Basic income and the universal basic share

A discussion of the challenges of income inequality and automation

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Abstract

Faced with the challenges of increasing inequality and automation, it might be time to look at new ways to organize our welfare states. Can a relatively newly proposed version of universal basic income, the universal basic share, be a good answer? I make a critical review of basic income schemes in general, and look at what we can expect to happen if they were introduced. I argue for how they can help in dealing with the challenges mentioned, but that the universal basic share might be a better proposal worth exploring instead. In my master thesis I illustrate how parts of the national income are caused by institutions and productivity enhancing social interactions. This part of the national income is denoted the common income to indicate that it perhaps should be distributed equally to everybody. Doing this could help in reducing income inequality by establishing a common income floor. A kind of redistribution like this would, in addition to reduce inequality, function as a social insurance against loss of income due to automation or other reasons. A universal basic share could also be a suitable arrangement for developing countries on the road towards a more comprehensive welfare state.

Preface

First and foremost I would like to thank my supervisor Kalle Moene for his great advice and counseling. His insight and knowledge has made the writing process both fun and educational.

I would also like to thank all my friends at the University of Oslo. They have made my time at the university a period I forever will look back on as the best years of my life.

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Finally, I have to thank Magnus Hoel, for always believing in me and for always knowing how to motivate me.

I am alone responsible for any inaccuracies or errors in the thesis

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1 Introduction

Living in an age of increased automation and rising income inequality there are calls for reform in the way we organize our welfare states, both in rich western countries and in the developing world. The threat that automation can pose against many jobs has been emphasized by technology magnates like Elon Musk and Mark Zuckerberg, and Frey and Osborne (2017) pointed out that as many as 47 percent of jobs in the US had a high risk of being automated. How real this threat is can be discussed, for example did Arntz et al. (2016) find that the figure was closer to 9 percent. Whether the percentage is 10 percent or 50 percent is not possible to say for certain, but the fact is that artificial intelligence and other forms of automation undoubtedly will replace many of the jobs currently being done by people, people who would need to find other professions in order to provide for themselves and their families.

The automation trend does not only pose a direct threat against people's jobs, it also carries a risk of further increasing the income inequality that has been rising the last decades. In 2015, 71 percent of the world's adult population held only 3 percent of total global wealth, while the richest 8.1 percent held close to 85 percent of global wealth (Inequality.org, 2017). This has been steadily increasing, especially in the United States where the wealth share of the top 0.1 percent increased from 7 percent in 1978 to 22 percent in 2012 (Saez and Zucman, 2016). This is not only wrong from a normative perspective, it also poses a threat to the stability of whole societies since it creates many losers and few winners. This can be seen through the increased influence of populist movements in western countries, and has recently materialized in the election of President Trump in the US and the Brexit vote in the UK, where people who can be considered to have lost out, voted for agendas of anti-free-trade and anti-globalism. People have seen the increasing globalization as beneficial to the already rich with not much gains to the ones in the middle and lower classes. Instead it has made things seem worse for many people. It can be argued that globalism and free trade are good paths to pursue if done right, but up until now many people have felt that it is the richest who have been the ones to reap the benefits in many countries.

Seeing the need to find ways to ensure that more people can benefit from globalization and automation, and counter the possible surge in unemployment due to the latter, economists and others are to an increasing degree arguing in favor of a universal basic income. The idea first appeared several hundred years ago, in the 16th century. One year prior to the start of the Protestant Reformation, in 1516, the English lawyer, social philosopher, author and statesman Thomas More presented, in the novel *Utopia*, the idea of introducing a basic income as a way to fight theft (Basic Income Earth Network, 2017c). The father of the basic income is, however, thought to be Johannes Ludovicus Vives, who was the first to introduce a detailed scheme in 1526. He believed that it was the government's

responsibility to make sure that every resident received a minimum income based on the argument that it was a more effective way of providing what he saw as morally required charity. The income should be given to the undeserving poor and the requirement was that he was willing to work (Basic Income Earth Network, 2017c). Since it came with a requirement to work, is was not a universal basic income in the modern sense, but it comes close to being one. Vives also presented the argument that since everything is created by God, the ones who have gathered much wealth from the nature and do not help the poor are thieves, since they occupy and keep what God had not created exclusively for them.

Throughout history, universal basic income in different forms has been picked up and presented as an answer to challenges at the time, from the author Joseph Charlier who in 1894 argued that a basic income could end the domination of capital over labor, to President Richard Nixon who in 1969 presented a plan for income guarantees, the Family Assistance Plan, in order to end the increasing dependence on means-tested welfare systems (Basic Income Earth Network, 2017c). More recently the debate has been brought back to the center of attention by a failed referendum on basic income in Switzerland and by an ongoing experiment in Finland. Being an idea supported by people from both the political left and the political right, the question is why this has not been implemented already? What are the arguments in favor of the idea today, and why are people still skeptical?

In this thesis I try to figure out whether introducing a universal basic income can achieve the goals of more equality, which threatens to increase even further because of automation, without having the feared consequence of people dropping out of the labor force. I do this by first looking at what characterizes universal basic income and what impact these characteristics would have on the overall economy if such a scheme is introduced. I then present a critical review of some of the different versions of universal basic incomes that have been suggested, and argue why or why not they can achieve what supporters of them argue they would, and what the downsides are. Next I introduce and discuss the common income, a concept based on the idea that there is a share of national income that should be distributed equally between the citizens in a society, maybe through a universal basic income. In the end I argue why a somewhat new idea, the universal basic share, can combine the positive aspects of other universal basic income schemes while at the same time address some of the concerns.

2   What is universal basic income?

The Basic Income Earth Network (BIEN) defines universal basic income as "a periodic cash payment unconditionally delivered to all on an individual basis, without means-test or work requirement" (Basic Income Earth Network, 2017a). Whether it is supposed to

replace many of the welfare programs we have today depends on who you ask, but through the design of it it could make many programs like the paid sick leave and unemployment benefits unnecessary. Groot (1999) sees it as an alternative to the present conditional scheme of social security, but also this is debated since some would argue it cannot replace but rather supplement existing schemes. What is common for most of the views is that they are based on basically the same definition as the one provided by BIEN. In this section I take a closer look at what characterizes a UBI and discuss some of the different proposals on how a basic income program could be financed, which is one of the major concerns of some of the opponents.

2.1 What characterizes the basic income

Based on the definition by BIEN, a UBI has the following five characteristics:

1. It is **periodic**, in that it is not paid as a one time grant, but over regular intervals.

2. It is **paid in cash**, so that the people themselves can decide how to best use it.

3. It is given on an **individual** basis, and not to couples or households as an entity.

4. It is **universal**, in that it is given to everybody without a means test.

5. It is **unconditional**, in that it is given without any requirements to work.

2.1.1 Periodic payments

Giving the cash payment over regular intervals makes the UBI a supplement to already existing earnings, and will in addition serve as a supplement to already existing welfare goods such as schools and others. While a basic income by mine (and the BIEN definition) is based on regular cash payment intervals that may vary from one version to another, some have also suggested that the payment should be done with a one time grant when a child enters adulthood, a system called basic endowment. Among proponents of this system was Thomas Paine, who proposed an endowment given at age 21 and a pension from age 50, funded by a land tax (Paine, 2004). It can be argued that those two systems are basically the same since a basic endowment easily can be converted into a basic income by being invested in a way that generate an annual payment, for example through being invested in assets.

Van Parijs and Vanderborght (2017) argue in their book "Basic Income, A radical proposal for a Free Society and a Sane Economy" that of the two options, the one with annual payments is preferred. While the basic endowment aims at giving everyone the same opportunities at the start of the adult life, the basic income aims at providing economic security throughout life, and they argue that the basic endowment favor those who

at 21 are best suited to make long term decisions for themselves because of "intellectual abilities, parental attention, school quality, social networks, and many other factors" (Van Parijs and Vanderborght, 2017, p. 31). The less fortunate therefore stand to loose from this system, and the ones that at the offset stood to win, still will come out on top. A basic income on the other hand would give everyone the possibility to take risk and invest throughout life and not only make success pending on the choices made at the age of 21.

It can be argued from a normative standpoint that the reason stated above is an argument enough in favor of periodic payments. Why should your freedom to make choices throughout life be dependent on a choice made at one point in your life? Giving people the safety of having a guaranteed monthly payment throughout life can as mentioned provide them the security to take risk, either through pursuing an idea of a business or take time off from work to travel. These options are not open to you if the payment was done through a one time endowment and you made a bad choice at the time. Having the stable monthly payment gives you the option to pursue these goals, and might lead to increased prosperity, especially if more people take the risk of creating their own workplace. This increased prosperity can then strengthen the fiscal foundation on which the basic income is based, leading to the possibility of further increasing the payouts.

2.1.2 Paid in cash

Many of the earliest versions of guaranteed income was paid in the form of specific consumer goods such as food, shelter etc. Those in favor of this kind of aid, many of them advocating for this kind of foreign aid today, argue that it is the best way to make sure that the aid received goes to cover basic necessities rather than it being wasted on goods the households or individuals do not actually need. The same reasoning is being used in support of welfare programs such as food stamps and other vouchers. The supporters of giving basic income in the form of cash payments are highlighting the fact that it requires far less bureaucracy and is to a lesser degree subject to pressure from outside groups that seek to advance their own agendas. Examples of this can be food producers that supply aid organizations with food and suppliers of food-stamp products.

It is also argued by Van Parijs and Vanderborght (2017), and it is quite obvious, that giving cash directly creates purchasing power that again helps local businesses, instead of hurting them as the distribution of imported food and other goods most likely would do to local suppliers. There are situations where cash handouts would not do any good, most often in situations where there are no markets available to people, like in areas experiencing natural disasters or other crisis, but overall there are significant advantages to providing a basic income through cash payments.

One example of such an advantage is that giving people the chance to decide for themselves how to spend the aid received can in itself be beneficial, especially if seen

from a basic freedom perspective. Receiving cash instead of specific goods can be more effective in helping people since it can be argued that people themselves often know best how they can increase their own and their families welfare, keeping in mind that there are examples where the adults in families might not act in accordance with what is best for the children. It also removes some of the obstacles that create efficiency losses in systems where benefits are given through specific consumer goods, since people no longer have to use time to convert for example food stamps into goods they actually need.

2.1.3 Given on an individual basis

Unlike many other forms of minimum income the basic income is paid to each individual in a household instead of for example to the head of the household. The main argument against such strict individual payments is that giving it to the head of the household is simpler. This is especially true if the minimum income is given through tax credits and there is only one adult in the household who works, which is more often the case in developing countries. Today, most of the minimum income systems are designed in a way that gives an adult living in a household with more than one adult less in benefits than if he/she was living alone. This has to do with economies of scale in consumption, mainly because the cost of fulfilling basic needs is higher when a person need to carry all the costs by themselves. There are however two reasons why a basic income should be given on an individual basis.

The first is that it is difficult to confirm or control the fact that people are either living alone or in households with other adults. This makes a system of individual payments easier to administer and more efficient, which would cut administrative costs.

The second is that a system with diminishing transfers discourages people from living together since they in many cases stand to loose economically. Van Parijs and Vanderborght (2017) therefore argue that giving it on an individual basis helps make the system more efficient and helps promote cohabitation which again to a larger extent utilize scarce resources such as space and energy.

It has, however, also been argued by many opponents of basic income, most notably as a response to the supposedly increased divorce rate witnessed in some experiments, that giving the benefit on an individual basis also give people the freedom to separate from their partners since they no longer are equally financially dependent on each other. This was an argument used against the results of a basic income experiment in Seattle and Denver, but this effect on marital stability was later rejected as a statistical error (Forget, 2011).

By giving the payments on an individual basis a basic income can also help in empowering women, especially in developing countries where they often are far from having reached gender equality. By giving the payments also to the women in the households it is natural to think that this would give them more to say in matters concerning the family

and push the societies in the direction of more gender equality, which from a normative standpoint often is seen as desirable.

2.1.4 Universal

In contrast to many already existing minimum income schemes the UBI is universal in the sense that there are no means tests. Today most programs are designed so that you receive the most in benefits when your income is zero and decreases as you increase your income. This can have negative effects on people's propensity to supply labor in cases where they have nothing to gain financially from working, and might in some cases even experience a financial loss. Van Parijs and Vanderborght (2017) do however identify three reasons as to why a universal income is to prefer over the current means tested systems.

First, it is easier to reach the poor with a universal system. If systems are designed to target the poor it is often required that the poor themselves have to take steps to receive the benefits, steps that sometimes can be difficult to identify and for some be seen as humiliating. To efficiently target the poor it is therefore required to have extensive bureaucratic systems that in many cases can be expensive to manage. These identified faults of the system are to a large extent eliminated with the introduction of a universal income since the poor no longer have to apply for support and the government does not need to use resources to single out the poor.

Second, it is important to free people from having to accept lousy jobs. Many entry level jobs, which are the ones available to many of the people on welfare, often come with unpredictable pay and uncertain contracts which makes the step from welfare to work even greater because of these uncertainties. The bureaucratic process for getting back the welfare benefits is also often so cumbersome that many refrain from taking the risk of getting a job. A universal income on the other hand makes it possible for people to take these risks and maybe even start their own businesses, which could as mentioned earlier increase prosperity.

Third, it is easy to prevent poverty traps. Everything a person earns in addition to the basic income increases the net income of the individual. This removes a problem with the current system where people can be trapped in unemployment, the so called unemployment trap or welfare trap. The income of low paid jobs sometimes is largely offset by the reduction in welfare. Thus people actually stand to loose when going from welfare to work, removing the incentives to actually take the step. Very few people with a family to support would want to take the risk of entering a low paid job if it meant loosing financially, especially if the financial situation is already strained. With the universal basic income, even in the form of a negative income tax, which I discuss in more detail later, every new dollar earned would go to increase the net earnings of the individual, maintaining the incentive to take even low wage entry jobs.

A universal system maintains more of the support for the redistribution. To be able

to create and keep a welfare system it may require that a majority of people support it. If the system was designed in a way that provided cash payments only to the poorest it could create a desire from the people not benefiting from it to dismantle it, as discussed in Moene and Wallerstein (2003b). Bay and Pedersen (2006) found in their study that two-thirds of their representative Norwegian sample expressed sympathies towards the idea of a universal basic income and contributes this to the fact that the current Norwegian welfare state is to a large degree universal already, especially when it comes to child benefits and pensions, and that Norwegians have good experiences from it. Their findings can provide support for our argument that universality itself is an important aspect that is crucial to establish and defend a universal basic income over a longer term.

2.1.5 Unconditional

While many of the current minimum income schemes which often are conditional in the sense that it is required for you to actively seek employment and in many instances have to say yes to a job you are offered, the UBI has no such obligations. The obligations linked to these schemes do in many cases lead to employers having unfair power over the employees, since the employees have no option of saying no, even when the pay and the conditions in the workplace are bad. Because the employees do not have the power to say no, it removes the incentives for these bad employers to try to attract workers by offering better contracts. An unconditional income on the other hand gives the unemployed the option of saying no to a job if he sees it as unattractive in some sense, whether it is with regards to the wage, work environment or other factors.

Van Parijs and Vanderborght (2017) believe removing the obligations addresses what they call the employment trap; the inability for employees to say no to, or quit, a lousy job. If a universal basic income is introduced they get the power to do this, and the employers of these jobs then would either have to automate the jobs, make the job more attractive or simply offer better wages. Since automation in many cases is expensive and takes time, and sometimes is not even possible, the expected outcome would be that the lowest wages would begin to rise or that the workers get better benefits to make up for the low wages. It could be the case that these jobs would disappear because of the effects I have described, but exactly how significant this effect would be is hard to predict.

The unconditional aspect of a universal basic income is, however, controversial. Giving people money without requiring them to at least look for a job goes against the basic notion that people should contribute to deserve welfare. Overcoming this common belief would be among the toughest challenges in achieving a universal basic income, but as I show later the empirical evidence from experiments done on universal basic incomes does not point towards increased "free-riding".

2.2 Financing

Even though the introduction of a UBI would make many already existing welfare programs obsolete and by that make parts of the basic income "self financed", it is clear that the net costs of such a program in most cases would create a need for new ways to finance it. In this section I do not go into the details on the many different proposals for how to fund a UBI, but I quickly mention the main financial arguments. Most proposals are based on income taxation, but there has also been proposals about funding through rents from natural resources and some have suggested that companies such as Facebook and Google, who are making money out of selling information about us, should pay a larger share of their revenues in taxes and thereby help in financing a UBI. I quickly go through each of these suggestions.

2.2.1 Tax on labor income

As mentioned, tax on labor income is the most commonly proposed way of financing a UBI, especially when considering implementing it in a country with a developed welfare state which often is accompanied by a well developed income tax system. It is reasonable to think that the easiest way of financing a basic income is through the already existing tax system, so the question then is how eventual changes in the tax system needed to fund the basic income effects the incentives to work.

If a basic income was introduced to ensure a minimum income for the people who from the offset are dependent on means-tested minimum income scheme, they could see their marginal tax rates be reduced from 100 percent, which is often the case in many means-tested minimum income schemes, to a lower rate of for example 25 percent. This reduction would eliminate the unemployment trap explained in section 2.1, leading to increased work incentives for people with the lowest wages. However, in order to fund the basic income the marginal tax rates on the richer people would have to go up.

Van Parijs and Vanderborght (2017) argue that the main concern of this system is that the increased incentives for the people at the bottom comes at the expense of the more productive workers whose work often is more important for the economy as a whole. These people are more likely to reduce their hours worked due to the income effect which comes from the fact that their net incomes increase and the substitution effect which comes from them earning less per hour worked. How large these effects would be is hard to measure, but as mentioned later in section 3, experiments have shown that the reduction in hours worked might not be drastic enough to pose a threat to the sustainability of the program.

One additional problem with the idea of funding a basic income through income taxation is that it is unclear how much taxes would have to be raised. First of all, even if some of the costs of already existing welfare programs can be reduced with the introduction of a basic income scheme, it is too bold to assume that all of them can be eliminated,

creating concerns for how much taxes would have to be raised. Van Parijs and Vander-borght (2017) shows that, in the case of the introduction of a basic income at 25 percent of GDP, when taking into account that not all other expenditures can be removed, the required tax rate goes up. When assuming that 50 percent of the social expenditures can be cut with the introduction of a basic income they show that the require tax rate in the US would be 55 percent of GDP while it would be as high as 65 percent of GDP in France. When taking into account that part of the GDP does not take the form of personal income they show that the tax rate required goes up to about 80 or 90 percent. These are of course rough estimates for an arguably large UBI, and should not be seen as more than indicators of the marginal taxation implied by a transition from means-tested minimum income to a generous universal basic income. In order to fund a basic income it is therefore necessary to find new ways to raise revenues.

2.2.2 Natural resource rents

The social reformer Thomas Paine was one of the first to introduce the idea of funding a universal basic income through the distribution of natural resource rents. In 1796 he suggested that a basic endowment should be funded by the government by renting out the country's land (Kildal, 2017). This comes from the idea that natural resources belong to everyone and therefore the rents from it should be distributed equally between every citizen. How much raising revenue through the rents from unimproved land would amount to is difficult to calculate, but one estimate from the state of Vermont in the US found that it could amount to between 4 percent and 8 percent of the state's GDP, which is means that there are revenues attainable (Van Parijs and Vanderborght, 2017).

The same argument applies to the use of the atmosphere. Since there is only a limited amount of carbon emissions that can be absorbed, it can be seen as a scarce renewable resource which is equally owned by everyone. This could validate the introduction of a carbon tax or a fee for individuals and corporations that release pollution into the atmosphere, something that many political parties have argued for as a way of preserving the environment. This could, depending on the way it is designed, make it possible to raise enough revenues to fund a basic income.

Another way of funding a universal basic income is to distribute the return from the sales of non-renewable natural resources. This has been done for example in Mongolia between 2010 and 2012, where the government gave cash payments to every citizen funded by the revenues from the mining industry (Van Parijs and Vanderborght, 2017). This can, however, raise concerns regarding inflation since the large profit margins of natural resources vastly outperforms that of other industries, which in turn can lead to too much cash being poured into the economy. It is self-evident that funding a basic income through this type of scheme is by no means sustainable since non-renewable resources are depleted in the end. In time the funding will therefore dry up and governments would have to

either cut spending in other areas to prop up the basic income, or cut the basic income itself.

A possible solution to this is that revenue from natural resources can be placed in a fund where the surplus from it could be paid in cash to citizens in forms of an annual or monthly dividend, based on the performance of the fund. This is the case today in Alaska where the oil revenues are invested in the Alaska Permanent Fund and where the annual return given to every citizen in the state sums up to around $1,200 per year, or about 2 percent of Alaska's GDP per capita (Van Parijs and Vanderborght, 2017). This can also in theory be done in other places with sovereign wealth funds, like in Norway and Nigeria, and could amount to significant amounts. Yet, this is not a solution that would work for most nations in the world today, since not many have been blessed with the access to such wast amounts of natural resources as Norway and the Gulf States. It can, however, be argued that revenues from other resources, such as minerals and land are owned by everyone and should therefore be subject to heavy taxation, like revenue from oil- and gas sales is in Norway, and invested in a similar fund.

Another proposal comes from the Nobel Prize-winning economist Vernon Smith. He has argued that the interstate highway system in the United States should be privatized and that the money earned from it should be put in a fund which could pay for a basic income (Bershidsky, 2017). This is very much in line with the proposals mentioned above. I do not discuss this idea more in detail, but it helps in showing that there are several proposals being floated by several influential individuals.

2.2.3 "Information rents"

An idea put forward by the innovation editor at the Financial Times, John Thornhill, can also help in addressing the financing issue. He notes that companies like Facebook and Google make money by selling the personal data of their users to other companies, usually advertisers, and that these companies could help fund a basic income by giving back some of the money earned from these data sales (Bershidsky, 2017). Today these large tech companies are to a large degree exempted from taxation because of the many different ways of exploiting tax loopholes.

Bershidsky (2017) points out that tech magnates like Elon Musk and Mark Zuckerberg are speaking out in favor of a universal basic income and he believes that this is because they see and understand what the future has in store for us; automation and artificial intelligence may replace many of the jobs currently being held by humans, a prediction supported, as mentioned earlier, by Frey and Osborne (2017). Companies like Facebook and Google therefore wants to secure support from the public for their idea of a automated future, where people are consumers rather than workers, with a basic income funded by the revenue raised by machines. By implementing a universal basic income funded by the taxed income from sale of information and work of machines, people thereby becomes

shareholders in an automated nation and will have a self interest in pursuing further automation in order to increase the basic income. This idea was also supported by Benoit Hamon, the Socialist Party's candidate for the presidency in France, who advocated for a robot tax to fund a kind of basic income (Basic Income Earth Network, 2017b).

The concern raised against this approach is that it can be seen as a "buy-off" from tech firms to make people accept that automation is being pushed on them. In exchange for a monthly payoff the firms are free to take advantage of the new machines that can make them richer than they already are and that the amount being paid to people is to silence the majority. Bershidsky (2017) points out that contrary to the other basic income proposals the buy-off from tech companies is not about sharing, but more a "humiliating" approach of paying people to accept that their labor is no longer needed. He believes that the other proposals for a universal basic income, which are based on sharing the wealth, is better since they in his mind can be seen as less "dehumanizing" and "humiliating". As I show later when discussing the universal basic share, this concern is possible to address.

3 Different types of universal basic income

When the idea of a universal basic income is being discussed in the media and by people in general it is often spoken of as a monthly cash handout to every individual unconditionally. There are however different proposals out there on how to organize it, and each of them have their own positive aspects and their own drawbacks.

The most basic proposal is, as mentioned, where you get a handout unconditionally. I call this a basic income guarantee. Then there is the idea of a negative income tax famously championed by economist Milton Friedman, where the handout is reduced as you increase your income (Friedman, 2009). The last proposal I focus on in this section is the earned income tax credit combined with a means-tested minimum income. This is an interesting case since the earned income tax credit is already implemented in many countries and can be a stepping stone towards a full basic income.

There are several other proposals out there, outlining different basic income schemes, but I focus on the three mentioned above to get a basic understanding of what a universal basic income is and how it could be designed. Later in the thesis I take a closer look at a fourth alternative, the universal basic share.
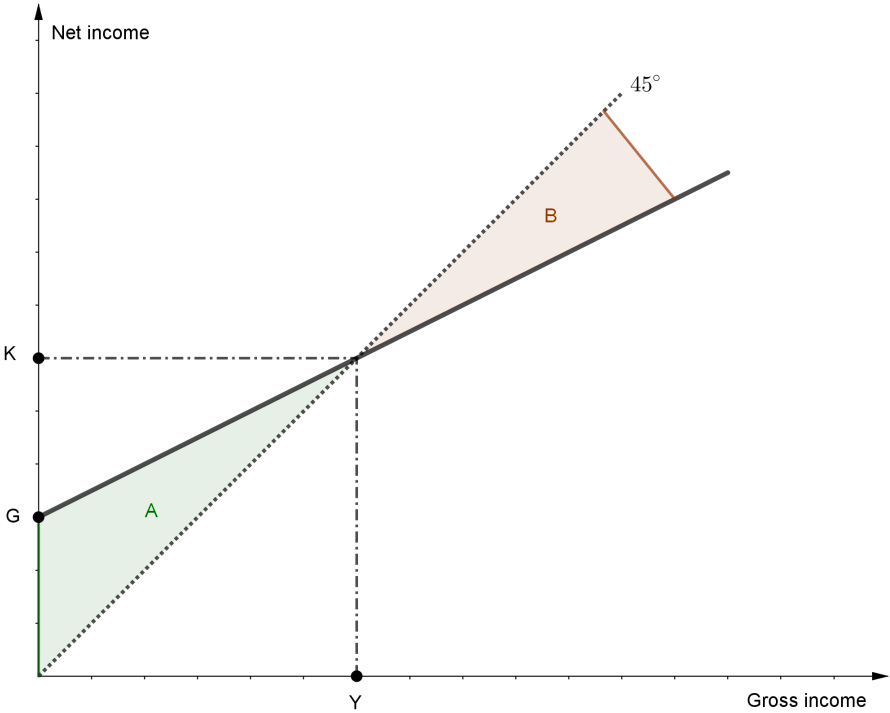
3.1 Negative income tax

The negative income tax is basically a system where people earning below a certain threshold receive a wage subsidy, or wage supplement, from the government instead of paying taxes. This would simplify the welfare bureaucracy by allowing people to receive income through filing tax returns rather than by applying for welfare benefits. Milton

Friedman argued that this could improve work incentives, substitute many other welfare programs, cost less and not distort market prices, unlike for example minimum wages and tariffs (Moffitt, 2003). To illustrate how a negative income tax could work I use a basic example where there is a flat tax of 50% on income and the threshold standing at $20,000. The subsidy rate is equal to the tax rate; 50%.

- A person without any income would then receive $10,000, ($20,000×50%) from the government, which in this case would be the basic income in this society. Every individual is therefore guaranteed to receive at least $10,000.

- If he earns $10,000 he would receive $5,000, (($20,000−$10,000)×50%) from the government, giving him a total income of $15,000.

- If he earns $20,000 he would neither pay taxes nor receive anything from the government.

- If he earns $30,000 he would receive -$5,000, (($20,000−$30,000)×50%), in other words he would have to pay $5,000 in taxes. Every income above the threshold is in other words taxed at a rate of 50 percent.

I show this in a basic figure:

Figure 1: Linear negative income tax (Van Parijs and Vanderborght, 2017)

Where the 45 degree line represents what the net income would be if there were no taxes and no transfers and the bold line represents the net income, taking into account positive

and negative taxation. The break-even point, (Y,K), where the net- and gross incomes are equal, is the point where the individual starts to pay taxes instead of receiving the wage subsidy, in this case the break-even point is at $20,000. This is where gross income and net income are equal. The point G is the minimum income, which in this case is equal to $10,000. The area A represents the wage subsidy, and as shown it decreases with increasing gross income, through the tax rate set at 50 percent. The area B represents the taxes paid when earning above the threshold, which increases with increasing income. The main argument for this type of basic income scheme is that it would be less expensive than giving absolutely everyone the $10,000 minimum income, regardless of income. It would also make sure that people have incentives to work since any additional income would not be offset by an equal decrease in the wage subsidy, as often is the case in many welfare systems today. Implementing a negative income tax scheme would therefore theoretically remove the welfare trap discussed in section 2.

One of the main arguments against the negative income tax is the same that is being used of every other form of basic income; that it would reduce the incentive to work. In many countries today there are low or even no taxes on the lowest incomes, making the introduction of a negative income tax seem like a tax increase. This is however offset by the wage subsidy given by the government, so the effect on labor supply is not given.

Another argument is concerning the administrative part of it. Since the potential wage subsidy you receive depends on the earning you had in the last period, be it the last month or the last year, it can create situations where people in desperate need of financial help one month has to wait until the next before receiving a payment. It is therefore clear that a negative income tax system must include a mechanism with advance payments that people who earn below the set threshold have access to. This could on the other hand go against the benefits of unconditional payments mentioned earlier, namely that having no "checks" on the people receiving the benefits helps remove the stigma and shame surrounding it. Having this mechanism could also increase the bureaucracy needed to maintain the system, making it costlier to administer.

The negative income tax can be considered to be one of the most politically feasible basic income schemes since it is one that also gathers support from the political right. Even if the best option for many people on right, especially in the United States, is to aggressively decrease the size of the welfare state, they know it is not actually possible. This makes the negative income tax a good second-best option; it reduces bureaucracy while at the same time provide a basic safety net.

The problem with using the negative income tax is as mentioned that it does not fulfill all the criteria mentioned in section 2. Most notably it does not meet the requirements to be called universal, since it is not given to people earning above a certain threshold. This reduces to some extent the incentives to work since, especially if the tax rate is as suggested at 50 percent, since people then might find it less favorable to take a job if for

each dollar earned they get a reduction of 50 cents in payments. How these effects would materialize is difficult to predict, but as I show later, experiments have not found a large degree if people not working.

3.2   Basic income guarantee

Being the purest form of a universal basic income, the basic income guarantee (UBG) is probably the most explored. Unlike the negative income tax the UBG is a guaranteed income with no reductions in the paid amounts no matter how much you earn. Because of this it is significantly more expensive than the negative income tax, but it also have all the positive aspects explained in section 2, like the removal of stigmas and shame surrounding receiving help from the government. It is also the proposal that would most significantly reduce the need for bureaucracy since there would be absolutely no means tests. To better understand how a basic income guarantee would work, I look at a figure showing a case similar to the one used in section 3.1, where the minimum income was $10,000:

Figure 2: Basic income guarantee with a flat tax (Van Parijs and Vanderborght, 2017, p. 34)
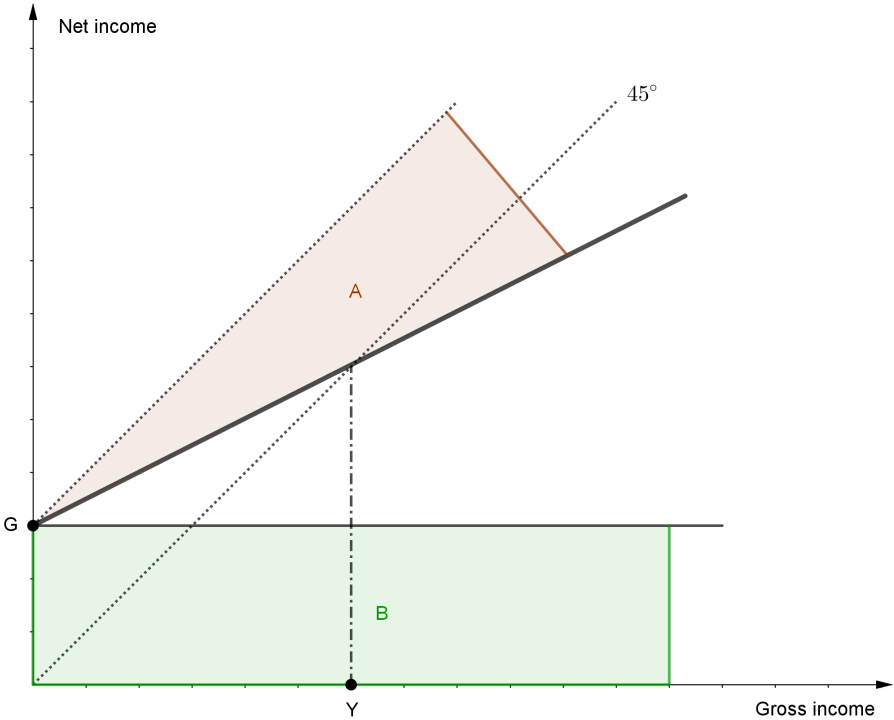
Where the basic income level G is funded by a linear tax on all gross income. After receiving the basic income people's gross income, represented by the dotted line, shifts upwards to the upper dotted line. The degree of taxation needed to fund this basic income determines the slope of the bold line which represents net income. The intersect between

this bold line and the 45 degree line represents the point where people go from paying less in taxes than what they receive from the basic income to paying more, making them go from net beneficiaries to net contributors. The area A represents the tax income for the government while area B represents the expenses going to fund the basic income.

By the very nature of the basic income guarantee it has significant redistribute effects since the marginal tax on the richest most probably would have to go up in order to finance it. There would be large savings since many already existing welfare programs no longer would be needed, but since the size of the savings from this is unknown we can assume that there would have to be some increases in the tax rates for some individuals. There are other options on how to finance it, as discussed in section 2, but since the usual and most talked about way of financing it is through the tax system it is natural to think that the redistribute effects would be significant. Seeing how income inequality increasingly is becoming a problem in many countries the universal basic guarantee could therefore be a good first step towards achieving a more fair and balanced distribution of wealth.

The main argument against this basic income is however that it would be too expensive and would not be fiscally possible without raising taxes to unbearable levels, something that as mentioned earlier would lead to weakened incentives, making the tax base smaller which would make funding the basic income impossible. In section 3.4 I look at whether this assumption holds when I take a look at some of the experiments conducted.

## 3.3   Earned Income Tax Credit with means-tested minimum income

First enacted in the United States in 1975, the earned income tax credit (EITC) was a refundable tax credit aimed at low-wage workers. Similar to the negative income tax it takes the form of a tax reduction for some and payment of benefits for others. The main difference between these two is in regards to what happens when people start earning money. Under a negative income tax scheme, an increase in earnings lead to a decrease in benefits, while it under an EITC scheme leads to an increase in benefits for the low-wage earners. While the EITC is in its current form based on household incomes, which often can create disincentives for secondary earners in households to work, it can easily be transformed into an individual program.

What makes the EITC different from the negative income tax is that the EITC's focus is solely on the working poor, and not the unemployed. The specific focus of the program can help explain why it is politically possible to implement, since one of the main arguments against universal basic incomes is that it pays people who do nothing. The focus on the working poor, however, goes against the universal criteria of a basic income, but to transform the scheme into a universal one could be done by proposing a hybrid

version.

One kind of hybrid proposed by Van Parijs and Vanderborght (2017) is constructed to combine the EITC with a means-tested minimum income such that it provides incentives for people to work while at the same time provide a basic income as a floor guaranteed to everyone. I can illustrate this hybrid scheme in a basic figure:

Figure 3: Earned income tax credit combined with a means-tested minimum-income scheme (Van Parijs and Vanderborght, 2017, p. 43)
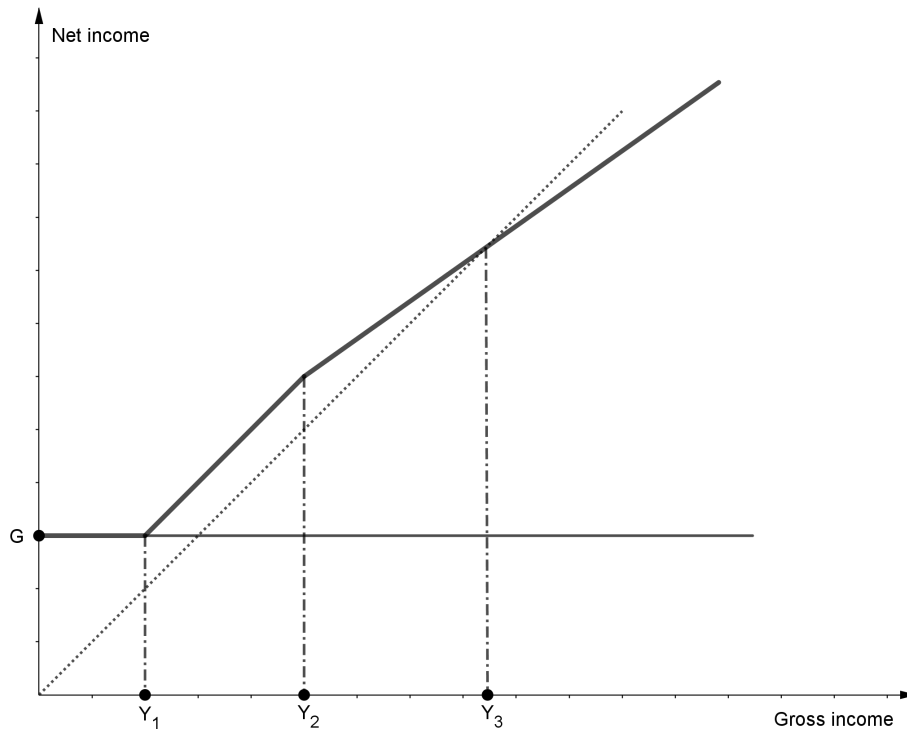
In figure 3 the dotted 45 degree line is the net income in the absence of any taxation or transfers. The bold line represents the net income in a situation where an EITC is combined with a means-tested minimum income. The income level is raised to G for the individuals earning below Y_1. The EITC makes it possible to have net earnings exceeding G when gross earnings are below G because of the wage subsidies. In the range up to Y_2 the incentive to work more is high since the marginal tax rate is zero and the individual receives a cash benefit from the government. In the range up to Y_3 the incentives to work more falls since the EITC is being phased out. After the point Y_3 the individual start paying taxes as normal, so that the net income is lower than the gross income.

In the whole range up until Y_3 net income is higher than the gross income because of the payment benefits received from the government. This can be seen as a form of wage subsidy. This makes it possible for individuals to take jobs at low wages since the government will supplement the wage with this subsidy.

This hybrid version might be of interest for us since it might serve as a way to phasing in a basic income since the EITC is a popular program already in place in many countries.

It could especially be of interest if the goal is to make sure that everyone earns a decent wage, since the lowest wages would be supplemented with this tax credit. It could also achieve the goal of increased income equality by raising the wages of the lowest earners while paying for it by taxing the ones with the highest incomes harder.

3.4 Experiments

While there has not been many large scale experiments conducted with regards to universal basic income, there are a few that can points towards the various effects we can expect if it was introduced. The main problem with the experiments is that the results might not be representative for what would happen since the people who are participating know that it is only for a period of time and that they at the end will loose the basic income. The restricted horizon might pose a threat to the validity of the experiment since people who in the case of an introduction of a permanent basic income would drop out of the labor force, might not do it in the experimental setting. The reason for why people do not drop out might be because that they by the end of the experiment would have to go back into the labor market, something that in many cases can be difficult if the jobs have been taken over by others, and therefore not worth the risk. The continuation of work might lead to results that are not translatable to a real life setting, and might create the wrong impression of what could happen.

Keeping the restricted horizon in mind I look at some of the experiments conducted to get a view of what the results have been, with an emphasis on what the effects have been on labor supply and the distribution of wealth. It might be the case that even though these are results in sometimes limited environments, they can provide some insight into what we can expect to happen if a universal basic income was introduced on a national level.

3.4.1 Negative income tax experiments

There have been several experiments on the negative income tax in the US in the 60's and 70's, where one of the main goals of the researchers was to uncover what effects such a system would have on factors such as labor supply and the general well being of the participants. Widerquist (2005) reviews the US experiments and notes that they clearly contradicted many of the common arguments used against a basic income. He found that a weighted average of four negative income tax experiments in the US showed that the reduction in time spent working for people receiving the benefits was 5- to 7.9 percent less than the control group for men, while it was 7- to 21.1 percent for women with children. He finds no evidence that it would cause large amounts of people to drop out of the labor force and there were no evidence that the labor supply response would increase the cost to a point where it would become unaffordable. Widerquist (2005) addresses some

of the findings of other studies conducted about the experiments, which found that the labor responses would increase the actual tax costs of the program. The problem of these studies is, according to Widerquist (2005), that they fail to incorporate the potential labor demand effects. This could effect the results if for example the reduced labor supply by some lead to employment opportunities for others, making the experiments seem more costly than they actually are if these effects are not taken into consideration.

However, he also points out that opponents of a basic income could use the results from the experiments as arguments since they did show some reductions in the hours worked, but counters the argument by asking what would happen if experiments had been done prior to the introduction of social security. The experiments would most certainly show that people would save less for retirement, retire earlier and that we would see a decrease in the degree to which families felt they needed to take care of their elders. The results from the experiments would then be used as arguments against social security, but today you would most likely find no one that would advocate repealing it, at least not as a serious proposal.

Widerquist (2005) also argues that a reduction in the amount of hours worked might not be a bad thing overall. If people start working fewer hours it could in the long run lead to higher wages because of the need for more workers, and it could also empower low wage earners in negotiations with employers, as explained in section 2. He points out that the problem with the debate about the results of the experiments were more a normative debate of whether reductions in hours worked was good or bad rather than a discussion of how the results could shed a light on the positive aspects of such a program. As he explains, the experiments "... indicate that a basic income guarantee is financially feasible at a cost of certain side effects that people with differing political beliefs may take to be desirable or disastrous. To claim more would be to overstate the evidence" (Widerquist, 2005, p. 69).

One of the most famous of the negative income tax experiments is the one performed in the Canadian province of Manitoba, the so-called Mincome experiment which took place between 1974-1979. This experiment and its results are particularly important to understand what effects we can expect on a factor not researched after the US experiments, namely the impact on health outcomes.

One advantage of the Mincome experiment was that it included a rural community, Dauphin, where everyone was eligible to participate. The experiment was done to in an attempt to answer questions about effects on a community level rather than the more unrealistic situations in classic experiments where only a sample in a location receive support (Forget, 2011).

The major drawback of the experiment is that it ended without any final reports or any significant analysis of the results, because the program ran into problems early on. The experiment was originally granted $17 million, but proved insufficient when faced with

higher than expected unemployment rate and high inflation in the 70's. The program ran for four years, but because there were no money left the data was never truly analyzed.

In an effort to look at the effect of the program, economist Evelyn L. Forget from the University of Manitoba collected data on the health of the population in Dauphin to determine whether the experiment had any impact on the population health (Forget, 2011). She found that hospitalizations, especially for accidents and mental health diagnoses declined for the participants in Dauphin, relative to those in the comparison group. The size of the effects were so substantial that Forget argue that much of it has to be credited to a social multiplier, since only a third of families qualified for support at any given time. This social multiplier could occur if the changed behavior of the ones participating in the experiment lead to changed behavior among the ones living in close proximity to the participants.

Because everyone in Dauphin were eligible, it can be argued that it lead to changes in social attitudes and behavior also among families that did not participate directly, which then had an effect on the general hospitalization rate. Seeing how expenditure on health is among the largest items in many western government budgets, ranging from around 11 percent of GDP in Western European countries to above 17 percent in the US in 2014 (World Bank, 2017b). It is easy to see how even small decreases in hospitalization rates can generate significant savings for the society as a whole.

3.4.2 Basic income guarantee experiments

To counter the potential pitfalls of looking at experiments with time-constraints, a way to figure out how people would behave if given monthly payments for the rest of their lives is by looking at some experiments that happen without necessarily needing to be organized. One of these was the Win for Life scheme, a part of the national lottery in Belgium, where the winners of a lottery got a monthly payment of €1,000 between 1998 and 2007, which was about 40 percent of the country's GDP per capita at the time, and then €2,000 afterwards (Van Parijs and Vanderborght, 2017). The main positive aspect of this kind of experiment is that you eliminate the potential downside explained earlier, where people in limited experiments does not behave the way they would had it been lifelong payments. The problem is that it provides a too small sample to be representative and that the people receiving this income might have behaved differently if also the rest of society had received it. One could think that when you are the only one among your neighbors and friends who have received a large payment it is harder to drop out of the workforce because factors such as peer pressure. These experiments are therefore of limited interest if we want to understand how a society as a whole would have reacted to an introduction of a basic income.

A better experiment to look at if we want to understand the impact such a basic income guarantee would have is the Alaskan Permanent Fund Dividend (PFD). Having

been introduced in 1982 the PFD remains a widely popular program up until this day (Widerquist and Sheahen, 2012). Alaska, being a state rich on oil resources, deposits a portion of the revenues from oil into a sovereign wealth fund. This is then invested in a broad portfolio of different assets, much like the Norwegian sovereign wealth fund. Each year a part of the return to these investments is distributed equally to almost all Alaskans, 95 percent according to Goldsmith (2010), through a cash payment usually fluctuating between $1,000 and $1,500 annually (Widerquist and Sheahen, 2012).

A potential drawback is that the annual amount varies from year to year, but since the payment is calculated as the average of the return to the fund over a five-year period it is arguably predictable enough to be considered a reliable safety net. Considering that the annual amount is too small to cover the basic needs of the receiver, the PFD also has to be considered a partial basic income. The payments does, however, make a real difference in people's lives if we consider for example a single mom with three kids receiving more than $4,000 in benefits, which greatly helps in providing for the children. In 2009 the cash payments added up to about $900 million in extra purchasing power before taxes, equal in size to the total wages of state government (Goldsmith, 2010). The size of the total payouts was therefore so large that they by themselves could serve as a stabilizing force in the economy.

Alaska has one of the lowest poverty rates in America, something that can be contributed partially to the PFD (Widerquist and Sheahen, 2012). It is also among the most economically equal states in America, and is the only state where equality has been rising for the last two decades. From the early 1980s to the early 2000s, Alaska was the only state in the US where the after-tax incomes of the bottom 20 percent grew at a faster rate than the top 20 percent (Bernstein, 2000). This can serve as an indication of the impact a universal basic income could have on the distribution of wealth, not only by making the poor less poor but also through granting them a higher degree of economic freedom which in turns can give them the opportunity to pursue jobs with higher pay.

The effect of the PFD on equality can be hard to quantify, but it is reasonable to believe that it can play an important role based on the arguments mention above. Goldsmith (2002) has looked at the effects of the Alaskan program, and does to a large extent agree with the notion that the effects are difficult to contribute entirely to the program itself, but that it has had an impact. In addition to serving as a relatively significant handout to the poorest individuals, "... a large share of the annual distribution is spent when received and goes toward the purchase of consumer durable goods (those with an extended life), producing jobs and income in the trade and service sectors of the economy" Goldsmith (2002, p. 9).

4   Common income

As mentioned earlier, one of the first arguments in favor of a universal basic income was presented by the English social reformer Thomas Paine, who in the essay *Agrarian Justice* in 1796 argued that the earth's resources was equally owned by everyone, and that everyone therefore had a right to a resource rent to compensate for what they have lost through the establishment of property rights (Kildal, 2017). Together with the mentioned thought of Johannes Ludovicus Vives, namely that you should not use more of God's creation than what is assigned for you, these ideas create the foundation for what we consider to be commonly owned resources.

In addition to the contribution from national resources, (Moene, 2017a) argue that the income from good institutions, which he says might constitute as much as half of the total GDP, belongs to everyone and should therefore be distributed equally between every member of society. Since no-one can be said to own the institutions, he argues that a part of the national income today therefore should be seen as what he calls a "common income". Institutions are by North (1990, p. 3) defined as "... the rules of the game in a society or, more formally, are humanly devised constraints that shape human interaction".

Also supportive of this is claims by Mancur Olson, Jr.. He used wage data from the 1980 U.S. Census on immigrants to the US from Haiti and former West Germany, showing that much of the differences in GDP per capita between West Germany and Haiti comes from the quality of institutions (Olson, 1996).

Common income can therefore be defined as the part of national income that stems from the contribution from natural resources, trust, cooperation and social complementarity, all the factors that make good institutions possible. Natural resources, as Thomas Paine argued, is a part of the common income because they should belong to everyone, and trust, cooperation and social complementarity because they are components made by how we as a society interact with each other. Moene suggests that this part of national income should be divided equally between members of society, instead of the current system where we have privatized much of the gains from good institutions and where the society as a whole has to share the costs when things goes wrong (Moene, 2017b). Hall and Jones (1999); Mehlum et al. (2006); Acemoglu and Robinson (2013) and many others argue that institutions are important in explaining why some countries are more productive than other, and Hall and Jones (1999) found that differences in output per worker are driven by what they call social infrastructure. This I include in my definition of common income, since it comes from the way we as societies have chosen to interact with each other.

Before I figure out what sharing this income between everyone equally could lead to, I have to figure out how to calculate, or illustrate, what share of national income that can be characterized as common income in a country. I do this by introducing a simple

model.

4.1 The model

To illustrate, I use the Cobb-Douglas production function:

$$Y_i = A_i L_i^{\gamma} K_i^{\beta} \tag{1}$$

where in region i:

Y_i is total production, in other words the real value of all goods produced in one year, L_i is labor input, or simply put the total number of hours worked in one year, K_i is capital input, namely the real value of machines, buildings etc., A_i is the total factor productivity, γ is the labor share of national income and β is the capital share of national income, which is assumed to be around 1/3 (Bernanke and Gürkaynak, 2001). The total factor productivity (TFP) is often referred to as the part of the output not explained by the amount of inputs used in the actual production, or as a measure of productivity (Weil, 2009).

In this case I use TFP as a proportional measurement for common income, and use it to measure differences in the share of common income across regions or countries. First, I make a set of courageous assumptions. Local adjustments by capital owners lead to two results: the wage in region i equals the marginal productivity of labor in that region, and the capital labor ratio is adjusted so that the marginal productivity of capital equals a common return to capital across regions. In other words; that owners of capital have access to the same outside opportunities with a return r. We then get:

$$\frac{\partial Y_i}{\partial K_i} = r = \beta \frac{Y_i}{K_i} \tag{2}$$

which is the return to capital in all regions. The wage in region i is as mentioned above given by the marginal productivity of labor in that region:

$$\frac{\partial Y_i}{\partial L_i} = w_i = \gamma \frac{Y_i}{L_i} \tag{3}$$

From (2) and (3) we get that:

$$K_i = \frac{\beta}{r} Y_i$$

$$L_i = \frac{\gamma}{w_i} Y_i$$

Inserting this into (1) we get:

$$Y_i = A_i \left(\frac{\gamma}{w_i}\right)^{\gamma} \left(\frac{\beta}{r}\right)^{\beta} Y_i^{\gamma+\beta}$$

$$\Leftrightarrow$$

$$A_i = \left(\frac{r}{\beta}\right)^{\beta} \left(\frac{w_i}{\gamma}\right)^{\gamma} Y_i^{1-\gamma-\beta}$$

Assuming constant returns to scale; $1 - \gamma - \beta = 0$, we get:

$$A_i = \left(\frac{r}{\beta}\right)^{\beta} \left(\frac{w_i}{\gamma}\right)^{1-\beta} \forall i \tag{4}$$

If I then look at two countries/regions, i and s, we can write:

$$\frac{1}{A_i}\left(\frac{w_i}{\gamma}\right)^{1-\beta} = \left(\frac{r}{\beta}\right)^{\beta} = \frac{1}{A_s}\left(\frac{w_s}{\gamma}\right)^{1-\beta}$$

$$\Leftrightarrow$$

$$\frac{A_i}{A_s} = \left[\frac{w_i}{w_s}\right]^{1-\beta} \Leftrightarrow \frac{A_s}{A_i} = \left[\frac{w_s}{w_i}\right]^{1-\beta} \tag{5}$$

Using wage differentials, I can illustrate the relative importance of trust and cooperation. To calculate A_i for any region we need a country or region as a benchmark: A_s. I can then calculate common income in country i, A_i, relative to country s for any country as $\left[\frac{w_s}{w_i}\right]^{1-\beta}$. The value $A_i - A_s$ is then a rough approximation of the common income of the country, relative to the benchmark. Common income would then be:

$$(A_i - A_s)Y_i$$

where y_i is GDP in country i from inputs like capital and labor. The common income in country i is then:

$$\phi_i = \frac{(A_i - A_s)Y_i}{A_i Y_i} = 1 - \frac{A_s}{A_i} = 1 - \left[\frac{w_s}{w_i}\right]^{1-\beta} \tag{6}$$

For all $A_i \geq A_s$ we get that $0 \leq \phi_i \leq 1$.

4.1.1 Benchmark

A natural benchmark could be a country with institutional quality in the middle between a country where people plunder each other and a country where social interactions and the institutions magnify productivity. The idea is that there are no significant gains from good institutions, but also that it is no significant drawbacks from the lack of it in the benchmark country. Mehlum et al. (2006) have in their article looked at how institutions, when they are grabber- or producer friendly, either lowers aggregate income or raises it when countries get more natural resources. Grabber friendly institutions are defined as institutions where there are gains to be made from specialization in unproductive activities, due to weak rule of law etc., while producer friendly institutions are institutions

that encourage entrepreneurship and productive activities. These definitions are close to the ones I use when I describe what is important for a high share of common income, and I use their work to find the benchmark. Mehlum et al. (2006) finds that the resource curse which sometimes accompanies more natural resources such as oil and natural gas applies in countries where the institutions are grabber friendly, but not where they are producer friendly.

I look at two different ways to find a good benchmark, both by using the the article of Mehlum et al. (2006). The first is by using the index for the quality of institutions from Political Risk Services which they use to see whether the institutions have an impact on the outcome of more natural resources. This index can be used by us to find a benchmark country I use going forward, since it gives an impression of which factors are important for good quality institutions.

Political Risk Services produce a institutional quality index called the International Country Risk Guide as an unweighted average of five indexes: a risk of expropriation index, a government repudiation of contracts index, a corruption in government index, a rule of law index and a bureaucratic quality index (Knack and Keefer, 1995). A good benchmark could arguably be somewhere in the middle of these indexes, but I then might run the risk of choosing a country with far too grabber friendly institutions, since I do not know whether the threshold between grabber- and producer friendly is exactly in the middle of these scores. To be sure of this more comprehensive analysis is needed, something I do not spend much time on in this thesis. I instead look at what share of common income I get from using these measures for a benchmark, and compare it to the second method.

The second way of finding a good benchmark is by using the threshold for institutional quality identified by Mehlum et al. (2006). Whether a country is above or below the threshold determines whether they end up in an equilibrium that is producer- or grabber friendly. They use data from Sachs and Warner (1995) and include an interaction term which captures the link between resource abundance and institutional quality. They use this interaction term in an effort to capture what their model predicts, namely that resource abundance is harmful to growth when the institutions are grabber friendly. They find that the resource curse is weaker the higher the institutional quality is, and they find that for countries with institutional quality higher than the threshold, which they estimate to be 0.93, the resource curse do not apply at all. Since countries below the threshold are defined as grabber friendly by Mehlum et al. (2006), and the countries above as producer friendly, the benchmark used need to have institutional quality at, or close to, the threshold.

An additional factor I look at is trust. Newton (2001) argues that "trust is a - probably the - main component of social capital, and social capital is a necessary condition of social integration, economic efficiency, and democratic stability" (p. 202). Delhey and Newton

(2005) have looked at how different factors influence trust, and they found that inequality has a negative, statistically significant effect on trust. This link between inequality and trust points towards the importance of having a benchmark with not too much and not too little income inequality, since trust is thought to be one of the drivers of production enhancing social interactions, as Newton (2001) argues.

Using the first method to find a benchmark, I see that one country that is approximately in the middle in the rule of law index, the risk of expropriation index and the corruption perception index is Turkey (Transparency International, 2017; The Global Economy, 2017; World Justice Project, 2017). To see whether Turkey is also acceptable as a benchmark based on income inequality it is natural to look at the Gini index for household incomes. In 2012 Turkey's score was 0.40 on the index, and since the most unequal countries are around 0.60 and the most equal are around 0.20 I consider Turkey to be acceptable as a benchmark (World Bank, 2017a). Having in mind the concerns mentioned about choosing a benchmark based on these criteria it might be argued that Turkey is not the best choice. This becomes even more clear if I instead use the second method and look at countries close to the threshold defined in Mehlum et al. (2006), where the United Kingdom and France can serve as benchmarks since both have institutional quality score of 0.93, which as mentioned is the threshold identified in the paper. If we look at the Gini index for these two countries we see that they have somewhat lower income inequality than Turkey, the UK had 32.6 while France had 33.1, something that might be argued makes them "too egalitarian".

When deciding which one of the benchmarks to use I keep in mind that they are very different from each other and probably yield very different results when I calculate the common income. Since the three countries are so different I choose to focus on Turkey and the United Kingdom in order to get approximations for benchmarks from each of the two methods I use in order to select one.

4.2   Calculating common income

Using Turkey as the benchmark the share of common income can be calculated by using the model presented in section 1.1. When looking at the wages I choose to look at the average wage in 2011 PPP (purchasing power parity) dollars to take into account the different price levels in the countries I want to compare. In 2014 the average monthly wage in Turkey in 2011 USD PPPs was 2,019 while it in the UK was 3,207 in 2015 (International Labour Organization, 2017). To start with I use the benchmarks to calculate the share of common income in Norway, and the monthly wage in 2011 USD PPPs in Norway in 2015 was 4,648 (International Labour Organization, 2017). Beginning with Turkey as our benchmark, inserting the numbers for the wages and the share of capital (1/3) into (6), I then get a rough estimation of the share of common income of national income in Norway,

relative to the benchmark:

$$\phi_{N,T} = 1 - \left[\frac{2,019}{4,648}\right]^{1-\frac{1}{3}} = 0.426 \approx 42.6\%$$

which means that around 43% of national income in Norway is common income, in other words the share that, based on the arguments of Moene (2017a), belongs to everyone. Using the benchmark chosen by the second method, the UK, I get another illustrative estimate:

$$\phi_{N,U} = 1 - \left[\frac{3,207}{4,648}\right]^{1-\frac{1}{3}} = 0.219 \approx 22\%$$

First of all are these measures very different from each other, based on which country I chose to be the benchmark. It is not surprising since the UK and Turkey are two very different countries. The UK is considered to be a fully developed country, while Turkey is still developing. It is therefore important to keep in mind that these are only very rough estimates of the share of common income in Norway, relative to the benchmark country. These are also very high measures, but since Norway is among the wealthiest nations in the world it is not surprising. Together with good institutional quality Norway has the advantage of having access to oil and natural gas, making it wealthier than its neighboring countries.

It can therefore be of interest to look at what the share is if I look at a country like Sweden, which has many of the same good quality institutions are Norway but has not been blessed with the same access to high valued natural resources. In 2014 the average monthly wage in 2011 PPP dollars in Sweden was 3,589 (International Labour Organization, 2017). Inserting this into (6), using Turkey as my benchmark, I get:

$$\phi_{S,T} = 1 - \left[\frac{2,019}{3,589}\right]^{1-\frac{1}{3}} = 0.3185 \approx 32\%$$

And if I use the UK as my benchmark I get:

$$\phi_{S,U} = 1 - \left[\frac{3,207}{3,589}\right]^{1-\frac{1}{3}} = 0.072 \approx 7\%$$

We see that the share of common income in Sweden is more than 10 percentage points lower than in Norway when I used Turkey as our benchmark, while the difference is even greater when using the UK. This points towards the fact that natural resources might play an important role in determining common income, and it might make sense to therefore make a distinction between common rents from natural resources and common income from trust and cooperation.

As seen above the difference in common income shares in Sweden and Norway using the UK as the benchmark was 7% and 22%. Assuming that those two countries are equal with the exception of Norway having access to natural resources, a rough estimate of the common income from trust and cooperation could be 7%, and that the remaining $22-7 = 15\%$ in Norway stems from the common rents from natural resources. As discussed above in section 2.2.2. a potential drawback of distributing rents from natural resources between the citizens in a resource rich country could lead to unwanted economical effects such as increased inflation, something that is prevented in Norway today by a strict fiscal rule that constrains the government from using more than 3 percent of the value of the fund each year. If the rents from these resources would be used to fund a universal basic income it would therefore be necessary to preserve this fiscal rule to prevent the economy from overheating.

Since the above calculations show that the share of common incomes varies greatly depending on which country we choose as our benchmark it can be useful to look at a set of other benchmarks as well. To get a sense of how volatile these estimates are I look at six different benchmarks, using them to estimate share of common income in five countries:

Table 1: Common income for different countries under different benchmarks, in %

Country	Benchmark					
	Turkey	France	UK	Ireland	Spain	Malaysia
Norway	43	16	22	12	28	48
Sweden	32	0.2	7	-5	14	39
Finland	29	-4	4	-9	11	36
Germany	47	23	28	18	33	52
Italy	22	-14	-6	-20	2	30

As seen in the table the share of common income varies to a large degree depending on what country I choose as my benchmark. I use different benchmarks since it can be the case that the threshold introduced in Mehlum et al. (2006) is too strict. This I discuss more thoroughly in section 4.2.1. What stands out as a country with exceptionally good institutions in the table above is Germany, which have a larger share than most country, even better than Norway with its natural resources. There can be several reasons as to why this is, but it is natural to think that much of it has to do with good institutions in the German society.

Ireland can be an interesting case since it has a score of 0.83 on the institutional quality scale in Mehlum et al. (2006). I see from table 1 that the only two countries with a positive common income shares are Germany and Norway, pointing towards Ireland being too "good" to serve as benchmark. Still, it is important to remember that the shares are only very rough calculations and by no means a definite answer as to how

much of the national income that is common, but a rough estimate of the share relative to the benchmark country.

To best compare the different shares, Spain might be the country best suited to be a benchmark when looking at the five countries in the table above. I notice that Germany and Norway, by my estimates, have by far the most productivity enhancing institutions, serving as evidence that much of the national income in these countries are due to the way they are organized. Based on the arguments mentioned earlier as much as 33 percent of national income in Germany should be distributed equally between every German, while the share in Norway is 28 percent. How this can be done is discussed in section 5.

4.2.1 Problems with the measure

First and foremost the estimated shares are only rough calculations meant to illustrate the magnitudes of what I consider to be common income. They are done to serve as evidence of the fact that some of the national income can be contributed to what I have called productivity enhancing institutions. If I were to look at a country like Botswana or Cambodia, I would find that there was no share that could be considered common income if I used one of the benchmarks above. It can however be the case that there are parts of national income in these countries that could be argued should be distributed equally, not necessarily because the institutions are doing much to enhance productivity, but because also these countries have natural resources that based on earlier arguments is owned by everyone and should therefore be subject to a form of taxation or other re-distributive schemes in order to share the revenues from them. This is discussed more thoroughly in section 5.

One problem with using the TFP as a basis for the measure of common income is that it includes technological progress. This would make the measure of common income overestimate the value of trust and cooperation since much of the income would come from access to new technology which is thought to be dependent on a country's income. Therefore this is something of which I do not necessarily should include in the term "common income".

If I were to include technological change in this illustrative model, I can do so by augmenting the TFP:

$$A_i = a_i e^{\lambda t} \tag{7}$$

where a_i is the part explained by trust and cooperation in society and $e^{\lambda t}$ is technological progress. A_i increases over time t, since technology naturally improves over time. If trust and cooperation influences λ, which is the rate of technological progress, we have to take this into consideration when calculating common income. There are however doubts about how significant these factors are with regards to technological progress.

Olson (1996) have looked at whether or not the world's technological knowledge is

generally accessible for all countries at little, or no cost. If that is the case it can be argued that the part of growth stemming from technology is exogenous and therefore can be excluded in our analysis of common income. Olson finds, by showing to the case of South Korea from 1973 to 1979 that "the South Korean case certainly supports the long-familiar assumption that the world's productive knowledge is, for the most part, available to poor countries, and even at a relatively modest cost" (p. 8). There can be made objections based on the reality that developing countries are lacking the skills needed to take advantage of the newest technology, but that overlooks the fact that skilled labor under these circumstances have incentives to move to those countries since their skills would be highly valued and therefore would yield higher returns in these developing countries. In real life actually moving to another country is not done in a heartbeat.

This argument of availability of technology is, however, open for interpretation. It can be argued that even though all technology is available to every country, the countries with the best institutions are the ones who are best at innovating and adopting the new technology. If this is the case the contribution new technologies have had on growth should be included in what I consider to be common income on the grounds that the good institutions we as a society has established have made the implementation of them possible.

A second problem comes from using the threshold from Mehlum et al. (2006). As mentioned earlier it suggests choosing a benchmark country which would be considered safely inside the production enhancing column if it was judged based on the indexes used in the first method. This might be an indication that the threshold suggested is too strict, and that it therefore characterizes too many countries as grabber friendly. What we might keep in mind is that the definition of the threshold, as defined by Mehlum et al. (2006) is that the countries need to be above it to withstand the negative effect from more natural resources, often materialized through the resource curse. It can be that the institutions needed to withstand the resources course are so strong that they might be "too strong" to serve as benchmark. Above we therefore looked at several different benchmarks and found that even if we look at countries with institutional quality far below the 0.93 threshold (Spain was at 0.76), there were large shares that could be contributed to productivity enhancing institutions and good social interactions.

A third problem with my measure is whether it over- or underestimate the share of common income. The two shares I calculated in section 4.2 illustrate this problem. The two benchmarks are chosen based on two different selection criteria, and they are as mentioned two very different countries. The UK has a much better score on indexes such as corruption perception, expropriation risk and rule of law (World Justice Project, 2017; The Global Economy, 2017; Transparency International, 2017). Common for both calculations is that they show a degree of common income as I have defined it and can therefore be used as a basis for the suggestion that large parts on national income should

be divided equally between citizens in a society.

There is also a problem with the wages used to calculate the values of the shares in table 1. While most numbers are from 2016, the values for France is from 2013 and for Norway from 2015. Choosing wages from different years might be misleading if there were significant changes in the world wide economic trends from one year to another. This is especially a problem if looking at Norway, which was hit by a significant fall in the price of oil from 2013, which had a considerable negative effect on the GDP and therefore on GDP per capita, which again could have had an effect on the average wages in the period. Keeping in mind that these are only rough estimates I do not pay too much attention to this since the estimates are only meant to serve as illustrations of how parts of national income can be considered to be common income.

5 Universal Basic Share

Above I looked at the different pros and cons regarding a universal basic income, and in section 4 I showed how it can be argued that part of the national income comes from beneficial social interactions are cooperation, income I argued should be considered owned by everyone, equally. The need to find a good way of actually doing this brings me to one of the newest proposals for a basic income scheme, one championed by among others economists Debray Ray and Karl Ove Moene; the universal basic share (UBS).

The idea is that the government should commit a fixed share of the national income to be used to fund a universal basic income (Moene and Ray, 2016). This means that when the economy grows the amount paid to each citizen would also grow, while it would shrink if the economy shrinks.

As the UBS is based on a predetermined share of the national income, it addresses one of the major concerns with regards to the introduction of a classic UBI, namely that it could be phased out by the government by not adjusting it to inflation. In that way a government, which sees it as politically risky to outright eliminate a UBI scheme, could just let the absolute amount stay the same and let inflation get rid of it over time. This would not be a possibility under a UBS scheme. Being directly linked to the growth and size of the general economy, the monthly amount paid to each individual would rise and fall in line with the overall economy, and because of it it would not be possible for politicians to eliminate a UBS without doing it explicitly. This could safeguard an already introduced scheme against politicians looking to cut spending.

There are different ways for which share the basic income should be divided from, but Moene and Ray (2016) argue that the best way of organizing a UBS is through having it as a share of GDP, rather than for example labor earnings. If the share was linked to labor earnings it could put too much pressure on wage negotiations since employees would have a larger incentive to raise labor income, since a wage increase would raise

both the wage and the share received from the government. The employers on the other hand would have incentives to suppress the wages since the share would serve as an extra tax on labor income, increasing their expenses. This could then lead to higher tensions between employees and employers, making the wage negotiations tougher and might cause efficiency losses that would harm the overall economy.

Being able to achieve the many positive aspects of a universal basic income discussed in the sections above while at the same time address some of the concerns makes the UBS an ideal proposal, which I explain in more detail below.

5.1 Impact on the national economy

As mentioned earlier the danger of introducing a universal basic income in its basic form might face some challenges when a country enters unstable financial circumstances. If revenue dries up due to for example a financial shock it can be tempting for governments to decrease, or even eliminate, the universal basic income altogether. The universal basic share on the other hand is more resilient in a situation with economic downturns. In good economic times with high growth the share paid to everyone will increase together with the overall economy. People receive more money and some might reduce their hours worked because of the income effect, leading both to more upwards pressure in wages but also freeing up jobs for the unemployed. Whether the sum of these effects is good or bad is discussed earlier in the thesis, but the evidence from the experiments conducted show that the actual reduction in hours worked is not large enough to pose a danger to the economy as a whole. This is especially true if we consider the stabilizing mechanism a universal basic share would have.

If the economy, under a universal basic share scheme, enters into financial difficulties either by lower growth or even by the economy starts contracting, the effect would be that the share paid to everyone would contract alongside with the economy, and the incentives to work more would increase as a response. This could help lift the overall economy and might in some sense help restore the growth of the economy faster than if there was an ordinary UBI in place which did not decline with the size of the economy. It can therefore be argued in the case of a universal basic share that, like in the cases argued above for the other basic income schemes, the responses in hours worked would not necessarily be drastic enough to pose a threat to the stability of the system. It might even prove to be a stabilizing force.

As with the universal basic guarantee and other basic income schemes discussed above, the universal basic share can also help in empowering the workers through making them able to reject working for wages they deem unacceptably low. This of course depends on the size of the share given out, but as I show below even a to begin with small share can, and most probably will, over time grow enough to eventually be able to cover the

basic needs of citizens, which again would make them able to turn down jobs they see as unattractive.

Ray (2016) points out that introducing a UBS also could create incentives to improve the tax system through broadening the tax base, increase auditing and closing off loopholes. This is particularly important in developing countries with not fully developed tax systems. Ray (2016) uses India as an example, since only 1 percent of Indians actually pay income tax. If a UBS was introduced it would make it necessary to improve the tax system since more people would have to pay taxes in order to fund the share alongside other spending. Increasing these incentives to broaden the tax base could have positive implications for other parts of the economy as well, since more government revenue could lead to increased investments in other government areas such as health, education and infrastructure, areas that also could help improve the national income in the long run.

One of the factors differentiating an ordinary UBI from the UBS is that the latter provides greater incentives for workers to participate in the work force. More people working and contributing means higher growth, which again means larger cash transfers to everyone. The UBS might therefore create a sense of ownership to the national economy and could because of it make it harder for people to outright drop out of the workforce. The effect the feeling of contributing to a common cause of increased prosperity could have on actual growth is difficult to actually measure, but I regard it as reasonable to assume that it at least would make it harder to actually take the step and stop working.

While many people argue in favor of other universal basic income schemes based on the conviction that it will replace the welfare state, the universal basic share aims at complementing it. Depending on the size of the share, it makes many existing programs obsolete, but over all many of the current welfare programs continue to operate. The aim of the universal basic share is to more fairly distribute the economic gains in countries, and based on earlier arguments more equality could help empower productivity enhancing social interactions and good institutions, leading to increased common income. Seeing how more equality and universal welfare programs can lead to increased support for welfare spending, as mentioned earlier and shown by Moene and Wallerstein (2003b,a), the universal basic share can serve as a first step for less developed countries towards a more comprehensive welfare state.

5.2 Impact on the common income

While the idea of there being a common income in society, like I showed in section 4, can serve as an argument in favor of having a universal basic share, one of the most appealing aspects with it is the impact it could have on the incentives to coordinate and cooperate between agents in the economy. The UBS might thereby positively affect the indicators that contributes to a high degree of common income, increasing the share of common

income itself.

Giving people an annual or monthly dividend through sharing a part of the national income can give them a sense of ownership to the well-being of the economy. If for example the country is experiencing tough economical competition from other nations, it is in everyone's interest to have restrained wage increases in order to stay competitive, since raising wages too much would jeopardize the national economy and then also the share given to everyone. The UBS may therefore serve as a stabilizing effect on the economy since everyone will feel the consequences more directly through smaller dividends if the country looses out in competition with other nations.

As shown earlier in the thesis the degree of trust in society also contributes to a higher degree of common income, and the introduction of a universal basic share might also help promote trust itself. The increasing income inequality, driven by increased returns to capital without equal increases in the wage to the average worker, is threatening to dissolve the trust between the capital owners and the workers. The UBS might help in dealing with this problem since if everyone gets a share of the overall profits in society it becomes more in everyone's interest to seek profit for companies, which in turn can increase the incentives for the workers to cooperate with the capital owners to find the best way to raise total incomes of the enterprise.

Moene and Ray (2016) argue that introducing a universal basic share increases the propensity for workers to accept the increasing automation since they get a share of the potential profit increases this could lead to. It could therefore help to ease the transition if the prediction of robots taking our jobs actually turns out to be true, since the increased profits these robots could lead to would benefit everyone, even the ones loosing their jobs.

5.3 Impact on inequality

The fact that income inequality has been increasing in most countries the last decades, and the implications this has had, and will have, on our societies both now and in the future, is a source of great concern to many. Ray (2016); Moene and Ray (2016) argue that the most important feature of a universal basic share is the impact it could make with regards to fighting inequality.

By giving everyone a right to a share of the total prosperity in a country you make sure that some of the wealth accumulated is being distributed equally; redistribution in its purest form. This can be especially important in a situation where increasing automation and increasing reliance on capital becomes a more central part of the economy. When these means of production are owned by already rich individuals we run the risk of them becoming even richer while the ones that earlier have made money out of selling their labor see the value of their product decrease. Seeing how this can create friction and distrust in societies, most notably in the United States in recent years, it should be in

everyone's interest to prevent this from escalating even further.

As discussed in section 4.1.1., higher inequality can lead to lower trust which again can have a negative impact on the factors contributing to a high degree of common income. Seeing how a country with a high degree of common income often is more prosperous it can be argued that we should take steps to reduce inequality in society in an effort to increase trust in the long run.

5.3.1   An example

In an effort to see what impact a universal basic share could have on a measure of inequality, I make some very rough calculations with regards to the Norwegian case. For simplistic reasons I look at what the effects on the Gini coefficient depicting income inequality would be if we taxed everyone's income by a rate of ten percent and distribute the revenues from it equally between everyone. This is not the same as distributing ten percent of GDP, as would be the case in my suggested UBS scheme, but ten percent of total wage income. I assume that there is no costs of taxation and that there is no reduction in hours worked. This could be done more thoroughly, but since it is only for illustrative purposes I do it as simple as possible.

In 2014 the total amount of people receiving wage income in Norway was 3,077,513, amounting to a total of 1,209,215,000,000 NOK (Statistics Norway, 2015a). Knowing the share of total income for each decile, retrieved from Statistics Norway (2015b), and that each of them contains 307,751 people ($3,077,513 \times 10\%$), I get a rough estimate of the average income of the people in each decile. For example, for decile 1, which has 3.8 percent of the total income, the average income for the people in it is:

$$(0.038 \times 1,209,215,000,000) \div 307,751 = 149,310 NOK$$

Doing this for all ten deciles I get the following average incomes:

Table 2: Average income in the different deciles

Decile	Average income in decile in NOK	Share of total income in percentages	Cumulative distribution
1	149,310	3.8	3.8
2	235,752	6.0	9.8
3	275,043	7.0	16.9
4	310,406	7.9	24.8
5	341,840	8.7	33.5
6	377,203	9.6	43.1
7	412,566	10.5	53.6
8	459,716	11.7	65.3
9	530,442	13.5	78.8
10	832,990	21.2	100

These numbers are most likely not exactly representative, especially when considering that there are people in the tenth decile who earn several million NOKs, skewing the actual distribution more towards the top earners. I however use the above representation as a basic illustration going forward.

The Gini coefficient is calculated based on the graphical representation of the Lorenz curve, which plots proportion of the total income of the population that is cumulatively earned by the bottom $x\%$ of the population. This can be roughly illustrated:

Figure 4: Graphical representation of the Lorenz curve
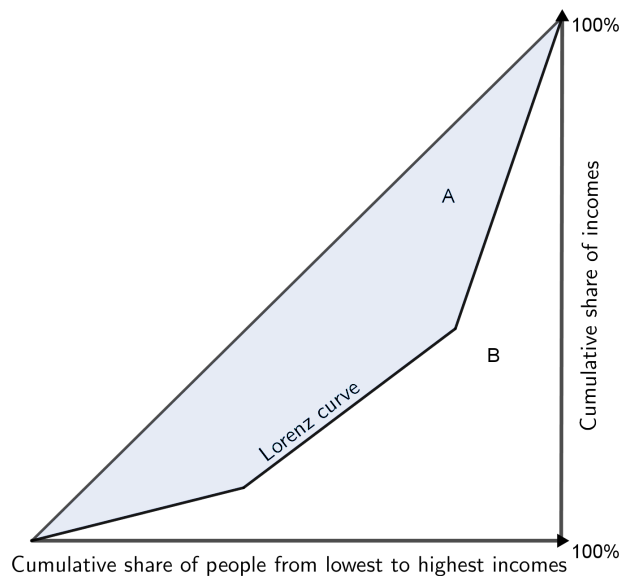
If the Lorenz curve is in line with the 45 degree line it is perfect equality of incomes. The Gini coefficient, which is smaller the more equality there is, is the ratio of the area A over the total area under the 45 degree line (A + B):

$$G = \frac{A}{A+B}$$

To calculate the area underneath the Lorenz curve I need to compute the areas of several trapezoids, one for each decile. I use the standard trapezoidal rule for a uniform grid to find the area B:

$$\int_0^1 f(x)dx \approx \frac{\Delta x}{2} \sum_{k=1}^{N} (f(x_{k-1}) + f(x_k)) \tag{8}$$

where the domain is divided into N equally squared panels, in my case 10 deciles each with the size $\Delta x = \frac{1}{N} = 0.10$, and the $f(x_k)$ are the cumulated shares of total income for decile k. Inserting the numbers from table 2 I get: $B = 0.3796$. Knowing that $A + B = 0.5$, since the axes are from 0 to 1, I get that $A = 0.5 - 0.3796 = 0.1204$. Using the formula for the Gini coefficient I get that it is:

$$G = \frac{0.1204}{0.5} = 0.2408$$

Considering that the Gini coefficient in Norway by Statistics Norway (2015a) is calculated to be 0.256, the above calculation comes very close to the true measure.

This coefficient is therefore the one estimated before I tax everyone with an additional ten percent rate and distribute the collected tax revenue equally between everyone. The amount collected in taxes is therefore $10\% \times \sum_{i=1}^{10} y_i$ where y_i is the average income for decile i. This amounts to 392,526.7 NOK, which means that the amount x added to the average incomes in each decile becomes: $x = \frac{392,526.7}{10} = 39,253 NOK$. The new average income for each decile thereby becomes:

$$y_i^{new} = y_i(1-t) + x$$

where t is the tax rate, set at 10 percent. This gives me a new distribution of incomes:

Table 3: Average income in different deciles, after tax and transfer

Decile	Average income in decile in NOK	Share of total income in percentages	Cumulative distribution
1	173,631	4.4	4.4
2	251,430	6.4	10.8
3	286,792	7.3	18.1
4	318,618	8.1	26.2
5	346,909	8.8	35.0
6	378,736	9.6	44.6
7	410,562	10.5	55.1
8	452,997	11.5	66.6
9	516,650	13.2	79.8
10	788,944	20.1	99.9≈100

Using equation (8) I find the area B under the new Lorenz curve. This equals 0.3902, which makes the area A: $0.5 - 0.3902 = 0.1098$. Using the formula for the Gini coefficient I get that it is:

$$G = \frac{A}{A + B} = \frac{0.1098}{0.5} = 0.2196$$

As mentioned is this only a rough estimate of the Gini, but the change is still worth noticing. I show this in a figure where the red line represents the Lorenz curve for the before-tax-and-transfer distribution of incomes and the black line after tax-and-transfer:

Figure 5: Graphical presentation of the Gini before and after tax-and-transfer
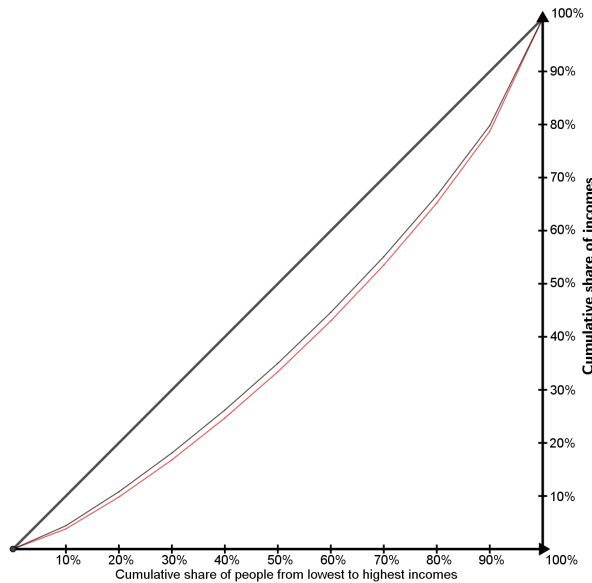
Going from around 0.24 to around 0.22, a reduction of two percentage points, is a clear step, especially when considering that it is in Norway, which from the get-go is a very

egalitarian country. Doing the same tax-and-transfer scheme in a country with higher income inequality would make an even greater difference on the Gini since more would be taken from the richest deciles and given to the poorer ones. If I had included taxation and redistribution of wealth the effect on inequality would have been even clearer.

5.4   UBS vs. other basic incomes

Up until now I have argued as for how introducing a universal basic income could achieve the goal of more equality while at the same time provide a safety net in a scenario where increased automation replaces many of the jobs currently done by humans. Now the question is; why should we prefer the universal basic share instead of the other proposals like the negative income tax and the basic income guarantee?

One of the most appealing aspects of the universal basic share is its self-regulating mechanism. As mentioned earlier, one of the main arguments against a universal basic income was that it could lead to people dropping out of the workforce. In section 3.4 I explained how the empirical evidence does not support this, but it still remains the number one argument of the people opposed to the idea. By proposing a universal basic share this fear could be addressed by setting the initial share at a low percentage of the national economy. The dividends to start with would then not be large enough to cover the basic needs of the individuals receiving them, making it less tempting to drop out of the workforce. However, as the economy grows, and I have argued as for how a universal basic share could further enhance growth, the regular payments would start to increase and, over time, we could achieve the positive aspects of other basic income schemes, like increased bargaining power for employees, less poverty, and more equality.

Another appealing aspect of the UBS is that it gives everyone a more direct ownership to the overall economy. When everyone gets a share of the prosperity in the country it becomes in everyone's interest to make sure that the overall economy is performing well, which as mentioned could lead to better cooperation between unions and employers. This would not necessarily be the case if it was a basic income guarantee or a negative income tax, since more prosperity in those cases would not necessarily lead to higher payouts to everyone.

The potential for the universal basic share having a large equalizing effect on incomes is one of the arguably the most appealing aspect of it, especially when considering that most of the gains from globalization today is concentrated in the hands of the already rich, which as mentioned earlier has given rise to populist movements that often champion policies that in the long run could be harmful to the overall economy. If we were to implement a universal basic share we could see that more of the gains being distributed more equally between every member of society, making it a tool to better defend free trade and globalist policies, increasing overall prosperity in the long run.

6 Concluding remarks

The aim of this master's thesis has been to shed light on positive and negative aspects of universal basic income, with emphasis on whether or not it could be a solution to the challenges posed by increased income inequality and the threat of automation. I have argued that most of the usual proposals, like the basic income guarantee and the negative income tax, could bring us several steps closer towards improving the lives the people at the bottom of the income distribution, but that both these proposals have their . They are either deemed too expensive or too "modest", depending on who you ask, and some opponents are disregarding the idea of a universal basic income as "Utopian" or even ridiculous.

I have gone through what characterizes a universal basic income and what we could expect to happen if a full scale implementation was to happen. By showing how raising marginal tax rates could have unwanted consequences in areas such as labor supply, I argued that financing it through the current tax system might not be the best solution, and that new financing methods need to be considered. I argued how financing could be done by for example higher taxation of tech firms such as Google and Facebook, or by investing revenues from what can be considered commonly owned natural resources in a fund, and use the returns from the fund to pay for it, much like what currently is the case in the state of Alaska.

By presenting some illustrative calculations I showed how parts of national income could be considered to be common income, which comes from the fact that some countries have organized in such a way that it enhances productivity and thereby have made it possible to become rich. The situation in many of the countries with such productivity enhancing institutions and social interactions today is that the gains from it often is being accumulated among the already rich without leaving much for the rest of the population. As (Moene, 2017b) argues, we now have a system where we have privatized much of the gains from good institutions and where the society as a whole has to share the costs when things goes wrong. I therefore argue in favor of a relatively new form of universal basic income, the universal basic share.

The universal basic share could serve as a tool to better distribute these gains between everyone, and at the same time help in fighting inequality and prepare for the potential consequences of increased automation, like unemployment and even higher inequality. It is based on the idea of taking a fixed share of GDP, perhaps equal to the share of common income, and distribute it equally between every citizen. It would not only give people opportunities to take part in increased prosperity stemming from automation and globalization, it would also help in encouraging better institutions and by that help in increasing the share of common income, which in turns means more prosperity. Even if initially set at a low percentage, the universal basic share could increase over time and

in the long run become large enough to be a regular payment that could cover people's basic needs, satisfying all the criteria characterizing a universal basic income.

In an effort to draw an illustration of how this could unfold if introduced in Norway I looked at how the Gini measure for income inequality would be affected if we were to tax everyone's income by an additional rate of 10 percent and distribute revenues from the tax hike equally between all wage earners. I showed how this tax-and-transfer scheme would reduce the Gini coefficient by 2 percentage points, and even when keeping in mind how this example did not include the unemployed, the elderly or children, the reduction was a clear indication of how such a scheme would achieve the goal of more equality.

While all calculations and illustrations in this thesis are only rough approximations, they may help in backing up the argument that parts of national income should be distributed more fairly than today, and that if it was to be done we would see an increase in equality. It could be a suggestion for further research to make more detailed calculations with the help of more complex statistical tools to try to get a more bulletproof estimate of the share of common income. The same can be said for the effect on inequality a redistribution of, for example, 10 percent of national income would have. It is also worth mentioning again that if introduced in less developed countries, the universal basic share could serve as a first step towards a more comprehensive welfare state.

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