

The reduction of net worth of indebted students and its effect on wealth inequality will influence mechanisms of the Dutch economy. An increase in wealth inequality in its turn has a negative impact on the quality of the education in the

Netherlands (Filmer & Pritchett, 1999). The debts give people bad credit scores which limits them in borrowing and acquiring a house (E. Wolff & Zacharias, 2007). Finally the increased wealth inequality reduces the economic growth and reduces the growth of income level (Galor & Zeira, 1993).

Evaluation

According to the social welfare function we should maximize the total personal benefits. In the Dutch study advance system the wealth of the people that borrow decreases, leading to less wealth build up. But at the same time the group with a high net worth increases their benefits because of interest receivements and dividends. According to the theoretical background, this group with a high net worth is also better able to retain this level over generations due to the children born within this group having better grades (Filmer & Pritchett, 1999). This allows these children to obtain more wealth in the future, preserving their high net worth (Juster, 1999). The Dutch study advance system therefore increases the total benefits.

The second theory is the maxmin which states that we should increase the wellbeing of the class that is the worst off. In a society where students of the lowest household wealth group have to borrow the most they are not increasing their well being. The increased borrowing leads to a lower net worth and an increase in wealth inequality which makes the lowest wealth group worse off (Wolff & Zacharias, 2007). To be in accordance with this theory we should reduce the amount the students of the lowest household wealth group have to borrow or abolish it.

The third theory is the egalitarian approach that consists of the equality of outcome and the equality of opportunity. The current study advance system supports equality of opportunity to students (Broek et al., 2020). Every student has the option to borrow the same amount regardless of the income class they originate. Equality of outcome is not the case in the current study advance system. Students from lower

income households borrow more which leads to a lower net worth and an increase in wealth inequality (Centraal Planbureau, 2020; Juster, 1999).

The last theory is the capability approach which states that the wellbeing of people should be expressed in their capability. The current study advance system does not differentiate capabilities based on enrolment. But the study advance system increases wealth inequality and therefore students do not have the same opportunities. Students from poor households enrol less often into school or drop out more often (Filmer & Pritchett, 1999). Furthermore borrowing money leads to a lower credit score and therefore a lower chance of borrowing money (getting a mortgage for instance). This leads to a lower wealth build up. Students from poor wealth groups thus have less capabilities in the current study advance system.

As previously stated wealth inequality is a large problem for the poorer parts of the society in question (Wolff & Zacharias, 2007). In order to reduce wealth inequality as much as possible the equality of outcome of the egalitarian theory is preferred. If full equality of outcome is achieved students will enter the labor force with equal net worth which results in the lowest wealth inequality (Filmer & Pritchett, 1999; Galor & Zeira, 1993; Piketty & Saez, n.d.; E. Wolff & Zacharias, 2007).

4. Conclusion and policy recommendations

The research question of the paper was: "how does the Dutch study advance system affect (household) wealth inequalities?". From the literature the conclusion follows that the amount of debts of users of the study advance system has increased over the last couple of years. This can result in the reduction of the net worth of students which increases the wealth inequality in the Netherlands.

Following the equality of outcome part of the Egalitarian Theory, the advice would be to create a system where debts of students are as low as possible. We therefore recommend to lower tuition fees or/and increase subsidies for students, both resulting in an increase of government spending. By implementing these policies

students will finish their studies with a lower amount of debt and a higher net worth. If students begin their working life with a higher net worth this will prevent the increase of wealth inequality. This will both favour the graduated students and the Dutch economy, due to the negative effects of wealth inequality being reduced.

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4.12. Compensatie voor de “pech generatie”

David van der Pol en Ricky Cao

Abstract

Door het invoeren van de leenstelsel wordt de huidige generatie student financieel benadeeld. Vele studenten ervaren hoge schulden en dit leidt voor sommige tot stress. Dit paper gaat in op de verschillende theorieën die kunnen helpen met het bepalen of de huidige generatie student gecompenseerd moet worden. Dit wordt aan de hand gedaan van ‘social welfare functions’. Aan de hand van de schade die studenten ondervinden en de ongelijkheid die ontstaat met andere generatie hebben wij geconcludeerd dat studenten gecompenseerd moeten worden. In de paper is geconcludeerd dat de compensatie het best gefinancierd kan worden via een extra vermogensbelasting.

1. Introductie

Met de Wet studievoorschot dat in september 2015 is ingevoerd, heeft het parlement besloten om de basisbeurs af te schaffen en de transitie te maken naar het leenstelsel. Het budget, dat hierdoor vrij kwam, zou worden aangewend om de onderwijskwaliteit te verbeteren. Het gevolg hiervan is dat een groter percentage van de studenten is gaan lenen om rond te komen, daarnaast lenen studenten tegenwoordig gemiddeld meer dan vroeger. Uit onderzoek van het CBS blijkt, dat de totale studieschuld in 2019 al bijna verdubbeld is ten opzichte van 2015 naar 19,3 miljard euro. Veel studenten (vooral de jongere generaties) kampen hierdoor met torenhoge schulden van tienduizenden euro's. Een deel van de studenten heeft als gevolg hiervan last van stress. Daarnaast blijft de studieschuld studenten ook nog achtervolgen als ze als starter een huis willen kopen.

Vanuit studentenorganisaties werd daarom de noodklok geluid, met de dringende vraag aan Den Haag om de basisbeurs weer opnieuw in te voeren en de huidige 'Pech generatie' te compenseren. Veel partijen zagen hier de noodzaak van in en beloofden er in hun partijprogramma werk van te maken.

Verschillende partijen hebben voorstellen geuit hoe huidige studenten van de pech generatie gecompenseerd kunnen worden. Zo werd er het voorstel geopperd om deze studenten het volledige bedrag van de basisbeurs te vergoeden. Daarnaast zijn er nog andere voorstellen, zoals een eenmalige tegemoetkoming van €10.000. Ongeacht welke vorm van compensatie, zal er budget beschikbaar voor gemaakt moeten worden. Onze onderzoeksvraag luidt daarom als volgt: Moet de leenstel generatie gecompenseerd worden voor het leenstelsel en zo ja, hoe moet deze compensatie gefinancierd worden?

In de theoretische achtergrond wordt er besproken welke economische theorieën op dit onderwerp van toepassing zijn. Bij de analyse en evaluatie worden deze theorieën vergeleken met de praktijk in Nederland. Vervolgens zal er in de conclusie een beleidsvoorstel worden gedaan.

2. Theoretische achtergrond

De vraag of de leenstel generatie gecompenseerd moet worden kan vanuit twee normatieve perspectieven behandeld worden. Aan de ene kant heb je 'Procedural Justice', wat uitgaat van een eerlijke behandeling van iedereen. Herverdeling van inkomen is nodig, wanneer ongelijkheid voortkomt uit een situatie, waar een persoon zelf geen invloed op heeft. Aan de andere kant heb je 'Agency', hierbij is er geen herverdeling van inkomen nodig, wanneer de situatie voortkomt uit de keuzes die een persoon zelf heeft gemaakt. Betreffende het leenstelsel is er ongelijkheid tussen de beurs die de vorige generatie ontving en mogelijk de nieuwe generatie gaat ontvangen en de huidige pech generatie, die heeft moeten lenen.

Daarnaast zijn er zogenaamde 'Social Welfare Functions', die beschrijven hoe individuele welzijn samengevoegd kan worden tot het collectieve welzijn. De additional social welfare function zegt dat het collectieve welzijn is te berekenen door het individuele welzijn van alle personen bij elkaar op te tellen, met als doel om zoveel mogelijk welzijn in de hele samenleving te creëren. In praktijk betekent dit dat inkomen van de ene persoon herverdeeld moet worden naar een andere persoon, als hij hier meer nut/welzijn uit haalt. Op die manier kan het totale welzijn in de maatschappij toenemen. Daarnaast is er ook nog het 'Maximin'. Het doel hiervan is om het welzijn van mensen, die onderaan in de maatschappij leven, te maximeren. Verder is er ook het egalitarisme, zij stellen met het principe 'gelijkheid van kansen', dat mensen ongeacht leeftijd, gender of ras dezelfde mogelijkheden tot hun beschikking zouden moeten hebben met het oog op eigen welzijn.

Naast deze persoonlijke opvattingen zijn er nu ook onderzoeken die de gevolgen van studieleningen in kaart brengen. Onderzoek wijst bijvoorbeeld uit dat studenten door stress over studieleningen langdurige gezondheidsklachten kunnen ontwikkelen (Turunen & Hiilamo, 2014). Ze hebben onder andere zorgen over het verkrijgen van een hypotheeklening. Voor deze groep zal het ook lastig worden om kapitaal op te bouwen, omdat ze met zo'n grote studieschuld beginnen. Deze zal eerst afbetaald moeten worden, voordat ze kapitaal kunnen opbouwen (Fan & Chatterjee, 2019).

Om een compensatie te betalen heeft de overheid budget nodig. Door middel van belastingen kunnen zij dit geld binnen halen en dan herverdelen onder de studenten. Effectief gezien betekent dit dat iemand anders via belastingen voor de compensatie moet betalen. Er zijn drie verschillende vormen van belasting, het grootste gedeelte van de belasting wordt opgehaald door loon- en inkomstenbelasting, daarna is omzetbelasting (btw) het belangrijkste en tot slot vennootschapsbelasting. De overheid kan kiezen met welke van deze drie belastingen de compensatie betaald kan worden.
Loon- en inkomstenbelasting zijn de grootste opbrengsten voor de overheid. Hierin wordt onderscheid gemaakt tussen inkomsten uit arbeid en inkomsten uit kapitaal. Volgens de econoom Mankiw, Weinzierl, & Yagan (2009) is de optimale taxatie van arbeid te behalen met een degressief belastingstelsel. Hierbij daalt het marginale belastingtarief als het inkomen stijgt, het gemiddelde belastingtarief daalt dan ook als je meer gaat verdienen. Dit moet mensen met een hoge arbeidsproductiviteit de prikkel geven om meer te werken. Mensen met een laag inkomen zitten in een hoog marginaal tarief en betalen dus relatief veel belasting. Door middel van bepaalde subsidies zouden zij hiervoor gecompenseerd kunnen worden.

Naast loon- en inkomstenbelasting is er ook nog omzetbelasting (btw). Er is een theorie die uitwerkt wat de optimale manier van omzetbelasting is. Volgens de theorie moet

alleen het uiteindelijk product belast worden en niet de tussenproducten of grondstoffen die gebruikt zijn bij de productie van het eindproduct. Ook moeten alle bestaande producten gelijk belast moeten worden. Er moet een uniform tarief komen, om te voorkomen dat de voorkeuren tussen producten van consumenten veranderen. In de optimale situatie is er sprake van 'Vertical Equity', waarbij de belasting wordt betaald, door degene die er ook daadwerkelijk voor kan betalen. Hiervoor moeten de boodschappenmandjes van verschillende inkomensgroepen wel verschillen.

Tot slot kan er ook gekozen worden voor vennootschapsbelasting. Het risico dat de overheid loopt bij het kiezen voor vennootschapsbelasting is dat niet de grote bedrijven hiervoor zullen betalen, maar elke individu dat werkzaam is bij het bedrijf. De bedrijven zijn hierbij de "statutory incidence" of terwijl de wettelijke gerechtigde om de belasting te betalen. Echter, zij zouden het belastingbedrag kunnen verschuiven naar de consument, door de prijzen van hun product te verhogen. Daarnaast, zouden zij de lonen van de werknemers kunnen verlagen. Het bedrijf is in deze situatie niet degene die benadeeld wordt door de verhoging van de belasting. Het is dus erg belangrijk om goed op te letten wie er daadwerkelijk belast wordt "economic incidence".

Er zijn verschillende criteria waarmee gekeken kan worden hoe efficiënt en eerlijk belastinginkomsten verkregen kan worden door de overheid. Dit helpt ons bepalen wanneer de overheidsuitgaven gefinancierd moeten worden, die ontstaan bij het compenseren van studenten. We zullen dit doen aan de hand van de 'efficiency principle'.

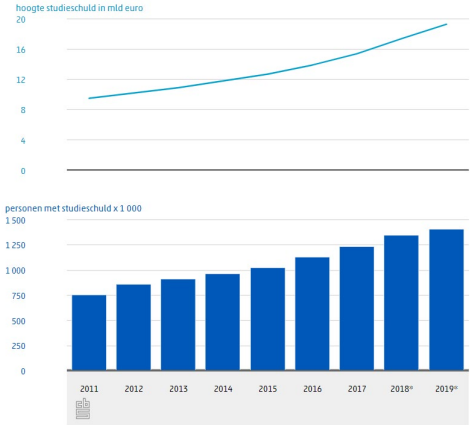
De 'efficiency principle' stelt dat overheidsinkomsten verkregen moeten worden door zo min mogelijk de economie te verstoren. De term die dit beschrijft is 'excess burden of taxation', dit zijn de efficiency kosten of het welvaartsverlies dat ontstaat door het heffen van belasting. Volgens de theorie wordt belasting steeds meer verstorend voor

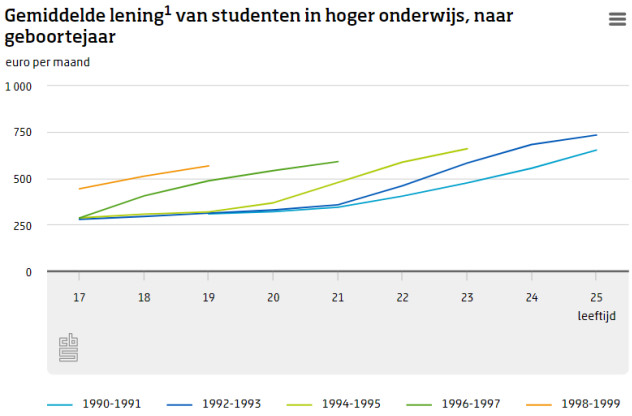
de economie, naarmate de belasting tarief stijgt. Het is daarom beter om belasting te verspreiden over de tijd. Tweemaal belasten met een lager tarief heeft minder verstorende effecten op de economie dan één keer belasten met een hoog tarief. Daarnaast is het hebben van schulden ook niet ideaal, hier moet namelijk rente over betaald worden dat evengoed verstorend kan werken op de economie 'excess burden of debt'. De financiering voor de compensatie moet dus verkregen worden met zo min mogelijk negatieve gevolgen voor de welvaart. Dit kan behaald worden door de 'excess burden of taxation' gelijk te stellen aan de 'excess burden of debt'. De overheid zou dus een deel in het heden moeten belasten en een gedeelte in de toekomst.

3. Analyse en evaluatie

Het CBS heeft onderzoek gedaan naar de gevolgen van het leenstelsel. In grafiek 1 is te zien dat de studieschuld bijna is verdubbeld tussen 2015 en 2019, de totale studieschuld bedraagt nu bijna 20 miljard euro. Daarnaast is er ook een trend zichtbaar dat steeds meer studenten een studieschuld hebben. Verder laat grafiek 2 zien dat de hoogte van de studieschuld per persoon ook aan het toenemen is.

Met het oog op het onderzoek van Fan & Chatterjee (2019) kan dit ernstige gevolgen gaan hebben voor de huidige generatie. Deze grafieken laten zien dat er daadwerkelijk ongelijkheid tussen generaties aan het ontstaan is.





Bron: CBS

Vanuit het principe 'Procedural Justice' is te beredeneren, dat studenten van de leenstel generatie recht hebben op een compensatie. De ongelijkheid tussen mensen die de basisbeurs hebben ontvangen en de leenstelsel generatie is namelijk niet ontstaan door persoonlijke keuzes, maar puur door het feit in welk jaar je bent gaan studeren. Verder heeft een student weinig geld ter beschikking. Het marginale nut van extra inkomen zal daarom bij studenten heel hoog zijn. Volgens de 'Additional social welfare function' zou de totale welvaart dus verhoogd kunnen worden met een herverdeling van inkomen naar de getroffen studenten. De andere social welfare functions neigen ook naar een compensatie. Door het leenstelsel zijn er bijvoorbeeld niet gelijke kansen voor studenten. Sommige maken de bewuste keuze om niet op kamers te gaan, om geld te besparen.

Daarnaast leveren de onderzoeken van Fan & Chatterjee (2019) en Turunen & Hiilamo (2014) voldoende bewijs dat er daadwerkelijk sprake is van ongelijkheid. De huidige generatie ondervindt veel verschillende problemen door het leenstelsel. Door ze te compenseren zou een groot deel van de schuld wegvallen. Dit zal zorgen voor een betere gezondheid voor een groot deel van hun leven. In de toekomst zal dit dus al een automatische besparing voor de overheid opleveren van zorgkosten. Het RIVM ondersteunt dit en laat in een eigen onderzoek zien dat het aantal jongeren met psychologische klachten is gestegen (RIVM, 2019).

De compensatie voor de pech generatie is een eenmalige uitgave voor de overheid. Er hoeft geen structurele verandering plaats te vinden om deze studenten te compenseren. Het benodigde budget kan door zowel loon- en inkomstenbelasting, omzetbelasting of vennootschapsbelasting worden verkregen. Daarnaast kan er ook voor gekozen worden om de compensatie te bekostigen met schuld, wat door toekomstige generaties terugbetaald moet worden.

De compensatie kan worden gefinancierd door extra vermogensbelasting. In het huidige systeem wordt 31% belasting over een maximaal fictief rendement van 5,69% betaald. Effectief betekent dit dat maar 1,76% belasting betaald hoeft te worden over het vermogen. In werkelijkheid is het rendement op vermogen vaak hoger. De rijke bevolking heeft flink geprofiteerd ten tijde van corona, het blijkt namelijk dat de rijkste mensen alleen maar rijker zijn geworden. De overheid kan deze groep extra belasten door het fictieve rendement te verhogen, of het belastingtarief te verhogen, of een combinatie van beide.

In het huidige systeem heb je twee tarieven in Nederland van 37,10% en 49,50%. Dit is hoger dan de omliggende landen zoals Frankrijk en Duitsland. Volgens de theorie van Mankiw, Weinzierl, & Yagan (2009) kunnen we belastingopbrengsten vergroten door het invoeren van een degressief belastingstelsel. Het is dan wel noodzakelijk dat mensen met een laag inkomen, die een hoog marginaal tarief betalen door middel van herverdeling gecompenseerd worden.

De compensatie ophalen door middel van omzetbelasting stuit op een aantal problemen. Bij omzetbelasting hoeft de ‘legal incidence’ niet perse de ‘economic incidence’ te zijn. Als hier een extra belasting op geheven wordt, is het onduidelijk wie er nou daadwerkelijk voor gaat betalen. Op die manier is het heel lastig om een specifieke groep te belasten. ’Vertical Equity’ zou hier deels een oplossing voor kunnen bieden. Er zou namelijk een belasting kunnen komen op een product dat over het algemeen alleen rijke mensen kopen.

Gekeken naar de groep die veel profiteert van het onderwijs van studenten, zijn het de bedrijven. Hoe beter opgeleid studenten zijn, hoe hoger hun productiviteit wordt en des te beter een bedrijven kan functioneren. Bedrijven betalen niet mee aan onderwijs,

terwijl zij er wel van profiteren. Daarom zou het wellicht eerlijk zijn als zij wel betalen aan het onderwijskwaliteit via vennootschapsbelasting.

De 'efficiency principle' ons een andere kijk naar de situatie. Volgens de theorie zou de overheid belasting moeten verspreiden over de tijd om te voorkomen dat de economie verstoord wordt. Een gedeelte van de compensatie zou dus in het heden gefinancierd moeten worden en een gedeelte in de toekomst. Dit kan de overheid doen door een bepaalde belasting over een langere periode te verhogen. Hiermee voorkom je een grote eenmalige verstoring van de economie.

4. Conclusie en beleidsvoorstel

In deze paper is gezocht naar een antwoord op de vraag: 'Moet de leenstel generatie gecompenseerd worden voor het leenstelsel en zo ja, hoe moet deze compensatie gefinancierd worden?'. Uit de theorieën 'procedural justice' en 'Additional social welfare function' is gebleken dat studenten gecompenseerd zullen moeten worden voor de invoering van de Wet studievoorschot. Wij vinden het rechtvaardig als het bedrag van de compensatie verkregen wordt via bedrijven. Aangezien ondernemingen het meest profiteren van het onderwijs van studenten, maar zelf niet bijdrage aan de kosten van ons onderwijssysteem. Echter is het in het huidige klimaat van belastingontwijking ingewikkeld om bedrijven te belasten. Dit zou enkel een goede optie zijn als er meer samenwerking en regelgeving vanuit de EU komt.

Wij raden daarom aan om het niet via vennootschapsbelasting te bekostigen, maar via een aangepaste vermogensbelasting. In het huidige systeem wordt vermogen namelijk nauwelijks belast. In Nederland neemt hierdoor "wealth inequality" toe. Door dit meer te belasten zal geld herverdeelt worden van de rijke bevolking naar de arme bevolking. Dit leidt tot een daling van inkomensongelijkheid. Wij gaan hierbij uit van de 'Efficiency principle', het bedrag voor de compensatie wordt hierbij over een lange tijd

terugverdiend. Dit maakt het mogelijk om de vermogensbelasting minder te verhogen, dan anders het geval was.

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4.13. The study advance system and equality of opportunity in higher education

Daniëlle Quaedackers

Abstract

Since its introduction in September 2015, the student loan system has led to much discussion. Many political parties argue, the system has a negative effect on equality of opportunity. In the debate there is a lot of mutual understanding. This paper offers some insight in this debate, by analyzing the effects of the study advance system on equality of opportunity. The paper conducts a theoretical analysis to find an answer to the question: How does the study advance system affect equality of opportunity in higher education? It finds the study advance system mostly affects MBO-students into the decision to transfer to HBO. The policy proposal is therefore aimed at a financial allowance for this group.

1. Introduction

On September 1st in 2015, the largest system change happened in student finance since the 1980s. The introduction of the loan system. In the former system, the basic grant system, all Dutch students received a monthly basic grant. In addition, these students received a supplementary grant if the income of their parents was low. Furthermore, if someone lived away from home, they would receive more student finance (DUO, z.d.). The basic and supplementary grant are loans and are only converted into a gift if you obtain your diploma within ten years.

In the current system, only students from the lowest income group receive a monthly basic grant. This allowance no longer covers housing costs. The supplementary grant still exists in this system. Students now have access to maintenance loans, meaning this loan will have to be paid back when you start earning above the repayment threshold (*Studiefinanciering - DUO*, z.d.).

The introduction of the new system has also consequences for students with a disability. They receive important financial support from the 'profileringsfonds'. Before the new system, they were entitled to an extra year of basic grant. Students with a disability who have not yet graduated due to study delay, are expected to make an appeal to this fund immediately after their nominal study duration. They are no longer eligible for an extension of the basic grant at DUO. As a result, they are sooner dependent on this fund than the students who fell under the old system (Ministerie van Onderwijs, 2018).

Since education has been recognized as a human right in 1948. Everyone should have the right to education. The *Universal Declaration of Human Rights*, UDHR, stated that the right to education must be achieved on the basis of *equality of opportunity* (BenDavid-Hadar, 2016).

Many political parties argue that the student loan reforms have a negative effect on equality of opportunity in education and the basic grant system should be reintroduced. The problem in this debate is that equality of opportunity in education

can be interpreted in many different ways (Lazenby, 2016). When politicians claim they want to improve the equality of opportunity in education, it is unclear what they mean. The debate is hindered by mutual misunderstanding.

Students find it unfair that they have to get into debt since the abolition of the basic grant (Van Gaalen & Keultjes, 2018).

According to the CDA, the main problem with the student loan system is that it makes higher education less accessible. They especially think of the transition from MBO to HBO, or of disabled young people who study less, or of young people without highly educated parents (HOP, 2016).

According to Farid Azarkan, member of Parliament from Denk, the study advance system should be abolished. He states that people who have little money are less likely to study. According to Peter Kwint, member of Parliament from SP, especially children of parents on social assistance benefits allow themselves to be held back by the study advance system (Weber, Steffi, 2019).

Van Engelshoven, Minister of Education, Culture and Science, disagrees. She finds it “quite obvious that a link is made between the student loan and equal opportunities” (Weber, Steffi, 2019). She states there is no numerical evidence for the conclusion that the study advance system disadvantages certain groups. She is more concerned that students will borrow more than necessary, than that they will not study because of a fear of borrowing.

The purpose of this paper is to bring some insight into the debate about equality of opportunity and the effect of the study advance system on this equality. The paper gives an answer to the question: How does the study advance system affect equality of opportunity in higher education?

To analyze this, 2 sub-questions have been formulated. First, what is equality of opportunity in education? Second, what is the relationship between student finance and equality of opportunity?

2. Theoretical Background

What is equality of opportunity in education?

Equality of opportunity is the principle of treating all the people the same, without any barriers, prejudices (Dictionary cambridge, z.d.). In 2007, UNICEF published a *Human Right-Based Approach to Education*, which validated that equality of opportunity in education means every child has an equal right to attend school. One step to fulfill this is to make schools accessible. To realize this further, the barriers in the community and in school have to be removed (UNICEF & UNESCO, 2007). Governments have a duty to develop legislation, policies and support services to remove the barriers that hinder children's access to school. Economic factors can be barriers that keep people out of school.

In an attempt to remove these barriers, the Dutch government offers student finance. The purpose of student finance is that the government uses its resources for student finance in such a manner that education is accessible to everyone. This includes people with a lower income (Tweede Kamer, 2005).

The most common mistake in the debate is the misunderstanding between equality and equity. Equality is not the same as equity. Equality is about sameness, giving everyone the same opportunities. Equity is about fairness, meaning someone with a different circumstance gets the opportunity to reach an equal outcome. "Equity in education requires putting systems in place to ensure that every child has an equal chance for success. That requires understanding the unique challenges and obstacles facing individual students or student populations and providing additional support to help them overcome those obstacles" ('Equity in Education', 2018). Concluded, equality of opportunity in education focusses on equal access to higher education for everyone. Not on equal success for everyone.

What is the relationship between student finance and equality of opportunity in education?

The changes in accessibility of higher education can be explained by the student's behaviour. Because of the study advance system, the costs of education on the individual tend to be higher. Financial factors such as maintenance loans and the abolishing of the basic grant are, according to political parties, expected to have a significant influence on students' choice behaviour.

Human Capital Theory is an important economic theory, explaining this behaviour. It describes the demand for education in terms of production and consumption benefits. Production benefits are for example greater future revenue. Consumption benefits are for example personal development and better working conditions in the future. The theory states that people will continue to invest in education as long as the benefits outweigh the costs (Bowen & Howard, 1997).

People are not rational, which means the assumption that they outweigh the benefits against the costs is not completely true. Bounded rationality explains this (Bennato et al., 2020). Psychological factors play a role in human decision making, which lead to nonoptimal decisions. People tend to avoid risk as much as possible, meaning they want to avoid debt if they can.

A research about student loan debt and higher education participation in the UK finds students attitudes towards debt have improved in 2015 opposed to 2002. Borrowing money to pay for a university is increasingly seen as a good investment. Most students worry less about debt, because they think they will get well-paid jobs when they graduate (Callender C. & Mason G., 2017).

This is not the case between all students. There is still a small minority of students with debt-averse attitudes. In this group, they found debt-averse attitudes are stronger among lower-class students than among upper-class students, but not among lower-class students and middle-class students. Debt aversion seems to discourage lower-

class students into higher education participation, but not the middle-class students, even though the levels of debt aversion are similar. Debt-averse attitudes have even increased from 2002 to 2015 among lower-class prospective students. This widened the gap between lower- and upper-class students (Callender C. & Mason G., 2017). For this reason, we expect the study-advance system only affects the lower-class students in their decision into higher education. Debt aversion has a negative effect between lower-class students on access into higher education, meaning debt has a negative effect on equality of opportunity.

In the UK, the introduction of £1,000 tuition fees and the replacement of student grants with maintenance loans in 1998 had no impact on student participation in higher education. In 2006 the rise in tuition fees of £3,000 still had no impact on student participation. The reason for this is that the tuition fees were accompanied by large increases in loans and grants (Callender C. & Mason G., 2017). This may indicate there is little or no relationship between the costs of studying and higher education participation.

Havranek et al., 2018, investigated the correlation between tuition fee increases and the demand for higher education. In most EU-countries they find the demand for higher education is price-inelastic. This indicates there is no relationship between the costs of studying and the chance to study. At the request of Minister Bussemaker of the Ministry of Education, Culture and Science, the CPB conducted a research about the participation effects in the study advance system on higher education. One of the assumptions states that for a limited increase in the private contribution to higher education, the decision whether or not to study is inelastic.

The international literature, showing no or limited participation effects, was translated to the Dutch situation. Empirical evidence about the price inelasticity of Dutch students led to the assumption that a price increase of 1000 euros has no effect on participation. The research confirmed these assumptions. Studying is a fairly inelastic good (CPB, 2013). Studying has become so important that the costs of studying

have little to no influence on the choice to study. The study advance system causes higher costs for the individual itself. We expect the higher costs on the individual have little to no effect on equality of opportunity for most middle- and higher-class students.

3. Analysis and Evaluation

In equality of opportunity in higher education, everyone should have equal access to education, without any barriers, since all people are treated the same. The purpose of the student finance is to make education accessible to everyone. The more inaccessible higher education is, the lower the equality of opportunity is. We expected the study-advance system only affects the lower-class students in their decision into higher education, because of debt aversion. We also expected the higher costs on the individual, because of the study advance system, have little to no effect on equality of opportunity for most middle- and higher-class students.

The actual effects, actual access into higher education have been investigated by CBS, Statistics Netherlands, in 2018. The research mapped out the relationship between the socio-economic background and the flow of HAVO and VWO graduates (van den Berg & van Gaalen, 2018). In the study, a comparison has been made between graduates with salaried parents and graduates with parents on social assistance, in other words lower-class students. Graduates who are going to study after a gap year are not included in the research.

After the introduction of the loan system, both influxes of HAVO graduates decline. The decline of HAVO graduates with parents on social assistance is a little bigger (see Appendix A, figure 1). Another research by CBS, shows this decline of HAVO graduates is between students of all welfare tiles (see Appendix A, figure 3).

After the introduction of the loan system, the influx of VWO graduates with parents on social assistance is still higher than with salaried parents (see Appendix A,

figure 2) (van den Berg & van Gaalen, 2018). There is hardly an effect between welfare tiles in the decline of VWO graduates into WO (see Appendix A, figure 4).

They also looked at entry into HBO by VWO graduates, since entry into HBO is in fact the most common alternative for VWO graduates. In 2015, this entry was lower with parents on social assistance than with salaried parents. After the introduction of the loan system, this was still the case (van den Berg & van Gaalen, 2018).

The transfer from HAVO and VWO graduates to higher education hardly changed since the introduction of the study advance system. The introduction of the social loan system has led to a sharper decline of HAVO graduates with parents on social assistance. This can be due to fear of debt. By comparing the numbers of 2016 to 2012, where the basic grant system still existed, the effect is very small. Between WO-students who transfer directly to a master after a bachelor's degree, there is barely an effect in all welfare-classes (see Appendix A, figure 5 and table 1). The same applies for students with a disability. Research by the OCW has shown that the influx of students with a disability decreased a bit in the 2015-2016 academic year (mbo-professionals, 2016). It is not clear if this is the case for all welfare tiles. These results correspond to the expectation that higher costs on the individual have little to no effect on equality of opportunity for most middle- and higher-class students. In this case it even has little effect on lower-class students.

The flow of MBO students into HBO has not yet been discussed. MBO students, in contrast to HBO and WO students, still get a basic grant after the introduction of the loan system. When deciding whether or not to go to HBO, they are now faced with a more difficult decision, because they no longer receive a basic grant at HBO. The results are very interesting.

A research commissioned by the Ministry of Education, Culture and Science, the OCW, shows MBO students more often indicate they do not want to continue studying because of the costs of studying. MBO students with less wealthy parents more often

mention that the risk that grant and public transport will have to be paid back, if the study is not completed is a reason to stop studying (Ministerie van Onderwijs, 2020). This indicates that costs do matter. The introduction of the study advance system has a negative effect on accessibility for this group, since now they have to pay back anyhow and not only if they stop studying.

Loan aversion plays a role in this. In the research into the motives for whether or not to go to HBO, loan aversion was mentioned the most (Ministerie van Onderwijs, 2020). In 2005, 42 percent of MBO-4 graduates went on to HBO. In 2016 this has dropped to 35 percent (CBS, 2018). Appendix A, figure 6 and 7, show the decline in the flow of MBO to HBO, by household income and education level of the parents. The decline is just as high at all levels of welfare.

The introduction of the study advance system has negative effect on the equality of opportunity for MBO-students wanting to study at HBO at all welfare tiles. This does not correspond with the expectation that the study advance system only affects the lower-class students. It also doesn't correspond with the expectation that the study advance system has no effect on middle- and higher-class students.

4. Conclusion & Policy Proposal

Ever since the introduction, there has been a huge debate about the study advance system. Many political parties argue that the system has a negative effect on equality of opportunity in education and the basic grant system should be reintroduced. To bring some insight into the debate about equality of opportunity, this paper answers the question: how does the study advance system affect equality of opportunity in higher education?

The analysis showed there is little to no effect on HAVO, VWO, and WO-master students and a small effect between people with a disability. The effect of the study advance on equality of opportunity in education is barely there for these groups. The flow of MBO-students transferring to HBO shows a bigger effect.

The results are really remarkable, since we expected the maintenance loans in the study advance system, discourage some lower-class students into higher education participation. The reason for this was debt-aversion. Between HAVO, VWO, WO-master students we do not see this effect at all, but between MBO-students we see this effect between all household incomes/ social classes. We also expected that higher costs on the individual, because of the study advance system, have little to no effect on equality of opportunity for most middle- and higher-class students. For MBO-students the results do show an effect for all welfare tiles.

The decline in participation in the flow of MBO-HBO students, indicates that MBO-students see the study advance system as a barrier to attend higher education. To make schools more accessible, the barriers in the community and in school have to be removed. The more inaccessible higher education is, the lower the equality of opportunity is, meaning the study advance system has a negative effect on equality of opportunity for MBO-students.

The policy proposal is aimed at improving this equality of opportunity in education, since inequality of opportunity and students' achievements are negatively correlated (Aguirreche, 2012). This means lower equality of opportunity leads to lower student outcomes. The effects on the accessibility of higher education are fairly small in general, except for students transferring from MBO to HBO. Purely based on equality of opportunity in education, the return of the basic grant system could therefore be a little to drastic.

A financial allowance for transfer students from MBO to HBO could be a possible measure to remove financial barriers for that group. This can be done with or without a performance component. The costs of this are structurally, depending on the scenario, around 250 million euros (Ministerie van Onderwijs, 2020). There are some possible

negative effects of this policy. For example, HAVO students will find this allowance unfair, since MBO-students receive more money for the same access to HBO, than them. This policy proposal is based on equal access for everyone and not on fairness for everyone. This policy could possibly lead to a different discussion, which is about equity in education. This could maybe be an interesting idea for further research.

Disclaimer:

This policy proposal is purely based on equality of opportunity in education, meaning it does not take into account the consequences of the debt generated through the system on future equality, future welfare, the chance on a mortgage, students' choice to develop themselves by moving out of home and many other effects.

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4.14. The hidden costs of the leenstelsel

Wouter Pen, Annet Colenbrander, Eline Meiberg, en Kathleen Heijmer

Abstract

Nowadays, students in the Netherlands can borrow their study loan through the leenstelsel. However, the policy of this system faces increased criticism, which makes it considerable if another policy, such as the studiebeurs, would be better. This paper aims to study to what extent the long-term interest rate affects the costs for students and the government with regard to the leenstelsel. This paper examined if the leenstelsel is sustainable in the long run. It tries doing so by comparing the costs of the basisbeurs with the extra costs of interest of the leenstelsel. It tries to show the switching point at which interest rate the leenstelsel is cheaper or more expensive. There is also a discount rate included to correct for inflation and the rate of time preference. This paper predicts that at some point in the future, interest rates will rise and the increased lending due to the leenstelsel could result in higher costs for the government and/or students. Moreover, when the interest rates rise beyond a certain level, the leenstelsel become unsustainable and the basisbeurs could become a better option. Assuming the inflation target is 2% and borrowing behaviour will not change in the near future, at an interest rate of 6.6% the basisbeurs might be preferred over the leenstelsel in terms of costs.

1. Introduction

The interest rate is historically low. This low interest is a consequence of the policy of the ECB, namely quantitative easing (CBS, 2020). Abolishing quantitative easing could have interesting consequences for the leenstelsel. The government can borrow money from the ECB at a negative interest rate, and students can borrow 'for free' from the government, at an interest rate of zero percent. However, when the ECB eventually stops with quantitative easing, this interest rate could rise. When this happens, students have to pay interest on their loans, or the government has to pay the interest for the students. The more students get a loan now, even at a 0% rate, the higher the potential future cost for interest will be. If the government would pay the interest, it could even be that the basisbeurs ends up being the cheaper option over the leenstelsel. This makes it interesting to research to what extent the long-term interest rate affects the cost for students and the government with regard to the leenstelsel. Dutch newspapers are writing their concerns about the leenstelsel. They are writing about a return of the basisbeurs. RTL Nieuws writes: "PvdA gives in and wants basisbeurs back for students" (RTL nieuws, 2020). Academic research about which one is more cost efficient has not been done yet, since it is a relatively new subject. The leenstelsel was implemented on the first of september 2015. The research question formulated is: *'To what extent does the long-term interest rate affect the costs for students and government with regard to the leenstelsel?'* It is important to find out if the basisbeurs is cheaper than the leenstelsel to answer this question. The goal is to find the switch point where interest and inflation result in higher costs for the leenstelsel than the costs for the basisbeurs. This formula considers the interest rate, the cost of lending, the time of lending, time preference, and the inflation rate. It is relevant to know the switch point for choosing the leenstelsel or the basisbeurs for the government to switch in time to the best method.

2. Theoretical Framework

Quantitative easing is an unconventional monetary policy, where a central bank buys long-term government debt or other financial assets with money (Bhattarai et al., 2015). Quantitative easing was introduced during the recovery of the financial crisis of 2008, to improve the health of the economy.

The consequence of quantitative easing is to cause the interest rate to drop, and inflation to rise. However, the ECB cannot continue with quantitative easing for infinity. There is a moment in the future when quantitative easing comes to a halt. When quantitative easing stops, it is likely that the interest rates will rise again and the economy could become deflationary. When it is expected that real long-term interest rates will rise, it will directly reduce aggregate demand. Higher interest rates will further limit growth in spending, as the cost of borrowing is high. High interest rates often reduce inflation, which could cause even more deflation. If the economy ends up in a deflationary spiral, it will continuously create lower demand which will lead to even more deflation. A higher interest rate will result in higher costs for the government and consumers. It is now more expensive to borrow, and that is exactly the problem. Nowadays the government can borrow at a rate of -0.30% from the ECB (Bank, 2017). Which means that lending money from the European Central Bank does not cost anything, because of the negative interest rate. Related to the corona pandemic, the ECB wanted to keep lending affordable, so they kept the interest rates very low. The negative interest rate is an unconventional monetary policy, which the central bank uses to stimulate the economy (Czudaj, 2020). The student borrowing system is attractive as the interest rate to pay back the loan is 0%, while there is still inflation. In practice, it is thus beneficial to borrow. When there is deflation and higher interest rates, the cost of borrowing will increase massively. If that happens, can the 'leenstelsel' still exist and function properly?

3. Cost Analysis: Basisbeurs vs. Leenstelsel

"Will the basisbeurs in the long run be cheaper than the leenstelsel?"

To begin with, it may be quite difficult to answer this question since the question arises: 'cheaper for who?'. Since this study is more about the costs and not who should pay it, there will be no distinction between the costs for the government and students (Hoger Onderwijs Persbureau, 2015; Agterberg, 2014). Before the introduction of the leenstelsel, the average student got a grant of 187 euros and borrowed 69 euros per month. Thereafter, the average student got a grant of 61 euros, but borrowed 349 on average. This means that the average student got 256 euros before 2015 (the introduction of the leenstelsel) and 410 euros thereafter. It is not clear yet why students borrow so much more than they did before 2015. According to the CPB, this might be because students mainly experience a barrier to borrowing, but not to borrow more. To see whether or not the leenstelsel is more expensive in the long run, there cannot simply be looked at the interest that students or the government might pay over the total student loans. When the basisbeurs would still be there, the government would have higher costs and therefore might need to borrow more and pay interest in the long run as well (*Studenten lenen gemiddeld 700 euro per maand (en dat is meer dan voorheen)* | *RTL Nieuws*, z.d.).

Therefore, this study looks at the difference in costs of interest in grants and loans before and after 2015 also time preference is taken into account. There is awareness that the costs of the basisbeurs might differ now than in 2015, but this is as close as possible. As said, students 'get' 154 euros more per month than before 2015. The average total student loan at the end of the study keeps increasing. It is therefore most accurate to look at the monthly loans that students have now and their expected study time. According to the CBS, a full study (a master included) takes 74 months. When looking at the difference of 154 euros, this means that students 'get' 11.550 euros more during their student time than before 2015. When the interest rate is 0%, there are no

costs related to this borrowing. The costs for the basisbeurs were 187 euros per month and so 13.838 euros for the whole student time. In short and with many simplifications, when the total interest for the loan is below 13.838 euros, the leenstelsel is cheaper. Assuming a 30 year redemption which starts two years after graduation.

Pure time preference is a preference for something to come at one point in time rather than another, not because this will make the benefit greater or more certain, but merely because of when it occurs in time. Among others, Sidgwick, Ramsey, Rawls and Parfit have argued that pure time preference is irrational (Lowry & Peterson, 2011). According to Caplin and Leahy, the value of money in the present period is more heavily in current decisions than in the decisions of any prior or subsequent period (Caplin & Leahy, 2000). This means that students want to borrow money to spend now rather than in the future. When the preference of consumption is in the present period, the student missed out on the interest of savings. For this we make use of a real rate of interest, which reflects the rate of time-preference for current goods over future goods. Various arguments are given for the use of a real rate around 2%, with a higher rate for net benefit streams positively correlated over time with GNP and a reduction for negatively correlated streams (Howe, 1990).

This means that the formula, including the discount rate, is as follows:

$Basisbeurs + Extra\ Lending = (Extra\ Lending * (1 + interest\ rate)^{32})/ (1 + inflation + Real\ Rate)$

$Basisbeurs = 13,838$

$Extra\ Lending = 11,550$

$Real\ Rate = 2\%$

In this formula, the given variable is the inflation rate and the dependent variable is the interest rate.

From this formula, the following table can be made:

25, 388 = (11, 550 * (1 + i)32) / (1 + I + 0, 02)32

Inflation Interest rate
0% 4.5%
1% 5.6%
2% 6.6%
3% 7.6%

This means that at a 0% inflation rate, the switching point for the leenstelsel to become more expensive is 4,5%. The ECB is aiming at a 2% inflation rate and therefore the switching point would be at an interest rate of 6.6%. In the past, such interest rates were common at these inflation rates and this could also be the case in the future. We are aware that this calculation has many simplifications and is far from perfect, but it does show that in the long run it is possible that the leenstelsel is more expensive than the basisbeurs. The problem of high costs of interest rates that could arise can only become bigger in the upcoming 26 years, since only more and more students get study loans in that period while less students have paid off. So the longer the leenstelsel system is running, the bigger the potential costs are (*StatLine*).

To clarify, in this study we do not mention who should borrow the costs of interest. This is an ethical question and this gap should be filled by another study. Also the question on why students borrow more since the introduction of the leenstelsel is a topic for further research.

4. Conclusion

In conclusion, it is difficult to determine what is really going to happen in the future. At the moment, the low interest rates make the leenstelsel more cost efficient than the basisbeurs. However, it is possible to make a prediction for the future. The extreme low interest rates could not go on forever, so at some point in time the interest rates will rise. When this happens, the increased lending due to the leenstelsel could result in

higher costs for the government and/or students. When the interest rates rise beyond a certain tipping point, the costs of the leenstelsel become higher than providing the basisbeurs by the government. When assuming the inflation is targeted at 2%, this tipping point is at 6.6% interest rate. From this point on, it would be cheaper to reintroduce the basisbeurs rather than retain the leenstelsel.

5. Policy proposal

It is difficult to predict to what extent the interest rates will rise in the future. What we know is that it is impossible to continue with quantitative easing for infinity. Keeping in mind that the interest rate of 0% is not feasible in the long run, we should start looking at whether the leenstelsel is the best option in the long run. As the tipping point lies around 6.6% interest rate, this could be used as an indicator. When long term interest rate forecasts indicate the interest rates will rise extensively, another system of financing education could end up being more efficient.

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4.15. De verschillende effecten van zowel de invoering van het sociale leenstelsel als de invoering van de basisbeurs

Jip Grooten, Milou Gaertner, Nora Huijgen, en Sanne Bours

Abstract

Er is in de samenleving veel weerstand tegen het sociale leenstelsel ontstaan. Veel politieke partijen, net als veel studenten, pleiten voor de herinvoering van de basisbeurs. Met de basisbeurs had iedere student recht op een maandelijkse vergoeding, terwijl in het sociale leenstelsel de meeste studenten alleen recht hebben op een goedkope lening. In dit paper worden de verschillende economische effecten van de invoering van de basisbeurs en het sociale leenstelsel met elkaar vergeleken. De grootste verschillen zijn (1) dat de studieschulden van studenten enorm zijn toegenomen na invoering van het leenstelsel en (2) dat er van de beloofde investeringen in het hoger onderwijs na invoering van het leenstelsel weinig terechtgekomen is, en de compensatie voor studenten ruim ondermaats blijkt. Wij stellen een middenweg tussen de basisbeurs en het leenstelsel voor. Vervolgonderzoek zou antwoord kunnen geven op de volgende vraag: *moet studiefinanciering volledig inkomensafhankelijk worden?*

1. Inleiding

In 2015 werd de basisbeurs vervangen door het 'sociale leenstelsel'. Deze transitie was een voorstel van de PvdA. Deze partij vond het namelijk oneerlijk dat 'de bakker de opleiding van de zoon van de advocaat zou betalen'. Aangezien D66, GroenLinks en de VVD ook wel voordelen zagen in het nieuwe stelsel waarin iedereen goedkoop kon lenen om zijn of haar studie te bekostigen en waarin een aanvullende beurs beschikbaar is voor studenten die uit lage inkomensgezinnen kwamen, werd dit voorstel ingevoerd. De ruim vijf jaren die hierop volgden hebben echter ook een aantal nadelen van het 'sociale leenstelsel' laten zien. Zo zorgen torenhoge schulden ervoor dat starters op de stagnerende woningmarkt worden belemmerd, leidt het streven naar een lage schuld voor een onprettige prestatiedruk en kan leenangst ervoor zorgen dat mensen afzien van het volgen van een vervolgopleiding (Meijer, 2021). De financiële druk om nominaal af te studeren zou er ook toe kunnen leiden dat studenten uit een minder gegoed milieu minder extra-curriculaire activiteiten zullen uitoefenen wat hen zou kunnen benadelen bij toekomstige sollicitaties. Door de grote nadelen hebben PvdA, D66 en GroenLinks zich nog voor de verkiezingen uitgesproken tegen het 'sociaal leenstelsel', wat er hoogstwaarschijnlijk toe zal leiden dat dit stelsel wordt afgeschaft in de komende regeerperiode. De vraag is dan echter welk systeem ervoor in de plaats zou moeten komen. Partijen zoals de PVV, CDA, ChristenUnie en SGP zien de terugkeer van de basisbeurs als een goed alternatief. De vraag is echter wat de verschillende effecten zijn van beide systemen. De hoofdvraag in dit onderzoek luidt dan ook als volgt: *Wat zijn de verschillende effecten van zowel de invoering van het sociale leenstelsel als de invoering van de basisbeurs?*

In de analyse zullen de economische effecten van de twee systemen aan de hand van eerlijkheid, efficiëntie en rechtvaardigheid worden bekeken en zal er een voorzichtige conclusie worden gemaakt over de kwaliteit van de twee systemen.

2. Theoretisch kader

De basisbeurs, die in 1986 werd ingevoerd, zorgde ervoor dat de verzorgingsplicht weer verder werd verschoven van de familie naar de staat. Hier was destijds onder andere voor gekozen omdat het de zelfstandigheid van jongeren zou vergroten. De basisbeurs maakte het mogelijk dat iedere student ongeacht het inkomen van zijn of haar ouders maandelijks een bepaald bedrag ontving gedurende de nominale duur van zijn of haar studie. Dit bedrag was voor uitwonenden echter lager dan voor thuiswonende studenten, in 2014 bedroeg dit 100 euro voor thuiswonende studenten en 279 euro voor uitwonende studenten (Van den Berg & Van Galen, 2018). De genoten studiebeurs hoefde niet te worden terugbetaald, mits studenten binnen tien jaar hun diploma behaalde. Als dit niet het geval was moest de studiebeurs worden terugbetaald; er was sprake van een prestatiebeurs. Hiernaast werd er ook een aanvullende beurs ingesteld die studenten uit lage-inkomensgezinnen maximaal 239 euro of 260 euro per maand bood aan respectievelijk thuiswonende en uitwonende studenten (Van den Berg & Van Galen, 2018).

Uiteindelijk ontstond er echter veel weerstand tegen de basisbeurs. Veel politieke partijen met een links gedachtegoed vonden het niet eerlijk dat elke student (ongeacht het inkomen van zijn ouders) per maand een grote hoeveelheid geld krijgen. Dit is namelijk belastinggeld wat ertoe leidt dat laagopgeleiden ook moeten meebetalen aan de opleiding van de kinderen van hoogopgeleiden met een hoog salaris. Ook aan de rechterkant van het spectrum was er animo om de basisbeurs af te schaffen en een sociaal leenstelsel in te voegen, de VVD zag studeren namelijk als een investering in de eigen toekomst. Aangezien het sociale leenstelsel inhield dat de aanvullende beurs zou blijven bestaan, de rente van de lening die de studenten bij DUO (Dienst Uitvoering Onderwijs) zouden kunnen krijgen erg laag zou zijn en de studieschuld nog steeds niet bij het BKR (Bureau Krediet Registratie) zal worden geregistreerd, vonden de linkse partijen een sociaal leenstelsel ook een goed idee. Dit leidde ertoe dat het sociaal leenstelsel in 2015 werd ingevoerd (Meijer, 2021).

Het sociaal leenstelsel bleek echter niet alleen rozengeur en maneschijn te zijn: er kleven veel nadelen aan, zowel economische als niet economische. Zo zorgt het sociaal leenstelsel bij studenten voor erg veel prestatiedruk. Daarnaast kunnen de hoge studieschulden ervoor gaan zorgen dat het instromen op de woningmarkt voor velen onmogelijk zal worden. Bij een hypotheekaanvraag moet de studieschuld namelijk worden vermeld. Uit onderzoek van het Centraal Bureau voor de Statistiek (2019, 7 oktober) bleek ook nog dat de hoogte van de studieschuld onder studenten in een tijdsbestek van 2011 tot 2019 is gestegen. Door de intrede van het sociaal leenstelsel blijkt dat studenten een groter gedeelte van hun studie financieren dan voorheen, in de periode waarin de basisbeurs werd ingezet. Een reden voor de hoge leenbedragen door studenten is het lage rentepercentage dat beduidend lager ligt dan het rentepercentage bij banken. Een andere reden voor de toenemende studieschuld blijkt uit het feit dat terugbetalingsvoorwaarden zijn versoepeld, in het sociale leenstelsel mogen studenten hun studieschuld afbetalen in 35 jaar, terwijl dit in het oude studiefinancieringsstelsel 15 jaar was (Caminada, 2020).

Maar waar gaat het geld naartoe dat eerst werd ingezet om de basisbeurs uit te betalen aan studenten? Door over te stappen van de basisbeurs naar het sociale leenstelsel kwam 1 miljard euro vrij dat zou worden gebruikt om te investeren in het hogere onderwijs. Vooralsnog is er veel onduidelijkheid onder verschillende partijen waar het geld is gebleven. Uit een onderzoek van de Algemene Rekenkamer (2021, 13 april) bleek dat er uiteindelijk maar 280 miljoen euro naar de kwaliteit van hoger onderwijs ging. Ook in de toekomst zal de 1 miljard niet worden bereikt als het gaat om investeringen om de kwaliteit van het onderwijs te verbeteren. Tweede Kamerleden van onder andere GroenLinks en het CDA ergeren zich aan de onduidelijkheid die er bestaat om de huidige onderwijsbegroting (NOS, 2019). Ook de Landelijke Studenten Vakbond vindt het niet rechtvaardig dat studenten in de schulden worden gestoken, maar niet de kwaliteit van het onderwijs zien verbeteren. Er zitten dus wat haken en ogen aan de uitvoering van het sociale leenstelsel.

Toch zijn er partijen binnen en buiten de politiek die de positieve kanten van het sociale leenstelsel belichten. Zo vindt de VVD dat het eerlijk is dat een student een aanzienlijk deel van zijn studie zelf zou moeten bekostigen aangezien een studie later leidt tot een hoger inkomen (Meijer, 2021). Ook professor Caminada, vice-decaan van de faculteit Governance & Global Finance aan de Universiteit Leiden, ziet veel voordelen in het sociaal leenstelsel (Caminada, 2020). Hij geeft aan dat een studie een goede investering is die door de gegarandeerde lening via DUO (met lage rente) toegankelijk zal zijn voor alle studenten, wat blijkt uit eerdere studies. Hij vindt het ook goed dat studenten door het sociaal leenstelsel gedwongen worden om kritischer te kijken naar nevenactiviteiten die studievertraging kunnen veroorzaken. De baten van een bestuursjaar doen bij een studentenvereniging zullen volgens hem echt niet opwegen tegen de baten van een jaar voltijds studeren. Hij wijdt hier echter niet over uit. Zo bespreekt hij niet in hoeverre het hebben van nevenactiviteiten voordeel geeft bij het aangenomen worden bij goedbetaalde banen en ook niet de ongelijkheid die zou kunnen ontstaan doordat studenten uit gegoede milieus wel de studievertraging kunnen veroorloven die vaak samengaat met nevenactiviteiten.

3. Analyse

Om de hoofdelementen en de belangrijkste verschillen tussen de basisbeurs en het sociale leenstelsel te analyseren, bekijken we financiële gevolgen van beide systemen. Deze gevolgen zullen daaropvolgend worden geanalyseerd aan de hand van de criteria van efficiëntie, eerlijkheid en rechtvaardigheid. Deze analyse zal zich alleen maar focussen op de financiële gevolgen, aangezien uit onderzoek is gebleken dat er maar een erg bescheiden verandering is gekomen in het aantal studenten dat gaat studeren of doorstroomt met het sociale leenstelsel (Centraal Bureau voor de Statistiek, 2021).

Ten eerste is het grootste economische gevolg van het sociale leenstelsel ten opzichte van de basisbeurs dat de studieschulden van studenten enorm toenemen. De totale studieschuld is van €11.8 miljard in 2014 opgelopen naar €19.3 miljard in 2019

en het aantal studenten met een studieschuld is met bijna 400.000 toegenomen (Centraal Bureau voor de Statistiek, 2019). Hierbij is het zo dat de gemiddelde eerstejaars student in 2014 nog €57 per maand leende, en dit is inmiddels opgelopen tot €288 (*Dit krijg je voor je dikke studieschuld*, 2020). Doordat studenten bij het sociale leenstelsel zelf hun studie moeten bekostigen door middel van een lening, in plaats van de overheid die hen steunt met belastinggeld, vindt er een herverdeling van geld plaats. Met betrekking tot efficiëntie, kan deze verdeling gezien worden als efficiënt. De studenten, die later geacht worden een modaal tot bovenmodaal inkomen te gaan verdienen (Mooij, Geerdinck, Oostrom, & van Weert, 2011), betalen nu namelijk iets meer, en de mensen met een relatief lager inkomen betalen nu iets minder aan belasting. Hierdoor is de herverdeling van geld efficiënt, aangezien het een nivellerende werking heeft.

Ondanks dat het sociale leenstelsel een efficiënte werking zou hebben, is het niet eerlijk. Er is namelijk een verschil in verantwoordelijkheid voor de studiekosten tussen verschillende sociaaleconomische groepen die kan zorgen voor meer ongelijkheid bij het sociale leenstelsel (Van den Berg & Van Galen, 2018). Bij studenten met een hogere sociaaleconomische status, ligt de verantwoordelijkheid voor het voorzien van studiekosten vaak bij de ouders, terwijl dit bij studenten met een lagere status vaak bij de student zelf ligt (SCP, 2013). Dit betekent dus dat het geen eerlijk beleid is, aangezien studenten met een lagere sociaaleconomische status vaker met een hogere studieschuld achterblijven, dan studenten met een hogere status, die worden ondersteund door hun ouders.

In termen van rechtvaardigheid, is het lastig om het leenstelsel ter vervanging van de basisbeurs te rechtvaardigen naar studenten toe. Het is misschien een efficiënte manier van verdeling van geld, maar het is geen eerlijke manier. Bij het leenstelsel worden namelijk bepaalde sociaaleconomische groepen, al dan niet onbedoeld, benadeeld, wat zorgt voor een oneerlijke en ongelijke situatie. De basisbeurs

daarentegen biedt iedere student dezelfde kans met een vaste bijdrage per maand, ongeacht zijn of haar (familie)achtergrond.

Het tweede financiële aspect van het sociale leenstelsel ten opzichte van de basisbeurs dat wij zullen behandelen, heeft betrekking op de investeringen die gedaan zouden worden met het vrijgekomen geld van het afschaffen van de basisbeurs. De investeringen in het hoger onderwijs kan men als het ware zien als belastinggeld dat minder opgehaald hoeft te worden, omdat de financiering van de basisbeurs uit het potje van de overheid kwam en dus met belastinggeld werd bekostigd.

In Tabel 1 (Hoger Onderwijs & Studiefinanciering van het Ministerie van Onderwijs, Cultuur en Wetenschap, 2015) vinden we de bestedingen aan het hoger onderwijs die plaats zouden moeten hebben gevonden in de jaren 2015-2020.

	Bedragen x € 1 miljoen α	2015	2016	2017	2018	2019	2020
	STUDIEVOORSCHOT MIDDELEN						
	Studievoorschot middelen beschikbaar voor instellingen (totaal hbo/wo)*	200	200	200	200	200	236
1	Kleinschalig en intensief onderwijs (≥50%)				100	100	121
2	Talentprogramma's (≤10%)				20	20	20
3	Onderwijsgerelateerd onderzoek (20%)				40	40	47
4	Studiefaciliteiten en digitalisering (10%)				20	20	24
5	Specifieke stimulering van landelijke prioriteiten (10%)				20	20	24
6	Middelen vouchers studenten**						
	TOTAAL MIDDELEN STUDIEVOORSCHOT *(excl. Beter Benutten***)*	**0**	**0**	**0**	**200**	**200**	**236**
	OVERIGE BESCHIKBARE MIDDELEN	**4**	**21**	**87**	**82**	**82**	**71**
7	Profilering						
	- Middelen aftoppen bekostiging promoties naar 20% (WO)****			71	71	71	71
8	Stimuleren Leven Lang Leren:						
	- Huidige middelen flexibilisering van het ho voor volwassenen	4	21	16	11	11	
	TOTAAL BESCHIKBAAR BUDGET INVESTERINGSAGENDA HOGER ONDERWIJS 2015 *(excl. Beter Benutten)*	**4**	**21**	**87**	**282**	**282**	**307**

Tabel 1 - *Bestedingsrichtingen investeringsagenda hoger onderwijs 2015 - 2020*

In tabel 1 wordt duidelijk dat er in de jaren 2015-2020 voor in totaal €983 miljoen zou moeten worden geïnvesteerd in het hoger onderwijs. We zien echter dat er in de jaren 2015, 2016 en 2017 nauwelijks besteding vrijkomt (in totaal €112 miljoen). Dit staat in schril contrast met de ruim €1.3 miljard die in 2014 nog werd uitgegeven aan louter de

basisbeurs voor studenten. Ook blijkt uit een rapport van het Ministerie van Onderwijs, Cultuur en Wetenschap (2019) dat in 2018 maar ruim €184 miljoen en in 2019 €203 miljoen naar de investeringen in het hoger onderwijs is gegaan, in tegenstelling tot de €282 miljoen die beide jaren volgens de investeringsagenda zouden moeten hebben opgeleverd.

Om dit te compenseren ontvangen alle voltijdstudenten die een bacheloropleiding startten in de studiejaren 2015–2016 tot en met 2018–2019 en deze opleiding afronden, een voucher ter waarde van circa €2.000 om vijf tot tien jaar na het afstuderen in te zetten voor extra scholing (Hoger Onderwijs & Studiefinanciering van het Ministerie van Onderwijs, Cultuur en Wetenschap, 2015). Deze vouchers zijn onder vuur komen te liggen, om verschillende redenen. Ten eerste zijn veel studenten helemaal niet bekend met de studievoucher, en ook Minister Van Engelshoven (Onderwijs, Cultuur en Wetenschap) verwachtte niet dat alle studenten deze voucher zouden gebruiken (Gillesse & Litjens, 2020). Het CDA diende namelijk een motie in om deze voucher om te zetten in een korting op de lening, maar daar was volgens de minister niet genoeg geld voor beschikbaar. Daarnaast is te verwachten dat de meeste studenten vijf tot tien jaar na het afstuderen niet weer bereid zijn om te gaan studeren, omdat ze dan in een hele andere levensfase zitten. Er is geïnvesteerd in de kwaliteit van het onderwijs, maar er zijn maar weinig beloftes van de minister nagekomen. We constateren dat de basisbeurs een eerlijkere vorm van studiefinanciering was dan het huidige sociale leenstelsel.

Het leenstelsel is wat ons betreft ook moeilijk te rechtvaardigen naar de studenten toe die tot nu nooit de basisbeurs hebben ontvangen. De gemiddelde eerstejaarsstudent leende in 2014 nog €57 per maand, en dit is inmiddels opgelopen tot €288 (Dit krijg je voor je dikke studieschuld, 2020). Daarnaast is er van de beloofde investeringen tot €1 miljard weinig terechtgekomen en is de compensatie ruim ondermaats. De huidige generatie studenten dragen nu wel de lasten van het

ontbreken van een basisbeurs, maar profiteren niet van de winst die vrij is gekomen door het invoeren van het leenstelsel.

Alleen op basis van de financiële efficiëntie van beide systemen valt de keuze voor het sociale leenstelsel hard te maken. De student zit op dit moment met de gebakken peren, maar de belastingbetaler profiteert. In Nederland komt ongeveer 70% van al onze af te dragen belastingen voort uit inkomstenbelasting. Mankiw et al. (2009) betogen dat het optimale belastingstelsel bestaat uit een relatief vlak en proportioneel belastingtarief op inkomens, met hoge marginale tarieven bij lage inkomens die worden gecompenseerd met lumpsum-overdrachten van hoge naar lage inkomens. Concluderend: hoe dichter we bij een proportioneel belastingtarief komen, hoe efficiënter we zijn. Door de invoering van het sociale leenstelsel hoeft er relatief minder belasting bij de burgers opgehaald te worden (die vooral voortkomt uit inkomstenbelasting), en zo komt het progressieve belastingstelsel van Nederland toch dichter bij het theoretische ideaal.

4. Conclusie

De meest wezenlijke verschillen in de economische gevolgen tussen de basisbeurs en het sociale leenstelsel zijn: (1) dat de studieschulden van studenten enorm zijn toegenomen na invoering van het leenstelsel en (2) dat er van de beloofde investeringen in het hoger onderwijs na invoering van het leenstelsel weinig terechtgekomen is, en de compensatie voor studenten ruim ondermaats blijkt. Waar de financiële efficiëntie van het sociale leenstelsel wel groter is dan die van de basisbeurs, schiet de eerlijkheid en rechtvaardigheid van het leenstelsel ernstig tekort. Op basis van deze verschillen, concluderen wij dat er een middenweg gezocht moet worden tussen beide financieringssystemen. Met het volledig publiek maken van studiefinanciering ben je studenten aan het helpen die niet geholpen hoeven te worden, omdat zij uit een gezin stammen van een hoge inkomensklasse. Het sociale leenstelsel helpt studenten echter niet genoeg en is opzichtig gefaald. Daarom zou

vervolgonderzoek antwoord kunnen geven op de volgende vraag: *moet studiefinanciering volledig inkomensafhankelijk worden?*

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