Solving the problems of unconstrained technological innovation

Three models of inclusive society

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Executive summary

The recommendations in this thesis are relevant for research and consultancy firms specialized in social aspects of technology. The problem that is analyzed is how in the future society can remain inclusive, when faced with the problems of technological innovation and the possibility of it causing technological unemployment. Researching such societal problems is the goal of this thesis, and the results may be interesting for those (for example in consultancy firms) who seek to widen the concept of "inclusive society", by including ideas of what meaningful participation and individual autonomy could entail. For example, in the third model of inclusive society, maintaining individual autonomy includes providing civil society with true freedom for self-development. The discussion of how individual autonomy in this sense could be maintained, is closely related to the way work is funded, and how productivity gains in the economy are distributed to finance more work.

This thesis first describes two current models of inclusive society, which are evaluated based on their potential to ensure participation and to maintain individual autonomy, as well as on their financial feasibility as described in literature. In a third model of inclusive society, examined in this thesis, the concept of inclusiveness is widened to include not just having a job or an income, but having the opportunity to participate in society in a meaningful way without individual autonomy being undermined.

The third model of inclusive society is constructed by synthesising a collection of ideas found in literature. The first idea is that we can afford cultural services such as health care and education even when they are becoming more expensive ((Baumol, 1993);(Baumol et al., 2012)). The demand for cultural services will likely continue to increase, which presents an opportunity to provide meaningful work to those who have lost their job in the economy due to the consequences of technological innovation. The third model's financial feasibility is thus assessed based on the possibility of funding the growth of work in the cultural sphere.

A second idea or perspective that those concerned with inclusive society could use when discussing the concept, is that all work activities can be classified based on the need they meet: material or non-material. If the growth of material needs has limits, while non-material needs grow endlessly, it is likely that the cultural sphere will continue to grow relative to the economy. A data analysis of long-term trends in hours worked in the cultural, economic and political sphere shows that total hours worked in the economy tend to decline over time, while hours worked in the cultural sphere show a rising trend. In principle, this growth of work in the cultural sphere to could contribute to inclusiveness by preventing technological unemployment. However, how could the

growth of work in the cultural sphere be funded?

The third idea is that productivity gains in the economy (which meets material needs) could be used to fund the growth of work in the cultural sphere (which meets non-material needs), thus providing everyone the opportunity to participate. If the productivity gains that are made thanks to labour productivity improvements in the economy are made available to fund the growth of work in the cultural sphere, this could prevent technological unemployment. To this end, it is first determined that there are indeed, on average, more than enough productivity gains in the economy to fund the growth of work in the cultural sphere. However, this does not necessarily mean that individuals will also have meaningful work that respects their autonomy.

For the third model of inclusive society, funds would need to be made available and transferred to the cultural sphere in a way that does not undermine the individual autonomy of those providing and receiving cultural services. To this end the strengths and weaknesses of three methods of funding the cultural sphere are analysed based on a case study of education, and their ability to maintain individual autonomy (a criterion for inclusiveness in the third model) is assessed.

An important insight this thesis offers is that individual autonomy in education cannot be maintained so long as is funded by external (economic or political) parties that seek to further economic or political interests by meddling with the subject matter of education, in particular by determining the standards and quality control requirements of education. This implies that funding work in the third model can only lead to inclusive society if these funds are freely made available to the cultural sphere. It can thus be in the interest of civil society that the currently dominant role of the economic and political sphere reduces so that it does not determine the content of activities in the cultural sphere. Preventing external meddling in education means that the responsibility of quality control lies in the hands of the cultural sphere itself.

Some ideas as to what quality control of education by the cultural sphere could entail, and how the power relation with the other spheres could be managed are discussed. The suggestion is that funding education using a voucher system could lead to the quality control of education to be left to those providing and receiving education, which in turn could allow the cultural sphere to discuss the subject matter of education, in the context of tripartite negotiations between three autonomous spheres. For the third model of inclusive society freedom of education thus means that the current situation, where responsibility for funding and quality control both belong to the government as is described in the constitution, may have to be reconsidered.

When seeking solutions to societal questions, the problem often is that social problems

are often caused by conventional ways of thinking, and (complete) solutions do not yet exist or are not generally known. This thesis provides some 'building blocks' for a novel model of inclusive society, that may help those concerned with social inclusion to find new solutions by reconsidering the conventional way of approaching societal problems related to technological unemployment.

Contents

List of Figures

Introduction

Automation is a very widely used term, it describes the process of using a range of technologies to reduce the amount of labour that is used in a process. Automating, fully or partly, a labour-intensive manufacturing process for example increases labour productivity and reduces costs. Manufacturing has both a technological and an economic definition. The first is a process to alter the properties of a material to make a product, and the second is to transform a material into an item of greater value (Groover, 2020). However, there are more processes that can be automated using, for example, computer aided technologies, sensors or a combination of multiple methods. Since development of more advanced automation technologies has continued unhindered, questions into what this will mean for the future of labour and labour productivity are being increasingly brought up.

Two future perspectives

Two future perspectives are most prevalent in current literature, regarding the developments that could take place if the current pace of technological progress and policy making continue as is. These perspectives refer to developments that could occur if no action is taken. The first is that there will be no work. The underlying theoretical principle is that the cost of labour should be minimized to maximize profits. If automation is required to reduce costs, this means that labour is becoming too expensive both in and outside of the economy. In health care and education for example, the cost of labour also has to be reduced or else these services will become too costly. This problem is called the 'Cost Disease'(Baumol, 1967a). The idea behind Baumol's Cost Disease is that the economy can not support the rising costs of labour in health care and education, which means the labour productivity in these sectors will have to increase. Because labour is the largest share of the costs in health care and education, the best way to decrease the costs is automation and robotization.

Over time, innovation in automation technology continues up to the point that there is essentially no need for labour. Generally it is cheaper to produce goods and provide services using machines compared to human labour, which causes technological unemployment on a large scale. In the first model of inclusive society, it is proposed to keep society inclusive by providing a Universal Basic Income (Van Parijs & Vanderborght, 2018). This policy is also referred to as an Unconditional Basic Income(UBI), where the unconditionality of the income is not based on the condition of needing it(for example due to unemployment) and it is being paid on top of any additional income. In this proposal a UBI, of which there are many types and variants, replaces or compensates

the incomes of those who do not have work. A major criticism of this policy, aside from the massive costs, is that it reduces citizens to consumers and does not allow them to participate in society. This may lead to increased social inequality and decrease social mobility (Hassel, 2017).

The second perspective considers a future with work, but expects a change in the nature of work. Empirical observation shows that the increase in unemployment might not be as severe as some authors expect, because there is a significant growth of administrative, bureaucratic and management jobs (Graeber, 2018). In all sectors an increase in management and administrative staff is occurring, which is linked to a practice called New Public Management. In short, New Public Management encourages the sparse use of resources by controlling outputs of a company or public service through increasing supervision and regulation (Lorenz, 2012). Due to the increasing need to monitor and control the labour of those who create value, more jobs will be screen-sitting jobs of a bureaucratic and administrative nature. Increased reliance on protocol causes people to lose individual autonomy and perform jobs that do not add value both in economic or cultural sense. According to Graeber, these jobs take up time, keep employees busy, but are pointless in the end (Graeber, 2013). This does pose the questions whether, in this perspective, individuals have the autonomy to decide how they use their time, and resources.

So continuing unconstrained technological innovation has led to questions being asked about how such a future society will remain inclusive to all without compromising individuals' autonomy and responsibility. Interestingly, in both perspectives unconstrained innovation does not lead to more prosperity. Rather these two default perspectives illustrate that if no action is taken, the potential outcomes do not look too well. Historically the main goal of technological progress is to improve peoples lives, however it seems now that this progress itself has become a problem. This is why it is important to consider whether there is a third model that addresses the shortcomings of the other two. Hence, the main research question is:

"Is a third model thinkable that offers everyone opportunity to participate in society in ways that do not undermine the autonomy of individuals?"

Does inclusive society mean that everyone has to be provided with just an income or a job, or with the opportunity to participate in the political, economic and cultural aspects of society in a meaningful way? The difference between the first two and the third model is how inclusive society is defined. It could be defined as everyone having an income or a job, but this definition potentially has as a consequence that this inclusiveness comes at the expense of participation and/or individual autonomy. This will be elaborated in

the detailed description of the first and second model of inclusive society. These are reasons why a third perspective, that explores different possibilities than the default perspectives, is worth considering.

In the third model, inclusive does not merely mean having an income or job, but being able to participate in society in a meaningful way. This includes questioning where automation is necessary, desired and possible. To determine whether such a model could be possible and useful, the physical, goods-producing economy is distinguished from the cultural sphere. Differences in the potential for labour productivity improvements are one reason why this distinction is made. However, the most important reason is that it separates activities that revolve around material growth and well-being from those related to non-material growth and human potential. This is an unusual distinction of sectors, however it is needed in this case to illustrate differences between the cultural service providing sectors, which will be called the cultural sphere and the physical goods-producing material economy, which will be called the economy. The economy consists of the sectors that fulfill the material needs of livelihood, whereas the cultural sphere provides immaterial services to aid and support the development of knowledge and insight.

The expectation is that the number of hours worked in the goods-producing economy will decline over time, which implies that a greater number of hours becomes available for other sectors. At the same time, improvements in the standard of living allows people to focus more on non-material goals (Keynes, 1930), which leads to higher demand for services provided by the cultural sphere. If this expectation becomes reality, the way additional work in the cultural sphere is funded becomes of great importance, due to the implications this can have for the autonomy of the individuals providing and those needing these services. Hence, a distinction between economic, cultural and political sphere activities is required to allow meaningful discussion of the viability of a third model of inclusive society.

Researching the feasibility of a third model of inclusive society

The idea to research the feasibility of a third model of inclusive society stems from the problems that are faced when dealing with technological innovation and the possibility of it causing mass technological unemployment and an increase in low-paid, unchallenging jobs. By questioning how society, in these circumstances, can remain inclusive, this thesis starts with a literature based description of three models of inclusive society in Chapter 1. In this chapter the impact of automation on work and the models of inclusive society are described by determining what the role and meaning of work in

current models of inclusive society is. An evaluation framework is used to qualitatively assess the shortcomings of each model. The literature research revealed that there are currently two perspectives of what models of inclusive society could look like if progress continues at its current pace. These two models of inclusive society are based on different expectations of to what extent technological unemployment will become a problem. The literature the third model is based on is discussed, and the research that leads to answering the main research question, whether the third model is feasible, is split into two sub-questions.

1. Is it financially feasible to fund the work that is required to allow everyone to participate?
2. Is it possible to fund the third model in a way the safeguards the autonomy of those working in the cultural sphere as well as of the individuals receiving cultural services?

Chapter 2 focuses on sub-question 1. To answer sub-question 1, the growth of work in the cultural sphere compared to the economy and the political sphere is analyzed first. In Chapter 2 it is researched to what extent the cultural sphere has grown compared to the economy by analyzing which patterns of decline and growth of work has Dutch society gone through between 1970 and 2017. To analyse these patterns a sector classification that defines to which sector an activity belongs is made. Three sectors are defined, the previously mentioned economy, cultural sphere and the legal-political sphere. This classification is, after the data are modified and grouped accordingly, used to asses the total hours worked per sector over time. Possible explanations for the found patterns, such as an increase in the total hours worked in the cultural sphere, are discussed. As the hours worked in the cultural sphere keeps on growing compared to the economy, the labour required to provide cultural services could become too costly as is described by the Cost Disease. The subsequent need for labour productivity improvement to reduce the costs of these services would make the first model of inclusive society an inevitable outcome.

This is does not have to be the case. In 1993 and 2012 Baumol revised his earlier work on the Cost Disease, and stated that a growing health care and education sector can be financed, but not by increasing productivity (Baumol, 1993). Due to productivity growth in the economy people are able to both afford more goods and increased spending on cultural services. Only the way money spent is divided between the two changes (Baumol et al., 2012). In Chapter 2 it is found that due to both price and quantity effects, it might be possible to prevent technological unemployment by funding the growth of work in the cultural sphere. Education and research that takes place in the cultural sphere is what causes continued productivity growth in the economy. These productivity

gains could be used to finance the growth of work in the cultural sphere.

In Chapter 3 it is researched whether the productivity gains achieved in the economy are sufficient to fund the growth of work in the cultural sphere. These productivity gains are determined using a model. First, the variables that are required to make the analysis are combined with the data set that was constructed for the total hours worked analysis. Then, the productivity gains are calculated using total value added in a year. Considering the value added from this year it is calculate how many hours of work that would have taken with the productivity of the previous year. This shows how many hours would have to be worked in the previous year to achieve the same value added. This hypothetical number of hours is subtracted from the actual hours worked and multiplied with the real wage to obtain the productivity gains of that year. Also, the required funding of the cultural sphere is determined using the real wage and increase in hours worked. These two figures, the productivity gains and required funding of the cultural sphere, are compared to determine whether the growth of work in that year could be funded. Using the results of the model it is found that the productivity gains are generally more than enough to fund the growth of work in the cultural sphere.

Because there is no shortage of money to fund work, the technological unemployment that is described in the first model of inclusive society is not inevitable. The second model of inclusive society already describes a future with participation, but the downside is that the nature of work leads to loss of individual autonomy. Funds provided by the government, businesses and even charity provide opportunities to meddle in the subject matter of education and research, which corresponds with a decrease of individual autonomy in these activities. So now the question of maintaining the autonomy of those working in the cultural sphere as well as those needing cultural services, sub-question 2, still has to be addressed.

Sub-question 2 is addressed in Chapter 4, where different methods of funding the cultural sphere are discussed through the lens of education, with the goal of recommending one distribution method that suits the third model of inclusive society best. The strengths and weaknesses of the two most common distribution methods, the first being taxation and redistribution and the second being financing through the market, are analysed based on their ability to minimize the loss of individual autonomy. The importance of individual autonomy in the third model of inclusive society is discussed in detail, since the wide definition of individual autonomy constitutes the philosophical basis of the third model of inclusive society. After this the potential of a third method to transfer funds to the cultural sphere that minimizes the loss of individual autonomy and responsibility in education, a voucher system, is discussed. The idea is that, by first separating the funding and quality control of education, the responsibility for quality

control of education is taken over by an autonomous cultural sphere. Examples of how this could be organised, and how the autonomous cultural sphere could work together with the economic and political spheres, are discussed.

Finally, the third model of inclusive society is subjected to the same evaluation framework as the first and second were in the first chapter. By reflecting on literature, combined with the knowledge and insight this research has provided, it is discussed whether a third model, that offers everyone opportunity to participate in society in ways that do not undermine the autonomy of individuals, is thinkable.

An overview of the main research question and the Chapters is provided below. Note that after the literature research in Chapter 1, sub-question 1 is addressed in Chapters 2 and 3, and sub-question 2 is addressed in Chapter 4.

Main research question: Is a third model thinkable that offers everyone opportunity to participate in society in ways that do not undermine the autonomy of individuals?

Chapter 1: What is the role and meaning of work in current models of inclusive society?

1. Sub-question: Is it financially feasible to fund the work that is required to allow everyone to participate?

Chapter 2: Which patterns of decline and growth of work has Dutch society gone through between 1970 and 2017?

Chapter 3: Are the productivity gains achieved in the economy sufficient to fund the growth of work in the cultural sphere?

2. Sub-question: Is it possible to fund the third model in a way the safeguards the autonomy of those working in the cultural sphere as well as of the individuals receiving cultural services?

Chapter 4: How are productivity gains transferred from the economy to the cultural sphere, and what have been implications of conventional modes of funding education for freedom of education?

Relevance to Engineering Policy Analysis

Technological innovation that leads to gains in efficiency and productivity can on the one hand over time diminish costs and drive economic growth. On the other hand it can yield greater inequality and, as automation substitutes more labour, it has the potential to greatly disrupt inclusiveness. This is one of the grand societal challenges for which at this point it is not clear whether the former, the latter or a combination of the two scenarios

will emerge. By qualitatively assessing models of inclusive society, both societal and economic implications of the potential consequences of technological innovation are discussed. The conceptualisation of three spheres of society, and subsequent analysis of the contributions of each to inclusiveness, are the key to finding a new model of inclusive society.

To determine the financial feasibility of the new model of inclusive society, an attempt is made to quantify the productivity gains achieved in the economy . The model that is used to achieve this (indirectly) quantifies the amount of labour that is saved in the economy by the cultural sphere. Describing the technical relationship between ideas (which materialise for example as the invention of new labour-saving machines) and the resulting growth of productivity gains or 'freed capital' requires detailed analysis of this complex system. The model is used to analyse this system and to obtain a quantitative value for the total productivity gains. Quantifying a variable that is difficult to measure directly may contribute to better-informed decision making.

Having knowledge of where the money that funds the growth of cultural comes from allows decision makers to determine whether we consciously chose to end up in the situation we are currently in, and how we could change course. Based on this knowledge, decision makers can try to prevent the disruption caused by technological innovation, and prevent the domination of the cultural sphere by the economic and political sphere. Having a complete overview of all the possible models of inclusive society improves decision makers' ability to make the necessary adaptations. The final recommendation of a distribution policy that suits the new model of inclusive society may help decision makers (in all spheres of social life) to decide how the heart and soul of civil society can be empowered under rapidly changing socio-economic circumstances.

Chapter 1

What is the role and meaning of work in current models of inclusive society?

In this chapter the role and meaning of work in current models of inclusive society is discussed. The research question is centered around a third model of inclusive society, which means the first two existing models have to be discussed first. The role and meaning of work in the future is a large aspect of what differentiates the three models, and the focus of this chapter. As more and more human activities are being standardized and automated, it has become apparent that if this trend continues human beings can both reap the benefits of these developments, and/or suffer the consequences of technological unemployment. It is not certain that the first or the latter will become a reality, as there are many potential outcomes of this process, also called the Fourth Industrial Revolution. The Fourth Industrial Revolution is not exclusively linked to one model of inclusive society. It describes changes in the nature of work and the pace of change due to current innovations in automation technology, and how they differ from for example the Industrial revolution. First, the impact of automation on work is discussed. Then, three models of inclusive society are described and their shortcomings discussed.

To ensure a fair and consistent comparison between the three models of inclusive society, a framework that details on which variables they are evaluated is developed. This qualitative evaluation framework consists of three variables and it is applied to each model after it is detailed what the model entails. The three factors that the framework

is based on are:

1. Participation
2. Individual autonomy
3. Financial Feasibility

The meaning of these factors will be discussed in detail in this chapter, but in short they are defined as follows. The first factor, participation, refers to what extent people have the opportunity to participate in society in a meaningful way, if the perspective presented in the model becomes reality. The second factor, individual autonomy, refers to the amount of freedom people will have in developing their rationality, capacities and judgement. The final factor refers to whether the presented perspective is financially feasible, and how the financial feasibility is assessed.

Once the literature that describes advantages and disadvantages of the model is discussed, the evaluation framework is applied for two purposes. The first is to provide a means to objectively compare the models, but it also facilitates a discussion regarding the aspects of the models are not considered or discussed sufficiently. In these discussions, it is detailed why there are sufficient reason to look further than the first two models. Hence, the goal of this chapter to present an overview of which perspectives of what inclusive society might look like are currently being discussed and researched. Considering the disruption caused by the Fourth Industrial Revolution, it is argued that a third model can be a usefull addition to this discussion.

1.1 Model 1: Solving the consequences of technological unemployment using a basic income

The first model of inclusive society aims to reduce income inequality by providing a basic income. As detailed in the previous section, technological unemployment is the reason why a basic income is needed. The development of advanced automation technologies has, in this perspective, over time not only caused the need for work to decrease in the economy, but also in the cultural sphere. In this case work becomes too expensive or is obviated entirely which leads to a decreased need for work. Thus, a basic income is needed to aid in the transition to a future without work and could eventually replace peoples income entirely. There are, and have been, many different proposals for types and variants of basic income since the income redistribution policy idea was presented (Friedman, 1962). The goals of a basic income range from guaranteeing an income that ensures a standard of living above the poverty line for all citizens, to less drastic measures

such as maintaining income of workers in sectors that are subject to automation. A basic income is at its core a "regular income, paid at intervals that may vary from one version to another" (Van Parijs & Vanderborght, 2017). There are advantages and disadvantages to this policy, which defines the first model of inclusive society.

1.1.1 The impact of automation on work

In this section the general impact of automation is discussed, to show what impact it has on work and employment. Unconstrained technological innovation in a free-market economy will continue to impact employment. Research that discovers new technologies in fields such as genetic engineering and nanotechnologies lead on one hand to the belief that we will at some point live in an utopian society, but what exactly will this society look like? Since on the other hand, concerns about a possible dystopian future society, where unintended consequences of technological progress have given a small number of individuals control over everyone else, arise. (Joy, 2000). These perspectives are two dramatic opposites, however they do illustrate how important is it to consider what direction society is heading in. If repetitive tasks such as stacking shelves are taken over by machines, does that free people to do more creative tasks and help them reach their full potential? Can and does everyone want to do creative work, and will people who are less creative than others benefit from automation as well or will it for them only increase income disparity? Understanding what potential disruption automation can have, and what skills one could acquire that will be still usefull is key in answering these questions.

A wide selection of literature is available concerning the impact of automation on employment. The extent to which a job is susceptible to automation varies, depending on the "Probability of computerisation, wages and educational attainment"(Frey & Osborne, 2013). Computerisation is defined as a job being automated due to the labour being performed by computer-controlled equipment. The model developed by Frey and Osborne predicts that on one hand jobs in logistics, administrative support workers and low skill service occupations are highly susceptible to automation. On the other hand high wages and educational attainment jobs are at low risk of computerisation, with some exceptions(Frey & Osborne, 2013). This indicates that unconstrained technological innovation can, in the near future, lead to technological unemployment.

There is a difference between recent developments and previous revolutions in the labour market, because during the First and Second Industrial Revolution new technologies were used to simplify previously complicated manufacturing tasks (Frey & Osborne, 2013). This process created many middle income jobs (Goldin & Katz, 1998). During the

Third Revolution computers and information technologies caused the amount of high and low skill jobs to increase, and the middle share of this distribution has declined, which means the number of middle income jobs declined (David & Dorn, 2013). In a perspective where the speed of current breakthroughs causes technological unemployment, the high probability of low skilled jobs to be automated means that only jobs that require creativity or social intelligence will be available. This process is called the Fourth Industrial Revolution due to the scope, velocity and impact of the changes (Schwab, 2017).

Furthermore, it is detailed how technological innovation leads to technological unemployment using a model in which robots compete against workers. Using this model it was concluded that if robotics technology continues to improve over the next two decades, the world stock of robots could quadruple, which leads to a lower employment to population ratio and lower wage growth (Acemoglu & Restrepo, 2020). Hence, it is clear that there is a wide range of factors that have an impact on how quickly technological innovation can decrease the need for physical labour. It also means that according to literature a future perspective where technological employment is widespread, is realistic. Both companies and governments have a role to play in keeping up with the accelerating pace of technological change. Government could guide the market forces that drive automation towards positive outcomes, and at the same time maintain inclusive society by preparing a basic income as a social safety net (Grossman, 2021). A basic income policy is central to the first model of inclusive society. Under the assumption of unconstrained innovation in a free-market economy, it is described how the problems of technological unemployment can be faced.

1.1.2 What is a basic income?

A basic income proposal should detail exactly what amount of cash is paid and which territorially defined community is eligible. Furthermore is has to be decided whether the amount should be uniform or vary with age and location(Van Parijs & Vanderborght, 2018). These specifications can be made based on the means of the government that wishes to implement the policy, and what they aim to achieve with it. An important argument that proponents of a basic income bring up is that it ensures a standard of real freedom for all. This standard refers to the financial freedom of individuals that is provided by a basic income. A type of basic income is known as the Unconditional Basic Income is the version of a basic income that is chosen for this thesis. Elaborate definitions of their Unconditional Basic Income, how it can be implemented and what impact it could have are provided by van Parijs & Vanderborght in their book titled "Basic Income". There is a constant debate surrounding what the appropriate name for

a basic income scheme should be, and what it means when an income is "universal" or "unconditional", and the popularity of the terms has changed over time. It has also been studied what name a basic income should have in order for people to be more open to the proposal, for example calling it the "Freedom Dividend" which implies that as a member of a modern progressive society one is entitled to a dividend of its wealth(Yang, 2018). The wide variety of names, and the large implications of a different interpretation of the meaning of words used in the name of a basic income policy, is why one variant is chosen. In this case, that is "basic income" since that is what it is called in the book the definition is based on.

Most importantly, the income has to be unconditional in three main ways, it is an individual entitlement, it is universal meaning it is not subject to other income and it is obligation free (Van Parijs & Vanderborght, 2017). Obligation free in the sense that one does not have to be willing to work at all times. Everyone is entitled to the income, one does not have to prove they need it to survive, and one does not have to state they are willing or trying to find work to receive it. This once again highlights the massive impact slight changes in the way a basic income is implemented can have on society.

1.1.3 Advantages and disadvantages of a basic income

In this section an assessment of current literature regarding a basic income is made. There are multiple arguments against and for a basic income. This thesis does not aim to prove or disprove these arguments, but it is important to include a full description of the pros and cons of the policy that defines the first model of inclusive society. One of the ideas of a basic income is that it allows attainment of higher education and other personal development without the main consideration being how much money it will earn them. Studies in Finland and the USA have shown a higher average education attainment to families that were provided with a basic income over an extended period(Kangas, Jauhiainen, Simanainen, & Ylikännö, 2019). At the same time, it provides an income to those who have lost employment opportunities due to not only technological innovations such as self driving vehicles and robotization but also globalization and migration.

A basic income, being a redistributive cash transfer, could achieve a reduction of income inequality. The massive costs of the policy in general are a concern, even though the total expense would be less than what is currently being paid as wages, it would not fully replace these wages. The financial feasibility is still being researched, proposals usually include "increasing taxes on the very rich" (Frayne, Goodman, Jones, & Kellam, 2021), or funding the basic income using personal income tax and value added tax (Van

Parijs & Vanderborght, 2018).

An argument against the basic income is the concern that the supply of labour is badly affected by the combination of two things: an obligation-free minimum income and the increased taxation of the productive activities that are required to fund this income (Van Parijs & Vanderborght, 2018). It is stated that a basic income enables people to work because it opens up the possibility of taking a low paying job while maintaining the possibility to avoid lousy or even degrading low paying jobs. This means that people can both say yes to a job because they know their basic income will not be reduced, and decline a job because they are not so pressed for income that they are forced to accept it. This is why the previously mentioned "unconditionalities" ensure that the basic income is not used as means to exclude people, or as way to subsidize employers who underpay their employees, since these outcomes are prevented by the universal and obligation free nature of the income. The first creates possibilities and the second enhances them by lifting peoples obligations. In doing so extreme poverty can be reduced and participation in societies cultural, political and economic activities could increase. The balance between enabling people to work without being forced to do so to fulfill their material needs, is at the centre of the discussion about the positive or negative effects of a basic income on wages(Van Parijs & Vanderborght, 2017).

The incentive to work is not purely material as people also work to earn respect, social status and fulfillment of expectations. Thus a decrease of marginal gain would not discourage workers(Van Parijs & Vanderborght, 2018). However, this indicates that basic income is aimed to aid those who do not have employment and/or are at risk of poverty. This means a basic income benefits the margins of society at the expense of the middle class, causing a further divide in society and preventing social mobility(Hassel, 2017). This is why it is argued that a basic income lacks social legitimacy. It also implies that an unconditional basic income runs counter to the needs of a society with rapidly growing immigration. This might seem counter intuitive, because why would immigrants not benefit from a basic income? The argument is that they need to work to be included in society, and merely providing them with an income would, in the long term, decrease their participation in society(Hassel, 2017).

A relevant section from the article "culture of giving" describes why it is wrong to create a culture where it is assumed that people who can not afford basic necessities have to be supported by the rest of the population. *"The problem, apparently, isn't that capitalism's institutionalization of immoral maxims ends up leaving billions in poverty and hundreds of millions in existential need of food, water, shelter, and basic medical care. Instead, the problem becomes that relatively affluent individuals haven't bought those necessities from the capitalist class for the hundreds of millions that need them; the comparatively wealthy have*

been "living high and letting die" either out of ignorance of what their money could buy or out of weakness of will in the face of a consumerist society. The solution, then, is to raise awareness of what money can buy and create a "culture of giving." But this misdirects the impetus to address these issues into little more than a critique of personal spending habits."(Snow, M, 2015). Effective Altruism implores individuals to use their money to buy necessities for others who desperately need them, but says nothing about the system that determines how those necessities are produced and distributed in the first place. The point of a basic income is that it compensates for the loss of income due to technological unemployment.

At first glance these both seems to be a good thing, but at the same time it means nothing needs to be done to solve the cause of the problem, technological unemployment itself. Why is there technological unemployment, why do we allow it to grow, and is it inevitable? This argument is similar to Snow's argument who states that you can create a "culture of giving" in the form of charity, but why is that culture necessary? The reason is poverty, and should the question not be whether the way the economy is structured causes this poverty, and should we not do something about that? So rather than asking how individuals can guarantee the basic sustenance of millions of people, it is suggested that is should be questioned why we should strive for an economic system where this becomes necessary. Rather than solely creating an individualized "culture of giving," we could focus on challenging capitalism's institutionalized taking (Snow, M, 2015).

1.1.4 Evaluation of the first model of inclusive society

The advantages and disadvantages according to literature have been described and the evaluation framework can now be applied. The first factor, participation, is central to most discussion regarding the first model of inclusive society. In the first model of inclusive society peoples possibility of engaging in society's activities, and influence decision making processes is reduced. This is mostly due to labour being too expensive, however, there are many activities outside the economy where the amount of time spent providing a service is equivalent to the quality of the labour, and where the productivity thus remains constant. This idea originates from an article written by economist William J Baumol in 1967. In this article he makes a distinction between a 'technologically progressive' economy and 'technologically stagnant' sectors. These stagnant sectors are for example the performing arts, education, health care, research and other 'personal services'. He correctly predicted that the costs of health care and education would continue to rise significantly in the future, and stated that this could not be prevented due to the nature of these activities. The idea that work outside the technologically progressive economy, in 'technologically stagnant' sectors such as education, research, the fine arts, and health care is becoming too expensive has been named the 'Cost Disease'. In

short the Cost Disease means that these (cultural) activities can not keep up with labour productivity increases in the technologically progressive economy, which leads to work in these fields becoming more and more expensive (Baumol, 1967b).

It is suggested in literature that a basic income policy has the potential to improve participation by enabling people to work. Since due to technological innovation so much work has been obviated in both the economy and the cultural sphere, how would those affected still be able to find work? If there is still enough work to, would there not be no technological unemployment and thus no need for a basic income? Also, no discussion is found of what exactly the, primarily financial, freedom a basic income would provide is. The potential a basic income has to decrease social mobility could mean that people are prevented from carrying out their aspirations and ideals. This reiterates why merely providing people with an income should not be the goal of inclusive society. Instead it is repeatedly stated that the time is right for a basic income because it has "the potential for a wide range of positive impacts for specific social groups"(Frayne et al., 2021). Which in itself seems to be a good thing, but the resulting push for pilots has come at the cost of a discussion of what it means when it is accepted and assumed that there will be mass technological unemployment in the future. More importantly, whether this is a future we should strive for? In this perspective it is unlikely that people are able to participate in society in a meaningful way in the first model of inclusive society. The key criticism being that a basic income would not change the economic system, rather it would pamper the "free market", offering a solution to without addressing the cause of the problem.

It is hard to foresee what a basic income will mean for the individual autonomy of citizens, and their relationship with the government. Receiving the income unconditional of how much wealth one has, likely still means some conditions will have to be met such as, having a digital ID, maybe a smartphone with an app or other privacy sensitive control mechanisms. Once there are conditions in place, they can be altered to become more stringent at any time. The significant increase in power of the government institution that distributes a basic income could go hand in hand with for example enforcement of ever stricter rules in fields related to the development of capacities, such as education and health care. What real freedom does a basic income provide, if the distributor of the income can use it to for example confine scientific freedom? It might now seem that it is assumed that as the state is granted more power, it will eventually use that power to oppress its citizens in ways that are famously described by George Orwell in his novel 1984. It is unlikely that such a dystopian society would emerge solely due to a basic income policy. Still, the possibility to impair individual autonomy using the financial power the distribution of a basic income provides is there.

To provide an example, a development that has impacted society recently is used; the war on terror, specifically all the increased safety and security policy measures that are associated with it (Trojanow, Zeh, Alvizu, & Petersdorff, 2015). In Germany, massive systems that include local, regional as well as national governments have been developed to prevent passport fraud. However, it was determined that over the past 5 years, only 3 occurrences of passport fraud had been detected (Trojanow et al., 2015). This leads to questions into why such a system is wanted or needed. The research concluded that as society has grown over the past millennia, it also became less orderly. People are more anonymous and for policy makers this poses a new challenge to keep things under control. In other words, how can it be ensured that people behave nicely? If one has to work, then there is always a degree of structure and social control as you can be corrected and kept in check by your colleagues. This control could cease to exist due to a basic income policy, and it has to be reconsidered by the government what it is that prevents people from doing whatever crazy things. Already having a digital platform available to them to engages with citizens could easily tempt them to use it as a means of keeping an eye on them as well. This dualism is the ever present trade off between human behaviour and freedom, and it makes you wonder whether a government provided solution such as a basic income would not just address a symptom of social problems instead of the cause itself.

The search for what name a basic income policy should have to make it more acceptable is an indication that a "free money for all" policy is not (jet) feasible. There have also been many calls of support for the policy, or at least for more research, which is an indication that it is becoming more and more accepted (Frayne et al., 2021). Overall, the funding of a basic incomes itself does not seem to be the most problematic aspect of the first model of inclusive society. The question whether the first model of inclusive society is financially feasible is first and foremost: why is there no work? The argument goes that work is too costly, especially outside of the economy as is described in Baumol's work on the Cost Disease. The efficiency in education, research and healthcare has to increase, or else we will not be able to afford these cultural sphere activities. If it is true that all this work is not financially feasible anymore, then the total hours worked will have to decrease and the consequence is an increase in technological unemployment.

The point of the concerns mentioned is that with the renewed popularity of the basic income policy, vast literature regarding its potential to improve peoples (mental)health and diminish the negative consequences of labour market disruption (Frayne et al., 2021) has been published. A basic income could enable those without work to learn and find a new way to contribute. At the same time if a basic income is needed it has to be the case that there is simply not enough work or it is too expensive to fund it,

then how could a basic income increase participation in any aspect of society? It is not clear how providing those whose work has been obviated with an income and not with the opportunity to participate in a meaningful way would benefit them (Naastepad & Houghton Budd, 2019) and could be considered inclusive. The extent to which a basic income addresses the cause of problems of unconstrained technological innovation, and what implications it can have on the relation between citizens and the government, is unclear. Thus there are plenty of reasons to asses what inclusive society could look like from a different, second perspective.

1.2 Model 2: Full employment, but less meaningful work

The main difference to the first is that in the second model of inclusive society, full employment is maintained under unconstrained technological innovation. This means there is no technological unemployment, and thus no need for a basic income. As was detailed in Section 1.1.1, there is a lot of literature that describes a future with technological unemployment. However, the same can be said for literature that states technological unemployment is and will not be a problem. In this section it is discussed how an increase in administrative and bureaucratic jobs make a future without work unlikely. The innovations, and subsequent labour productivity improvements in the economy still obviate labour. In the first model this leads to technological unemployment because labour that is obviated in the economy is not re-purposed or applied somewhere else. In this second model of inclusive society, there is new work is available that allow people whose work is obviated to still have an income and participate in the form of bureaucratic and administrative work. Since there is no technological unemployment, but labour productivity improves at the same rate as in the first model, the question then becomes, what exactly will these jobs entail?

In the second model of inclusive society a trend that is currently being observed continues, and that is an increase in administrative, bureaucratic and screen-sitting jobs(Head, 2011)(Graeber, 2013)(Naastepad & Mulder, 2018)(Verger, Parcerisa, & Fontdevila, 2019). Because this trend is currently being observed, the second model of inclusive society is one of the two perspectives that describes a form of inclusive society that could occur when the current situation continues. In order to discuss the implications of this trend, and what the problems of the second model of inclusive society are, subjects such as individual autonomy and freedom of education will be discussed. In doing so, fundamental questions about how these subjects relate to inclusive society and technological innovation will be asked. I will not attempt to directly answer these questions. It is however important to include them in the discussion of the second model of inclusive

society, since they illustrate why a third model could be useful.

In the second model technological unemployment is prevented by maintaining (near) full employment, however, a growing number of these jobs are of a bureaucratic or administrative nature. While the number of manufacturing jobs has been decreasing, a trend of increasing managerial and administrative employees, especially in the public but also in the private sector, has been occurring in the previous decades (Graeber, 2013). The process that breaks up the public sector in individually manageable parts and applies private sector management techniques that aim to increase efficiency is called New Public Management. This process also causes a significant increase in the need for auditing processes and therefore creates more administrative tasks (Lorenz, 2012). This increasing managerial control and bureaucracy decreases individual autonomy, and leaves people to do "bullshit jobs" (Graeber, 2018). In order to increase effectiveness and productivity, systems of performance measurement initially developed for private companies are applied to the public sector (Sekera et al., 2015).

1.2.1 New Public Management

New Public Management is part of an economic ideology called Neoliberalism. In the public sector, the goal is to break up institutions and organizations in individually manageable parts. Then, private sector management techniques that aim to increase competition, encourage sparse use of resources and introduce performance indicator measurements that standardize measuring outputs are implemented(Lorenz, 2012). This practice was developed in the 1980's and imported from the US to Europe over the past 40 years. In New Public Management, there is an emphasis on control over and transparency of the use of resources. This is because the public sector is largely funded by taxpayers though the government, and the taxpayer deserves value for money. This emphasis on control and transparency goes hand in hand with an emphasis on supervision and regulation. Furthermore, in the pursuit of optimizing the quality, efficiency and productivity of a public sector activity, there is little space left for criticism on New Public Management, because the management is what is solving problems. Since management aims to implement antibureaucratic practices they themselves can not be the problem, even though the result of these changes is a sustained growth of management staff (Lorenz, 2012).

Now, an example of New Public Management and the way it impacts the cultural sphere activity education is given. A good example of a public sector where this has process has been taking place since 1980 is the British education sector (Head, 2011). Information technology(IT), has facilitated the implementation of the extensive management sys-

tems that now dominate the life of British academics. A management practice, imported from consulting firms, called the "Balanced Scoreboard" states that the Key Performance Indicators(KPI's) of education and research should focus on "relations with customers", "internal business process"," profit and loss", and "innovation and learning". The government assesses research excellence, which determines how funds are distributed, based on these KPI's. Having a mechanism of quality control is not in itself a bad thing, however in 2008 the bureaucracy that handles the administration of this process received well over 200.000 "items of scholarship", which were stored in multiple unused aircraft hangars. All of these academic works are rated by different panels, based on the mentioned KPI's, and given a score between 1 and 4. The results are then used to show whether or not the taxpayers get value for their money. A constant pressure to submit "units of research output" to secure funding, shifts the balance of power from researchers towards university administration managers. It also promotes short terminism, narrowness of focus and intense pressure to publish in top journals (Head, 2011).

The private sector's involvement in education overall has increased significantly. A number of businesses and corporations have created the so called Global Education Industry(GEI). Over time the GEI has started to influence education policies through a mix of philanthropic, charitable and private foundations. These organizations apply a method called network governance, where they partner up with the public sector to transform the education sector. Private companies apply consultancy principles to reform the education sector similar to how New Public Management aims to increase effectiveness of the public sector. Especially in higher education this has lead to a "consultocracy". (Verger, Lubienski, & Steiner-Khamsi, 2017). This process has also led to increased bureaucratization of the education sector, since academics across all universities have been forced to decrease the amount of time they spend teaching writing in favour of more assessing and quantifying everything they do. It is also illustrated by an increase in the amount of administrative and supporting staff in universities. (Graeber, 2018) This again poses the question whether New Public Management does in fact bring about the desired productivity and efficiency increases it promises.

Health care is another sector where the individual autonomy of the ones providing, as well as of those using the service is limited by an increasing set of rules and administrative oversight. Under the same credo as in education, promoting the effective allocation of sparse resources, NPM type policies have been implemented that aim to cut the cost of health care. Cutting costs and making sure good quality health care is provided for the best price is not a bad thing. However, the result of these policies has also been that a large share of the expenses of health care institutions is the administrative work

they have to do to show they are effective (Himmelstein et al., 2014). Demographic factors do not account for the rising costs in health care. The health care market was created to allow competition to drive price down, and at the same time the set of rules that is imposed on health care institutions grew. These rules come mostly in the form of protocols, also called "richtlijnen", that detail what medicine and treatment plan is to be used for what illness. Deviation from these protocols without a very good and well argued reason, can have great consequences for both the patient and the health care provider if the treatment is not effective.

Still, why would these rules that are designed to ensure the right care is provided be bad, other than that they go hand in hand with an body of administrators? The potential problems lie in who dictates what these rules are, and the way the service is financed. If a doctor has to follow a Diagnostic and Statistical Manual(DSM) and prescribe exactly what medicine and treatment are in that manual, an insurer might not pay for the treatment and he could get in trouble. The quality of health care now depends on whether in a "managed care" system, health care managers can provide better care than doctors who are in direct contact with their patients(Head, 2014). Take for example the diagnosis of ADHD, doctors in The Netherlands have to prescribe Ritalin for children that are diagnosed. This means that when a doctor suspects the problem originates in other external factors such as the social background and circumstances, he or she can not pursue these questions further(Wedge, 2012). As for the ones using the service, if for example the parents refuse to give their kid the prescribed Ritalin, the kid can be denied entry to schools.

Furthermore, a survey in Britain and Holland has found that around 40 of workers is convinced that their job makes no meaningful contribution to the world, thus indicating they feel as they are in a so called "Bullshit Job" (Graeber, 2018). In the long term, the problem of technological unemployment would be solved by an increase in administrative and managerial jobs that keeps them occupied, without making a meaningful contribution to society.

1.2.2 Evaluation of the second model of inclusive society

In the second model of inclusive society, technological unemployment is not a problem. People will have the opportunity to participate in society, it is the administrative, and protocol based nature of the work that begs the question whether there is true freedom in this model of inclusive society. In the previous section an example details how the autonomy and freedom of researchers is impeded by ever expanding administrative duties and responsibilities. The examples provided in Section 1.2.1 illustrate how an

increase in administration and management can cause a decrease in autonomy of in this case academics and health care providers, and those receiving the services they provide. The reason for the creation of such a vast administration is allegedly to promote the effective allocation of sparse resources.

In the education example, this pressure for accountability of the use of these resources, through incentives and penalties, has created an audit culture that forces academics to spend a large part of their time and energy to produce reports instead of teaching or doing research. This time is not being spent on the core tasks of the university(education and research), which begs the question whether it actually leads to a better allocation of resources. Furthermore, this illustrates that the way, and by who, work is funded has a large impact on the individual autonomy of the individuals who receive the funding. For a model of inclusive society this could mean that there is sufficient work to do in the future, but the nature of work changes due to increased control by automated management systems that monitor every bit of work that is being done, supported by a growing share of administrative work that needs to be performed to exercise this control. This control and administration does mean that near full employment can be maintained. However do these jobs contribute any actual value and if they do not are they, in both an economic and a cultural sense, less meaningful?

People are able participate as health care worker, but not in a meaningful way because they have to follow protocols from which they can not deviate. So the degree of individual autonomy is linked to who sets quality standards in the form of rules and protocols. Individual autonomy is also linked to the way a service is financed since control over the distribution of funds allows the enforcement of these rules and protocols. The financing of services such as education and health care should ideally be organised in a way the the distributor of the funds has a minimal role in determining the conditions under which these funds are distributed. Due to more protocols and other NPM policies, patients and health care providers can no longer make such important choices for themselves. Currently, the focus of services such as health care and education is heavily on accountability towards both corporate and government actors (Fuller & Stevenson, 2019). Accountability in itself is not bad, but it should be towards the patient in health care, and the student in education. For people to reach their full potential, should they not be able to search for a doctor that they feel is the right fit for them? The opportunities for individuals to discover what they find important are thus limited in the second model of inclusive society.

The second model of inclusive society is financially feasible because it is shown that there is apparently enough money to finance all this administrative and bureaucratic work outside of the economy. Currently there is a growing share of these type of jobs,

proving they are being funded. This growth is also remarkable considering that the susceptibility to automation of jobs as administrative support worker is described as high (Frey & Osborne, 2013). This perspective, which is part of the literature detailing the first model of inclusive society can be (partially) disproven by showing that there is indeed enough money to fund work. In the second model however, the discussion is centered around whether the work that is being done is meaningful, and who decides under what conditions this work is performed. Increasing administrative oversight in this perspective could lead to more standardisation, which makes jobs unchallenging and decreases the freedom people have to develop their capacities (Naastepad & Mulder, 2018).

Interestingly the argument that due to the Cost Disease work, especially outside of the economy, would be too expensive is not relevant when it comes to financing more administrative and bureaucratic work. It is not known where the money that funds the creation of these bureaucratic and administrative jobs comes from, but it is clear that there is more than enough. It is also an indication that it is accepted that a growing share of work is of administrative and bureaucratic nature. The problem is that this type of work could lead to a reduction of individual autonomy. To allow people to both participate in a meaningful way and develop their capacities, the problems of the first and second of inclusive model have to be addressed. Since financiers are apparently prepared to finance more administrative work, could the money that is now being used to fund administrative work also be used to finance work that does not decrease the autonomy of individuals? This is why there is enough reason to continue to explore another perspective where action is taken that could lead to a different, third model of inclusive society.

1.3 Model 3: Towards meaningful work for everyone

The question now is whether a third model of inclusive society is feasible? Is there enough meaningful work for all, and can this be financed? An estimated $3.3 trillion is needed to bridge the "Global Infrastructure Gap" in order to keep pace with current growth rates (Woetzel, Garemo, Mischke, Hjerpe, & Palter, 2016). The COVID-19 pandemic has exposed mayor problems due to under investment in health care and social services in the United Kingdom and other countries (Horton, 2021)(Mackenbach, 2020). Combined with the need for more investment in the green energy transition and education, there should be plenty of job opportunities for those who have lost their job due to automation. This shows there is loads of work that needs to be done but it is jet to be determined whether there is sufficient funding for interesting and useful work. If this

money is there, it is currently not circulating in the right places.

Over time, technological innovation has had many different implications on employment. Current improvements in the field of automation technology have caused technological unemployment to become a real concern as was described in section 1.1.1. Technological unemployment was first defined by J.M. Keynes in 1930. He predicted that increased application and spread of automation would cause this technological unemployment. At that time, he predicted that the rapid improvements in the standard of living seen in the 19th century would slow down around 2030. He goes on to predict that people would be able to afford to focus on personal development and other real values of life, since they no longer have to focus on only material needs (Keynes, 1930). A 15 hours work week would cover peoples material needs. The hours that are no longer spent labouring in the economy can then be used to focus on non material cultural-spiritual goals.

An example of a decreased focus on material needs is found in literature describing the consequences of the COVID-19 pandemic. The COVID-19 pandemic has contributed to a decrease in the importance people place on money, which suggests it has triggered a change in peoples values (Moldes, Dineva, & Ku, 2021). It is suggested that the focus on material and economic resources was diminished because people prioritized their personal health and well being higher than before the pandemic (Moldes et al., 2021). Together this is an indication that the change in attitude towards money and the subsequent societal change that the pandemic is bringing about is fueled by peoples reflection on their life priorities (Ku, 2021) (Christian, 2021).

Achieving non material goals can only be achieved in the cultural sphere, thus Keynes' ideas can be interpreted such that he predicts an increase of hours worked in this sector. However, a change in morals would be required to bring about the decreased social importance of the accumulation of wealth. So once for most if not all people their problems of economic necessity have been removed, they are free to focus on "the arts of life as well as the activities of purpose"(Keynes, 1930). In order to reach this state of economic bliss, peoples material needs must be met first. The key to being able to work less while producing the same or a larger amount of goods is the ability of technological innovations to increase productivity. As productivity increases, the number of hours worked to produce a good decreases. In a free-market economy, the ability to improve productivity via unconstrained technological growth can thus both be a cause for concern or greatly benefit civil society.

Due to the productivity gains in the economy there should also be enough money to finance work outside of the economy. In the third model of inclusive society, the idea is to

use productivity gains to fund interesting and useful work in the cultural sphere. Almost 30 years after writing about the Cost Disease, Baumol revised his earlier work that described why work outside of the economy would become too expensive. Importantly, Baumol stated that the 'Cost disease' is not a problem because the growth of jobs in 'personal services' can be financed by productivity gains in the economy (Baumol, 1993) (Baumol et al., 2012). Baumol describes that a larger share of income has to be being spent on cultural services because they are becoming more expensive. Keynes idea is that productivity growth enables people to prioritize cultural services which corresponds with an increase in spending on them.

The expected decrease in hours worked in the progressive economy due to productivity increases could be seen as an opportunity to invest time and resources in places where there is a lot of work to be done. To asses the feasibility of the third model it has to be determined whether, for The Netherlands, productivity gains in the technologically progressive economy are sufficient to finance the growth of jobs in the cultural realm. So in the first model of inclusive society, the reason why spending on cultural sectors has to increase is due to their inability to keep up with the labour productivity improvement of manufacturing sectors. The services sector is technologically stagnant whereas the manufacturing sector is technologically progressive (Baumol, 1967b). This means that as wages are rising in the progressive sector due to increasing productivity, the stagnant sector is not able to match this pace. Since wages in the two sectors do go up and down together, the service sector are subject to an increase in costs, primarily due to productivity growth in the progressive sector. First step towards solving the Cost Disease is acknowledging the fact that rising costs in stagnant sectors, due to their nature, can not be solved by increasing their productivity (Baumol, 1993). So participation in inclusive society through working, not by providing an income to those without it, could be achieved by allocating a larger part of society's total resources to sectors where work is relatively expensive and productivity is not increasing.

While the prediction of rising costs of cultural services has been acknowledged widely, the model of inclusive society that addresses the issue is not considered in literature. The argument is that spending on services in the stagnant sector has to, as percentage of gross GDP, increase from the current 15% to around 62% in the coming 100 years as can be seen in figure 1.1. However, due to productivity growth in progressive sectors people will still be able to afford more goods, so only the way money is divided between the two (Baumol et al., 2012). Compared to the second model of inclusive society this could mean only a re allocation of resources from administrative and bureaucratic tasks towards core tasks of schools, universities and health care institutions. Compared to the first model a major increase in spending on "expensive" labour would be required. As

long as there is demand for more services that are provided by the stagnant sectors there will be an increase demand for labour because they, due to the nature of the activities, experience low or no productivity growth. Of course there is productivity growth in some of the stagnant services, but many are resistant to standardization or the quality of the service depends on the amount of labour expended.

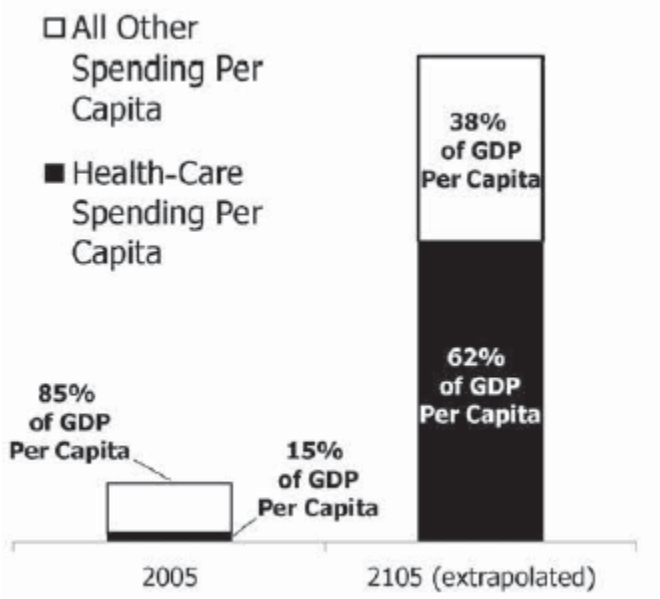

Figure 1.1: Percentages of U.S. GDP per capita devoted to health care and all other purchases in 2005 and 2105 (Baumol et al., 2012)

This rise in spending on health care is not only caused by increasing productivity and the resulting higher wages in technologically progressive sectors, also called a price effect. Rather it is a combination of the price effect, people will earn higher wages, as well as the quantity effect, meaning there is a higher demand for cultural services because total income will have increased sufficiently by then that people will still be able to buy more of everything, only the division of how money is spent changes. Compared to the second model, this means people spend a larger share of their income on immaterial cultural services, which implies that the development of capacities has become more important. Thus the question is how much financing is needed to fund new work people who lose their job in the progressive sectors to the stagnant sectors. Specifically, are the total productivity gains in the progressive sector enough to finance the growth of the stagnant sector, and is it possible to transfer these productivity gains?

If people whose work in the economy has become superfluous would work the same number of hours in the stagnant cultural sphere, would the productivity gains in the economy then be sufficient to finance the required growth of the stagnant sector? This

is only one part of the question, because for the third model of society to be different from the first two, this work has to be meaningful, and the autonomy of the individuals who offer these cultural services has to be assured. Hence, the need for and availability of meaningful work is central to this model. Building and expanding infrastructure for example is not a stagnant service, yet the amount of hours worked in these industries is unlikely to decline. The focus of the third model however, is on financing growth in the cultural sphere. The potential for meaningful participation in the third model is found in Baumol his work. The importance of autonomy in the cultural services is highlighted by the examples in section 1.2.1. In this thesis an important characteristic of inclusive society, participation, is combined and linked with the importance of individual autonomy. The final evaluation these factors the feasibility is based on the analysis in this thesis of the hours worked, productivity gains and the way they are transferred. The current debate is limited to the first and second models that were discussed previously. A discussion about how to finance meaningful work, considering the evaluation of the first and second model, can help to include a third model in the debate of what inclusive society could look like.

In this chapter is was discussed how work is financed in different models of inclusive society, and why financing the growth of work in the cultural sphere could lead to a third model of inclusive society. Especially outside of the economy, in the first model of inclusive society it is generally considered too expensive to finance work. In the second model the problem is the conditions under which work in the stagnant sectors is financed, and the implications that has on the individual autonomy of those who provide and use these services. So in these first two models work, especially in the cultural sphere is being disrupted, but in the third model, it is suggested that there might be other reasons why we choose not to use productivity gains of the progressive sector to finance meaningful work in the stagnant sector. Before financing work in the stagnant cultural sphere can be discussed, it has to be determined whether the mentioned increase and decrease of work has been occurring in the Netherlands. This will be discussed in the next chapter.

Chapter 2

Which patterns of decline and growth of work has Dutch society gone through between 1970 and 2017?

To determine whether it is possible to finance a growth of work in the cultural sphere using productivity gains in the economy, it must first be determined whether these gains would be sufficient to achieve this. The actual trend in hours worked is analysed because there are different predictions of what the future of work looks like. As was detailed in Chapter 1, some argue that technological unemployment will be widespread in the near future (Frey & Osborne, 2013)(Acemoglu & Restrepo, 2020). Even in the stagnant services, as defined by Baumol, there are opportunities to improve productivity (Bailey, Anttiroiko, & Valkama, 2016). It is also argued that these predictions of mass technological unemployment are exaggerated and that there will be plenty of work, just that these jobs are of an administrative and bureaucratic nature(Head, 2011)(Lorenz, 2012) (Verger et al., 2019). This is why in this chapter patterns of growth and decline of work in the economic, cultural and the political sphere are studied. Analysing the number of hours worked in both sectors, combined with the labour productivity at the time, is the first step towards this goal. If it turns out that there are insufficient productivity gains to finance the stagnant cultural sphere, the third model of inclusive society could not be centered around the idea that everyone can have meaningful work by financing the cultural sphere using productivity gains achieved in the economy. Hence, the analysis in this chapter aims to determine how many hours are saved in the

economy, and how many hours have been worked in the cultural sphere.

To this end, three domains are distinguished. The first domain is the technologically progressive economy, that is, the goods-producing economy. In addition to the economy there are two technologically stagnant sectors, a legal-political sphere and a cultural sphere. The public sector, the government, only refers to activities such as executive and legislative administration as well as supervision of fiscal affairs, not healthcare and education. This is important to note because it is not uncommon to refer to healthcare and education as being part of the public sector, but in this thesis that is not the case. The cultural sphere is a wide definition of activities that includes health care, education, research, recreation and the performing arts. Not all activities related to health care are part of the cultural sphere, diagnosis and treatment are but the production of medicine and the manufacturing of medical instruments are part of the economy. The data are retrieved from www.euklems.eu. This data set, from the EU-KLEMS database, consists of multiple releases, and provides the required country-level national data. The database includes a division between sectors such as manufacturing, public administration, and education. The data are used to examine the loss of work in the economy and the growth of work in the stagnant sectors between 1970 and 2017.

2.1 Sector classification

The data are subdivided into 21 sectors. This section details which of the three spheres each activity belongs to. Some of the 21 sectors listed below are further divided into sub sectors. Transportation for example is divided into land, air and water transportation. The further subdivision of the sectors is only relevant if one of the subdivided sector falls under a different domain than the initial industry classification. The sector classification separates activities that revolve around material growth and well-being from non-material growth and human potential. This is an aspect of the gradual evolution from a society that is working towards solving their economic problems and has freed the time and resources to focus on the "real values of life"(Keynes, 1930), which relate to non-material development. The most important technical division is the progressive or stagnant nature of a sector. The stagnant sector is further divided into a cultural and a legal-political sphere. If a sector lacks productivity growth it is considered stagnant. This occurs due to two main reasons, either the involved production processes are inconsistent with standardization or the quality of the service is correlated to the amount of labour devoted (Baumol, 1967a). These two reasons are interconnected, and highlight that in the cultural sphere, the work itself is the product, whereas in the economy it is a means to an end. Automation of the labour involved can in the cultural sphere not

always be achieved without a loss in the quality of the work. This difference means it not as simple as comparing labour productivity improvement data of different sectors to determine whether a sector progressive or stagnant. Some sectors can be can be argued to belong to neither, and will therefore be left out of the analysis.

2.2 The goods-producing economy

In many sectors of the goods-producing economy labour can be substituted by capital, for example GPS guided tractors in agriculture, wheel tractor scrapers in mining and robot assisted production processes in manufacturing. Constant improvement of these technologies is what makes these sectors progressive. For the food service and retail sectors it can be argued that labour can be substituted by capital, but this might cause the quality of the service to decrease. Ordering food from a screen, picking it up and cleaning up yourself is not the same quality service as having a waiter to discus menu options with, and a restaurant staff taking care of everything. Thus on one hand these tasks, even cooking, can be automated, but the quality of the work could be considered less. Still, the work is a means to an end; producing a meal. Furthermore, the food services, retail trade and support service activities are heavily connected to and reliant on the economy, because it produces the goods they require.

Productivity growth in sectors that belong to the economy has been achieved, and there is still potential for more growth mainly in the production and transportation of the goods. Productivity in selling, marketing and repairing the goods has not improved at a similar rate, or at least not without a loss in the quality of the work. Individual autonomy does not play the same role in the economy as it does in the cultural sphere. If for an activity the labour is a means to an end, for example producing a good such as a car, it is considered part of the economy. The cultural sphere on the other hand provides peoples immaterial needs such as self-development of the development knowledge and insight. The point of work in the economy, and thus the nature of the activities in the economy is to fulfill people's material needs. This also means that a large share of this work can be automated without a loss of quality. This is true, because of the massive both realized and unrealized potential of the substitution of labour for capital, for many of the sectors listed below. In some sectors a consideration of a decrease in the quality of the work can be made, for example due to not being able to rely on the expertise of a specialized construction worker. This is not sufficient for them to not be considered part of the economy, because of the considerable increase in the labour productivity on this sector and the material nature of this work. A list detailing the sectors of the economy, matching with the data set, is shown below.

1. Agriculture, forestry and fishing
2. Mining and quarrying
3. Total manufacturing
4. Electricity, gas, steam and air conditioning supply
5. Water supply; sewerage; waste management and remediation activities
6. Construction
7. Transportation and storage
8. Information and communication
9. Wholesale and retail trade; repair of motor vehicles and motorcycles
10. Accommodation and food service activities
11. Other service activities

The sectors Financial and insurance activities and Real estate activities will be left out of the analysis because they can not be clearly defined as stagnant or progressive sector. Even though these sectors have grown significantly over time, any labour productivity improvements are due to innovation in telecommunication services. More importantly, financial contracts such as derivatives are used for a wide range of services such as risk management, arbitraging and speculation which do not help people in fulfilling their material needs. It can be argued that they do support the goods producing economy, but there is also research that stipulates that these types of activities are disruptive to the economy and even caused the 2008 financial crisis (Duffie, 2019). Hence, the actual contribution of these activities, positive or negative, to the economy is not clear. Because the aim of this part of the thesis is to test the ability of the physical economy to finance the cultural sphere, these sectors are not taken in to consideration for this analysis. "Activities of households as employers; undifferentiated goods- and services-producing activities of households for own use", are mostly part of the economy, but also include services such as "teaching and caring for household members" (Carré, 2008), meaning they are not clearly defined as part of the economy of the cultural sphere. It is a very small sector which is also why the impact of it being left out of the analysis is minimal.

2.3 Cultural sphere

Activity in the cultural sphere is related to the growth of knowledge, development of capacities and personal development. These activities are beneficial to the growth of the economy, but they are also valuable in itself. Some activities in the cultural sphere produce "merit goods". Merit goods provide of a private and pubic benefit to society, but these benefits are not recognised by the consumer. This can mean that there is

under consumption or undervaluation of this good. Sectors in the cultural sphere are technologically stagnant, which means that there is little productivity growth. This does not mean there is no productivity growth, but that it is negligible compared to the growth in the progressive goods-producing economy. Education, health and social work are the prime examples of stagnant sectors, because the quality of the service is related to the amount of labour put in. The labour itself is the product. Also, political debate about how to deal with the rising costs in these sectors has time and again illustrated that productivity growth is difficult to achieve. All sectors in the cultural sphere providing services that are difficult to standardize, or standardization leads to a decrease of individual autonomy for the ones providing the service, and therefore also for those needing the service. These jobs require human intelligence, creative thinking and social skills which are not easily automated, if at all possible. Applying technical solutions to improve productivity in these sectors has shown to not necessarily reduce the cost and quality of the service.

A list detailing the sectors of the cultural sphere, the names matching with the data set, is shown below.

1. Education
2. Health and social work
3. Arts, entertainment and recreation
4. Other service activities(related to arts, entertainment and recreation)

Professional, scientific, technical, administrative and support service activities is very big a sector that consists of legal services, accounting, advertising, consultancy services, architecture, engineering, technical testing and analysis, scientific research and development, scientific and technical activities and administrative and support service activities. All these activities hours worked data is grouped as one and this makes it impossible to define this sector as being part of either the economy of the cultural sphere. Unfortunately this means it will be will be left out of the analysis, as it is not clearly defined as stagnant or progressive, and it is not clear whether they relate to material or non material needs. This is unfortunate because scientific research is an important cultural sphere activity, however it is also interesting that it is listed together with activities such as advertisement and marketing, consultancy and legal activities. This indicates it is seen as similar to or part of these activities. Finally, there is also no clear argument for the potential of technological progression in this sector or whether the work itself is the product not a means to an end as in the cultural sphere.

2.4 Legal-political sphere

The legal political sphere consists of technologically stagnant government services. consisting of Public administration, defence and compulsory social security. Even though the public sector is a stagnant service, it differs from stagnant services such as education and healthcare in the sense that it its goal is not cultural but administrative. The public sector thus only refers to activities such as executive and legislative administration as well as supervision of fiscal affairs, not healthcare and education. Furthermore, the expansion of the legal political sphere could be correlated with the second model of inclusive society, due to the increase in regulatory capacity the government would require, which is why it is included in the analysis.

2.5 Data collection and modifications

To analyse the hours worked from 1970 to 2017, two releases of the EU-KLEMS growth and productivity accounts data sets are combined. EU-KLEMS latest release was in 2019, and includes data from 1995 to 2017. The second data set was released in 2009, and includes data from 1970 to 2007. Both data sets include the years 1995 to 2007, and the data of the more recent 2019 release are chosen for these years. The reason a choice has to be made between either data set, is because there is a difference in the sector classification between the two. To combine the 2019 and 2009 release of the EU-KLEMS data sets, and ensure consistency, some modifications have to be made. The reconstruction of one set out of the two data sets has to be as accurate as possible, however the data are used to analyse a difference in hours worked. This means that as long as no major inconsistencies result from the reconstruction of the two sets to form a matching data set, it can be used to the purpose of analysing this difference in hours worked.

A number of variables are obtained from the data sets. These are:

1. Total hours worked
2. Gross Value Added(GVA) at current prices, or nominal GVA
3. Gross Value Added(GVA) at constant prices, or real GVA
4. Compensation of Employees

For this chapter only the total hours worked are needed. For Chapter 3, the calculation of the productivity gains in the economy, the other three are used in combination with the total hours worked. These calculations are not detailed now, only the modifications that were done to determine the total hours worked in the cultural sphere and the economy.

However, the method used to obtain a consistent data set of total hours worked is also used for the other three variables. For total hours worked there are two variables that can be used. Total hours worked by all persons engaged, H EMP, or total hours worked by only employees, H EMPE, these are both indications of the total hours worked. Since a complete summation of the total hours worked is required, and not only employees but also self-employed workers and outside contractors, H EMP is chosen.

2.5.1 Changes between sector classifications

Now the figures of the relevant sectors, according to the classification described previously, have to be added up in order find the total hours worked in the cultural sphere and the economy. This is where the difference between the two releases of the EU KLEMS data set have to be analysed. For an initial comparison, a table was provided. Most sectors were not problematic in the sense that they only consist of economy or cultural sphere activities. There were a small number of sectors however, that consist of both cultural sphere and economic activities, or where the content of that section differentiated between the two EU KLEMS releases. These are highlighted in red in figure 2.1 below. NACE rev. 1.1 and NACE rev. 2 are the classification of economic activity systems that are used in respectively the 2009 and 2019 release.

NACE Rev. 1.1		NACE Rev. 2	
Section	Description	Section	Description
A	Agriculture, hunting and forestry	A	Agriculture, forestry and fishing
B	Fishing		
C	Mining and quarrying	B	Mining and quarrying
D	Manufacturing	C	Manufacturing
E	Electricity, gas and water supply	D	Electricity, gas, steam and air conditioning supply
		E	Water supply, sewerage, waste management and remediation activities
F	Construction	F	Construction
G	Wholesale and retail trade: repair of motor vehicles, motorcycles and personal and household goods	G	Wholesale and retail trade; repair of motor vehicles and motorcycles
H	Hotels and restaurants	I	Accommodation and food service activities
I	Transport, storage and communications	H	Transportation and storage
		J	Information and communication
J	Financial intermediation	K	Financial and insurance activities
K	Real estate, renting and business activities	L	Real estate activities
		M	Professional, scientific and technical activities
		N	Administrative and support service activities
L	Public administration and defence; compulsory social security	O	Public administration and defence; compulsory social security
M	Education	P	Education
N	Health and social work	Q	Human health and social work activities
O	Other community, social and personal services activities	R	Arts, entertainment and recreation
		S	Other service activities
P	Activities of private households as employers and undifferentiated production activities of private households	T	Activities of households as employers; undifferentiated goods- and services-producing activities of households for own use
Q	Extraterritorial organisations and bodies	U	Activities of extraterritorial organisations and bodies

Figure 2.1: Broad correspondence between sections of the two EU KLEMS data sets

Upon inspection of the documentation of the 2019 release, the authors state that *"The substantial changes between NACE Rev. 1.1 and NACE Rev. 2 are too numerous to be listed here in their entirety"* (Carré, 2008). Which points towards the changes between the two releases, hence a fully accurate reconstruction is not possible. Furthermore the 2019 release changes in the methodology are described as follows: *"New divisions in manufacturing, representing important new industries or old industries that have increased their economic or social relevance, have been created ... Other new divisions have resulted from splitting existing divisions ... substantial portions have been moved to other sections"* (Carré, 2008). These are substantial changes, however as long as these hours are counted towards the physical economy total consistently, it is inconsequential that some specific professions have moved between sectors.

These quotes describe the many changes between the two releases which make a fully accurate reconstruction not feasible. This brings up the question of how accurate the reconstruction needs to be for this analysis. To what extent do changes in the manufacturing data matter if the nature of what products are being manufactured and how this is done has changed? The quote mentions "new" and "old" industries, and it is not surprising that there is a difference in what the manufacturing sector consists of

between 1970 and 2017. As mentioned before, the goal is to analyse "patterns of growth and decline of work", which indicates that as long as the data set is consistent it can be used. In some sections specific specification had to be made to ensure consistency.

2.5.2 Detailed modifications of specific sections

The following modifications of sections had to be made to ensure a consistent data set could be obtained. Section O of NACE Rev. 1.1, "other community, social and personal service activities", consists of both cultural and economic activities. So in the 2009 data set this section was split into subsections. For the first years of the data, there were no entries for the subdivided data, only the total for the entire section. For these years, these years the same share of the total of the final year that did included data was used to obtain a value for each subsection. Section E of NACE rev 2. "Water supply, sewerage, waste management and remediation", was part of section O in NACE rev 1.1. The split into subsections also meant that this could be solved by adding the relevant subsection to section E of NACE rev 1.1 "Electricity, gas and water supply".

Section J of NACE rev. 2, Information and communication, consist in part of cultural sphere activities such as musical performances, which are precisely the example Baumol uses in his description of a technologically stagnant service. Due to this, some part of the hours worked in this section are attributed to the cultural sphere. Specifically it includes "activities involving production and distribution of information and cultural products" However, the creation of a music industry, online music streaming and so forth causes this sector to have many reason to be part of the economy. This section also includes the manufacturing of the device that facilitate the production and distribution of information and communication product, which is certainly an economic activity. This is why putting this section in either sphere has drawbacks, which is why it was split between the cultural sphere and the economy. In the analysis, 75% of this section is counted towards the economy, and 25% towards the cultural sphere.

The years from the 2019 release that will be used in the analysis are 1995-2017, as for the earlier years that the 2009 release will be used. This way the more recent sector classification is used as much as possible in the construction of the data set. Because to determine productivity gains in the economy and eventually, the amount of freed up capital, not only the hours worked need to be reconstructed, but also the real and nominal GDP and the compensation paid out to employees. These variables are also adjusted using the methods described above, for the final construction of a single combined data set.

2.6 Total hours worked in the economy and the cultural sphere

The patterns of growth and decline of work in Dutch society are best shown using the data of total hours worked in both the cultural sphere, the economy and the political sphere. First an assessment of the change in total hours worked, based on the sector classification detailed previously, is made. There are many factors that can impact the total number of hours worked. The change in total hours worked includes both the effects of productivity improvements as well as scaling effects. Productivity improvements lower the number of labour hours that have to be worked to produce a the same output, since the value added per labour hour is increased. In the economy it is expected that these improvements are significant, which means there is a overall decrease in the number of hours worked over time. In the cultural sphere it is expected that there will be an increase in the total hours worked, due to the nature of the activities in this sector as was detailed previously. An increase in the hours worked in the cultural sphere could also reflect that people's immaterial needs are growing in importance compared to their material needs (Moldes et al., 2021). Quantity effects, such as increasing demand for cultural services, are positive in an economy that is growing over time. Figure 2.2 shows the total hours worked in the economy, the legal-political sphere and cultural sphere between 1970 and 2017.

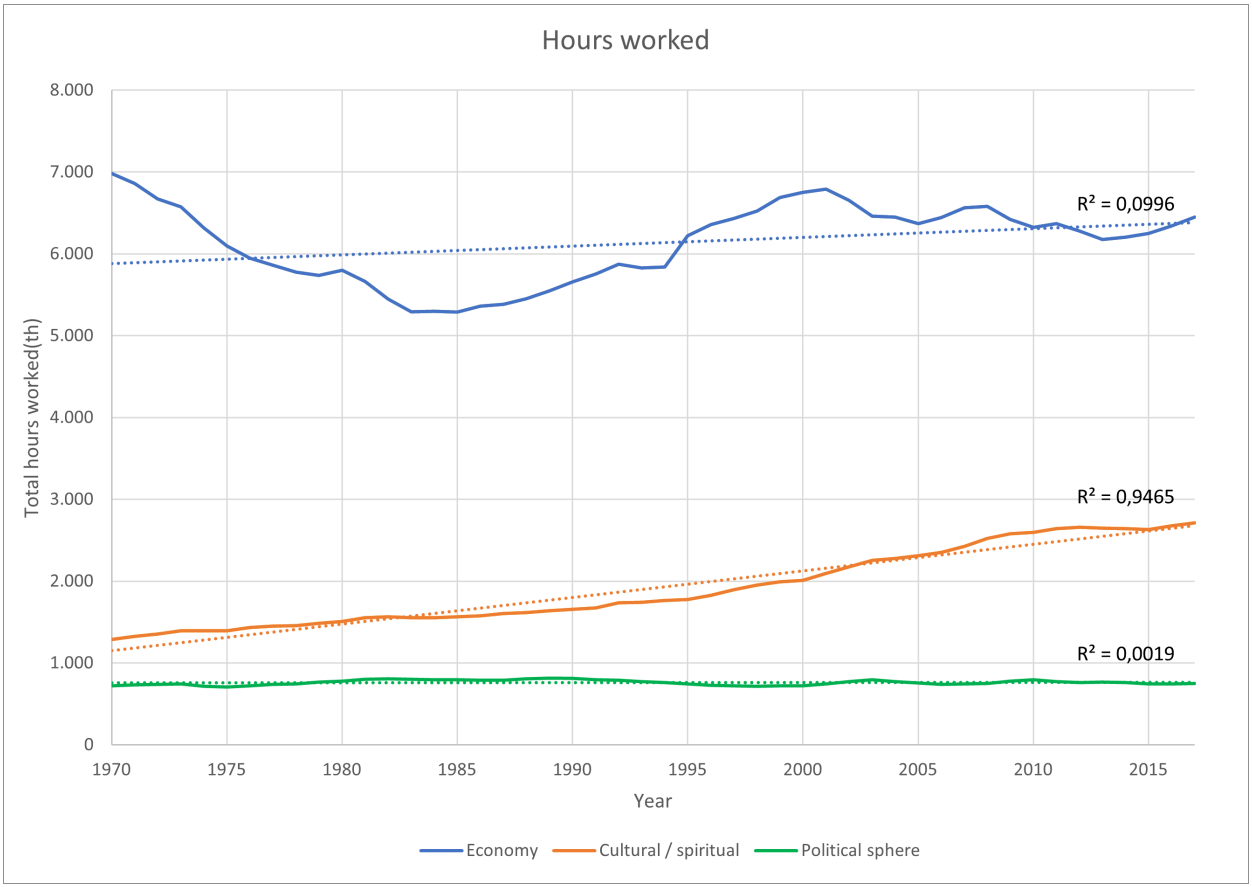

Figure 2.2: Total hours worked in the economy, the cultural and political sphere from 1970-2017

As expected the total number of hours worked in the cultural sphere has been steadily increasing over time. In the economy however, increases and decreases in the amount of hours worked are visible. As can be seen in Figure 2.2, since 1985 the total number of hours worked started increasing instead of decreasing. An interesting comparison to illustrate the increase in the value added by the economy is to compare the hours worked and value added in the first and final year that are included in the analysis, 1970 and 2017. Using the labour productivity in 1970 and the value added in 2017, it is calculated how many hours would have to be worked in 2017 had labour productivity remained constant since 1970. This amounts to 17.7 billion hours, and when the actual number of hours worked in 2017 is subtracted, the difference totals 11.2 billion hours. This shows how many additional hours would need to be worked to produce the same amount if productivity had not increased. Hence, without capital, human intellect and inventions it would not have been possible to reach current levels of production, because the labour force is simply not big enough to work so many hours. This is an illustration of how many hypothetical hours have been saved in the economy due to

labour productivity improvements over time. This is the long term trend that is expected to continue (Schwab, 2017), and its reversal that is observed in Figure 2.2 is a surprising deviation. Despite a decrease of 531.000 hours worked between 1970 and 2017, the expected decreasing trend in total amount of hours worked in the economy over time is not observed. So in spite of labour productivity improvements, more hours were being worked in the economy. Even though in some years the total hours worked decreased slightly, it can't be stated based on this result that most work in the economy is already in the process of being obviated. This is a remarkable statement, because it was expected that technological innovation would, over a long time, do exactly that (Frey & Osborne, 2013). Especially since the time span of this graph includes the entire IT revolution, the invention of the internet, and significant advances in automation technology. In the next section literature that provides possible explanations for this trend of the increasing total hours worked in the economy is discussed.

2.6.1 Possible explanations for the increase in hours worked in the economy

An important point that illustrates why the total hours worked in the economy is increasing is that material needs are a higher priority than non-material needs. Only when peoples material needs, such as food and housing, have been satisfied will they make more time for other needs that are often of a more cultural nature. So it is thanks to the productivity growth in the economy that more time could be spend on cultural flourishing and growth. This could lead to increased demand for the services provided by the cultural sphere, and the demand for the goods produced by the economy could stop increasing. Both for the economy and the cultural sphere are subject to supply of labour and demand for the goods or services they provide. For this hours worked analysis, this could mean that the observed increase of hours worked in the cultural sphere, since that is where the services that improve people personal health and well being are provided, continues as time goes on.

Thanks to productivity growth in the economy, the goods that are produced to satisfy peoples material needs can be produced by fewer people. Since the total hours worked is increasing instead of decreasing, there is either no productivity growth, or people are working jobs that have a low productivity. There is productivity growth in the economy, so why are people working more low productive jobs? Because there is insufficient funding for useful work in education and healthcare. Because of this the people whose work has been obviated in the economy can not find work in health care and education, so they are more likely to take on employment that is low paid and unsatisfying. The

relationship between the three spheres of three spheres, specifically the growth of the cultural sphere compared to the economy, is analysed based on data analysis and examples found in literature. The expectation is that the the number of hours in the economy is just decreasing, and that people should be able to find new employment in the cultural sphere. Since this is not happening now, the question becomes why people returning to jobs in the economy? This might have to do with more funds needing to be transferred to the cultural sphere. This would allow people to transfer from the economy to the cultural sphere, which is the point of the third model of inclusive society, and the thus the topic of this thesis.

There are multiple possible explanations for why the number of hours worked starts increasing around 1985. First of all, demographic factors such as population growth have caused an increase in the total labour force which can increase the number of hours worked, which is a supply side explanation of the observed trend. Increasing life expectancy has caused the age at with people retire to go up over time, making the total number of hours worked per person higher, which indicates that people want to work more in the economy, but this does not mean that there is more demand for the goods that are produced. Research published by the Stanford Center on Longevity states that in the U.S. "demographers predict that as many as half of today's 5-year-olds can expect to live to the age of 100" and that they can expect to work for at least 60 of those years, opposed to the current 40 years (Carstensen, 2021). A distinction is made between biological ageing and longevity, the latter being the measuring of the quality of a century long life. Improving the quality of life is done by enhancing the sense of purpose, belonging and worth. In this research a similar goal of finding and financing meaningful work by developing a third model of inclusive society is pursued. Thus, population growth in combination with a longer life expectancy is a straightforward explanation for an increase in the total hours worked, not just in the economy but in all three spheres. This however makes the prospect of work in the economy being obviated more worrying, where will these additional work hours be spent, and under what conditions? Another reason why people have started to work more in the economy specifically, is because the share of low pay jobs in the economy has increased from 17.7% to 23.1%, and this refers not only to low-skilled jobs (Hassel, 2014). These figures refer to the situation in Germany, for The Netherlands it is stated that they have a higher share of low-pay jobs than Germany. Taking on low paying jobs in the economy is not proof that people can not find employment in the cultural sphere. However it does imply that if there is meaningful work available in the cultural sphere, and this work is funded, they might not return to this low paying work in the economy. This is further illustrated by the two examples that follow.

Research into the liberalization of the German economy can further help explain why the number of hours worked in the economy has increased. Due to liberalization of the labour market in Germany, the divide between so called "core workers" of firms and non-core workers has increased (Hassel, 2014). Over time, structural labour market deregulation has occurred in all industrialized countries, not only Germany. Policy changes that aim to protect employees increase this divide, because while the positions of permanent employees strengthens, protection for other types of contracts diminishes. Hence, the share of fixed term, low level and part time employment contracts has increased as a consequence of unions trying to protect core employees. Furthermore, pressure on the unemployed to take up low-paid employment to supplement their benefits caused the labour participation of women and the elderly to increase, but this increase is in the form short term contracts and marginal employment. This illustrates that the difference between "insiders"and "outsiders" in the labour market has increased, and that the willingness of companies to deregulate the labour market goes hand in hand with more low pay and insecure employment. If the pay for work lowers both the supply of, people have to work more if they get lower wages, and the demand for, since it is cheaper, labour increases. The first is called an income-effect and the latter is a substitution-effect. Manufacturing unions for example now benefit from low-cost services provided by those outside of their organization, they oppose increases in the national minimum wage. These services do not refer to cultural sphere services but services provided to support the manufacturing of goods so they are part of the economy. Since manufacturing unions are well organized they are able to form coalitions with their firms and co-ordinate to achieve their desired institutional changes. So the share of service-sector employees has increased, getting lower wages could explain the need for more hours to be worked, or more members of a family having to work (Hassel, 2014).

Global interconnectedness and technological changes have led to economic activity becoming a continuously ongoing thing. The introduction and later growth of the 24/7 economy, has led to demand for labour performed at non standard or "unsocial" hours. The top 5 sectors where most people work at night and on weekends are cashiers, truck drivers, sales workers, waiters and waitresses, and cooks (Riekhoff, Krutova, & Nätti, 2019). Aside from the potential negative effects this can have on health and family life, there are links with the dualization of the economy and the rise of the economic services sector. The dualization of the economy refers to the growing divide between insiders and outsiders discussed previously, and the 24/7 economy is also a result of the liberalization of the economy. Cross-national evidence over the EU has shown that there are significant socioeconomic inequalities in to working unsocial hours. This means that low-skilled workers are at a higher risk of working at unsocial hours and that this is not

related to the characteristics of certain types of jobs. The research also indicates that due to job immobility and lower access to family-friendly working times of low-skilled service jobs, working during unsocial hours is not likely to be eradicated (Riekhoff et al., 2019).

It is also possible that the income effect of a worsening income inequality causes people to have to work more hours to maintain their standard of living. In the U.S. slowdown of average real wage growth has caused the share of profits in the GDP to increase with 5.6% between 1980 and 2019, roughly the period of the hours worked analysis (Storm, S. Naastepad, C.W.M., 2020). For 90% of the population this has meant that their real income growth had been between 1.4% and 0.2% per year(Storm, S. Naastepad, C.W.M., 2020). This is in contrast to the upper 10%, whose income compared to the national average increased, with by far the largest increases being observed in the top 1%. Households with more wealth rely on capital income, and are thus less dependent on wages for their income. This means that a decrease of the income wage share and subsequent increase of the profit share benefits them disproportionately. Hence a possible explanation for an increase in the total hours worked in the economy is that income concentration has shifted to a smaller share of households, meaning other have to work more for comparatively lower wages and under worse conditions, or more people of a household have to work (Storm, S. Naastepad, C.W.M., 2020).

Together these factors can explain why the number of hours worked in the economy has increased over time, instead of decreased due to automation technologies. Interestingly, these findings imply that even though the number of hours work in the cultural sphere has increased over time, there is a very large share of people who end up working low paying service jobs in the economy. Why can these people not find more meaningful employment in the growing cultural sphere? How is it possible that there are still desperate calls for more teachers and health care workers? The financial feasibility of a third model of inclusive society closely related to these questions. If there is sufficient funding for the growth of work in the cultural sphere, people would not have to rely on low paying jobs in the economy, or a basic income for that matter. Is there also a need for more work and investment in some progressive economic sector activities such as the development of infrastructure and the green energy transition, which not financed the same way as cultural sphere activities? There is a significant difference between the way activities are funded in, and the value added of, the cultural sphere and the economy. An increase in demand for cultural services has to be supported by growing productivity, and thus a higher value added, in the economy.

2.6.2 The share of work and the value added

The number of hours worked has started to increase slightly since 1985, at the same time the value added of the economy has increased significantly over the same time period. The real value added of the economy almost tripled, it was 119.8 billion in 1970, and 312.1 billion in 2017. As a percentage of the total hours worked per year in the Netherlands, the share of the cultural sphere has been steadily rising, and the share of the economy is declining as detailed in Figure 2.3.

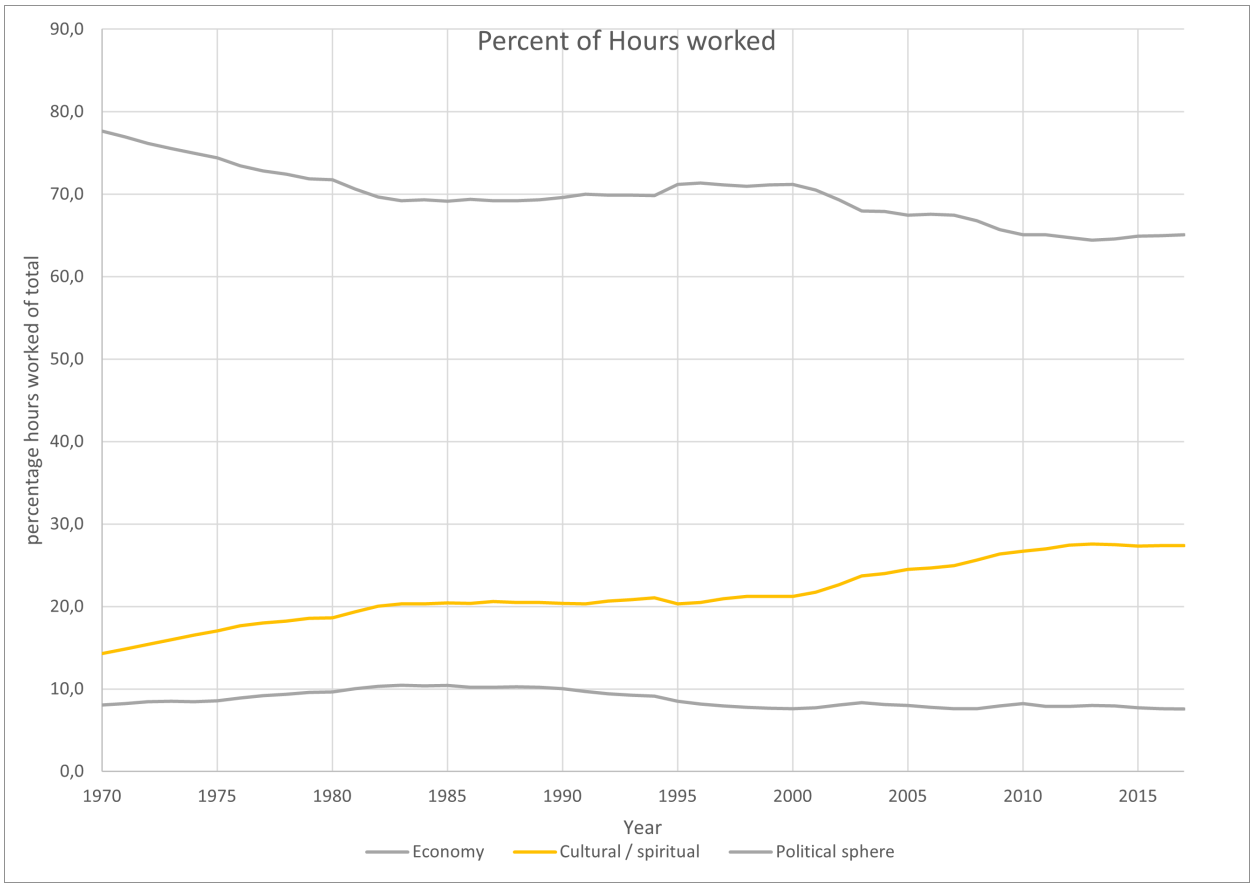

Figure 2.3: Percentage of total hours worked in the cultural sphere and the economy from 1970 to 2017

What Figure 2.3 illustrates is that over time a larger share of work is being performed in the cultural sphere. As a larger share of work is being performed in the non progressive cultural sphere, a larger share of the total value added will have to be used to fund that work. Hence, the question is whether the productivity gains in the economy are sufficient to finance this growth of work in the cultural sphere. The funding of work in the cultural sphere is an important aspect of the third model of inclusive society because,

as was detailed in this chapter, the remarkable trend of more hours being worked in the economy has had adverse effects on the working conditions of many. Should people be able to find new work in the cultural sphere, they would not be forced to return the economy in such low wage and skill jobs. The way this work is funded, or the way the productivity gains are made available to finance this work, has a large impact on the individual autonomy of the people receiving these funds. But first, the productivity gains in the economy are calculated.

The first question relates to model 1, and the question is why it is considered too expensive to finance work, especially outside of the economy. Are there insufficient funds to finance work in the cultural sphere, or can we afford it but are there other reasons we choose not to? The answer leads to questions as to why there is no money available. If enough money is available, and there is enough work to do, then this money has to come from somewhere. Hence the next step is to identify where this money could come from, and whether it could be used, transferred, to sectors where there are insufficient funds. Here the distinction between the economy and the cultural sphere plays a critical role because, as Baumol stated, the productivity gains in the economy would have to be sufficient to fund the growth of work in the cultural sphere, for the third model of inclusive society to be a viable consideration.

In the next chapter, these differences will be analysed on an annual basis, to determine the productivity gains in the economy and the amount work hours saved. This analysis aims to determine how much labour is saved due to human intellect and the resulting physical capital, and quantify this into a yearly amount, by determining the annual labour productivity increase and how many extra hours are saved due to this.

Chapter 3

Are the productivity gains achieved in the economy sufficient to fund the growth of work in the cultural sphere?

In this chapter the model that is developed to determine whether there are sufficient productivity gains in the economy to finance the growth of work in the cultural sphere is detailed and the results are presented. To assess whether a third model of inclusive society can help address the problems of unconstrained technological innovation, the financial feasibility of the the proposed model has to be assessed. Since the third model is centered around financing the growth of work in the cultural sphere using productivity gains achieved in the economy, these gains have to be sufficient in order for the model to work. The productivity gains in the economy are called "Freed capital", which is defined as the money that is freed from production by human intelligence (Naastepad & Mulder, 2018). The sum of freed capital in the sectors of the economy has to generally be high enough to finance the growth of work in the cultural sphere over time. Not defining this sum of money as productivity gains, gross value added or profits but as freed capital, highlights that it can be used to finance new work for those whose labour has been obviated in the economy. Or, since it was shown in Section 2.6 that the expected decline of hours worked in the economy has not been as severe as was expected, help those who lose their job in the economy to find new meaningful work in the cultural sphere, instead of returning to the economy in low paid jobs with poor benefits. After all, the reversal of the decline in hours worked in the economy

was against expectations. Due to improvements in labour productivity in the economy, the total hours worked were expected to decrease significantly. This begs the question whether insufficient investment in the cultural sphere could be the bottleneck that prevents the hours worked in the economy to decline. First, the thought process and subsequent calculation that led to the freed capital are described, then the results are shown.

3.1 Method

Productivity gains in the economy refers to increases in productivity. These gains lead to less time having to be spent to produce a unit of output, and whether you choose to produce more by keeping labour constant or produce more output, this increase is the productivity dividend. Freed capital is a financial indicator of the productivity dividend in the economy. The goal is to asses how much labour is saved due to human capital and intellect. Freed capital is the money that is freed from production by human intelligence, and it freed in the sense that it will not be used to fund activities related to the fulfillment of material needs. In the economy this human capital is materialised as machines and other productivity enhancing inventions. It is however not possible to find a data set that details how many machines are installed, and how many other innovations have been made to improve productivity, and precisely how many hours have been saved, or freed. Hence, this technical connection between innovation and work had to be estimated using the growth of labour productivity per year. It is possible to determine how many extra hours have been saved due to productivity growth, which then corresponds to more innovation and machines being used. This is why it is not measured what the total value added of machines and innovations as a whole is, but the growth of value added due to increased efficiency and use of these machines. This can only be calculated on a yearly basis, so it is calculated how many extra hours are saved each year. Combining this with the real wage of that year leads to an estimation of how many extra money is saved, which equivalent to the freed capital of that year.

For the calculation of the freed capital, 4 variables are used, the total hours worked, nominal Gross Value Added(GVA), real GVA and the compensation paid out to employees. All of these variables are available in a constructed data set as described in Section 2.5. Because the calculations are made with data for different spheres, variables referring to the first will be denoted with an e and the latter with a c. First the labour productivity of the economy during year t is determined using the real GVA and hours worked during that year.

$$\lambda_t^e = GVA_t^e / H_t^e \tag{3.1}$$

To determine the productivity gains that have been made over a year, an estimation is made of the hypothetical hours of work that would have been required to produce the same amount of output of that year, using the productivity of the previous year. So the hypothetical hours that have to be worked in year t to produce the same if labour productivity had remained constant. This is done using the following formula:

$$H^e_{t(h)} = GVA^e_t / \lambda^e_{t-1} \tag{3.2}$$

where GVA^e_t is the real value added of the progressive sector in year t, λ^e_{t-1} is labour productivity in the economy in the year before that, and $H^e_{t(h)}$ is the (hypothetical) number of hours that would have been required to produce GVA^e_t if labour productivity had not increased since the previous year.

Productivity gains made in the economy, called 'freed capital', are then estimated as follows. First, the difference between $H^e_{t(h)}$ and the actual number of hours worked in the economy in that year, H^e_t are calculated:

$$\Delta H = H^e_{t(h)} - H^e_t \tag{3.3}$$

Now that the hypothetical hours that need to be worked to produce at the same level as the previous year is known, the real wage in year t is required to finish the calculation of the freed capital. The real wage is calculated using the nominal wage and a deflator that is derived from the nominal and real GVA in year t. The nominal wage in the economy is determined using the hours worked and the compensation paid to employees in year t.

$$W^e_t = COMP^e_t / H^e_t \tag{3.4}$$

Then, the wage deflator is derived by dividing the nominal GVA by the real GVA of the relevant sector in year t. This deflator is used, in combination with the nominal wage, to determine the real wage in year t.

$$w^e_t = W^e_t / deflator^e_t \tag{3.5}$$

Then finally the difference between the hypothetical and real hours worked is multiplied by the progressive sector wage to determine the freed capital in year t.

$$FreedCapital = w^e_t * \Delta H \tag{3.6}$$

Using this method, the freed capital is calculated over the period 1971 - 2017. Using the same method described above, the increase in hours worked and the real wage

in the cultural sphere are combined to determine the yearly required funding of the cultural sphere. These two figures, the freed capital and the required funding of the cultural sphere, are the most important variables that are used to determine whether the productivity gains in the economy are sufficient to fund the growth of work in the cultural sphere.

3.2 Results

In this section the results of the model that was developed for the calculation of the freed capital will be shown. The results will be presented using three graphs. First the real wage in the economy, cultural sphere and political sphere will be shown, because this variable is used to determine the other results. Then, the funding that is required to finance additional work in the cultural sphere is shown. Finally the freed capital is presented, in combination with the required funding of the cultural sphere and the difference between the two. The first step towards the third model of inclusive society is to determine whether participation and meaningful work for all is a realistic goal. To determine this it first has to be assessed whether the funding of work in the cultural sphere using freed capital is possible. In Chapter 4 it will be discussed how the transfer of funds can take place, which is only relevant if there is sufficient freed capital available.

Using the method described in Section 3.1 the real wage over time is determined. The real wage is used to not only determine the freed capital in the economy, but also to calculate the required funding in the cultural sphere. A direct comparison of hours worked in the economy and cultural sphere is not possible due to differences in real wage between the two. Also, it was shown in Section 2.6 that starting 1985 the hours worked in both the economy and the cultural sphere has been increasing. The following graph shows what real wage increase corresponds to the increase in hours worked combined with the total compensation paid to employees.

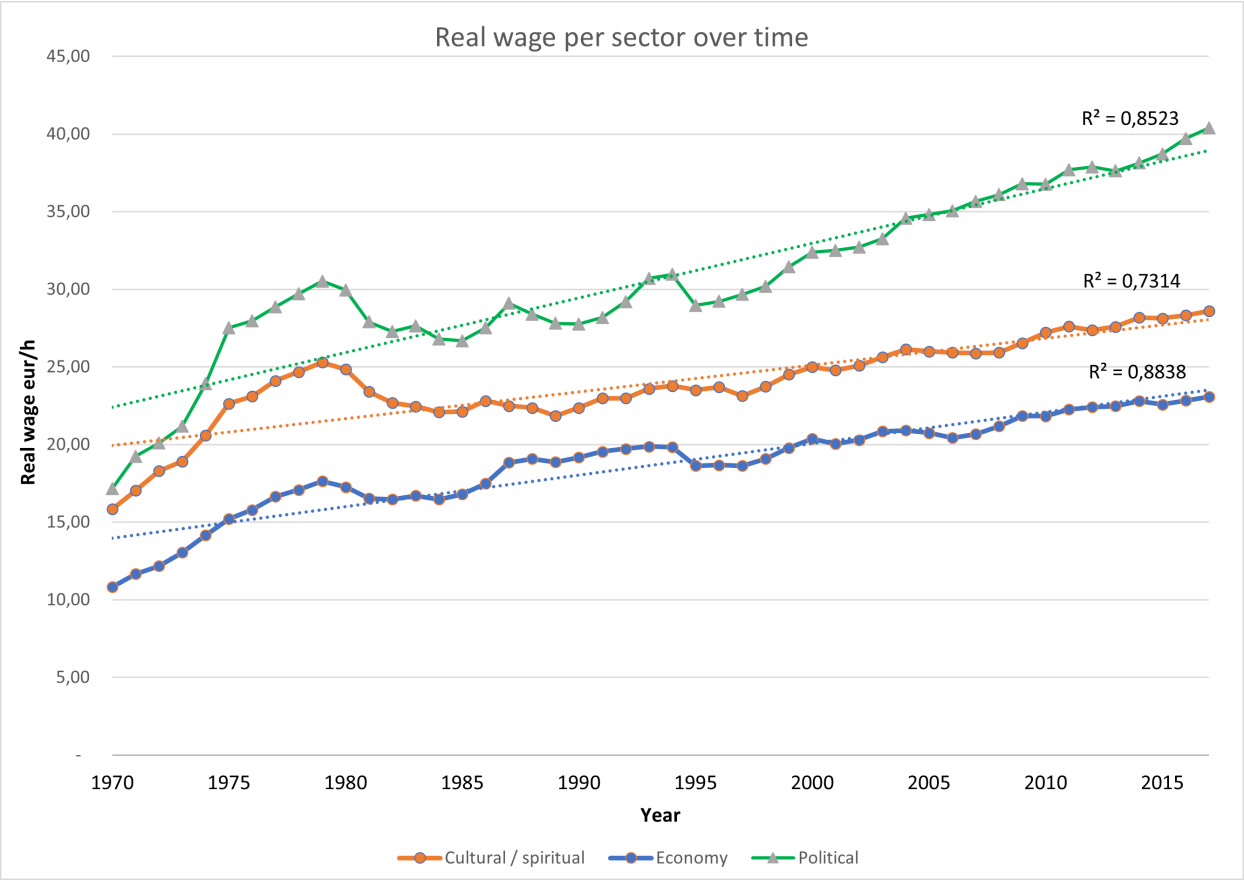

Figure 3.1: Real wage over time

As can be seen in Figure 3.1, real wage increases over time in the economy, cultural sphere and the political sphere. The lowest average wages are found in the economy, and the highest in the political sphere. Also, increases and decreases of real wage occur in a roughly similar pattern across all three sectors, so productivity gains and the resulting higher wages in the economy also lead to higher wages the other sectors. If the productivity of a sector does not increase and the wages do, work in that sector gets relatively more expensive as the real cost has increased (Baumol, 1967a). Also, since average real wage in the cultural sphere is higher than the real wage in the economy, one hour freed in the economy is not enough to finance one hour of work in the cultural sphere. Next, the increase in hours worked in the cultural sphere is combined with the real wage in the cultural sphere to determine the required funding of work in the cultural sphere.

Figure 3.2: Required funding of the cultural sphere

As can be seen in Figure 3.2, the maximum required funding of work in the cultural sphere is almost 2.5 billion in the year 2008. A large increase in hours worked and a high real wage combined lead to a large amount of required funds. On average, 740 million per year in additional funding is required to finance the current growth of work in the cultural sphere. Because these hours have been worked and the compensation to employees has been paid out, this work is currently being financed. The question that remains is: what is the source of funding for the cultural sphere? If the source is the productivity gains achieved in the economy, what share of total productivity gains has gone towards the cultural sphere? This answer leads to whether the growth of work in the cultural sphere could be financed using that years' freed capital. In some years the required funding is negative, this means that there is a decrease in hours worked in the cultural sphere, and this negative change in hours worked is multiplied with the real wage, leading to a negative required funding. Now, to determine whether it is enough to provide the required funding, the freed capital is calculated using the method described in section 3.1. The results are shown in Figure 3.3 together with the required funding and the difference between the two.

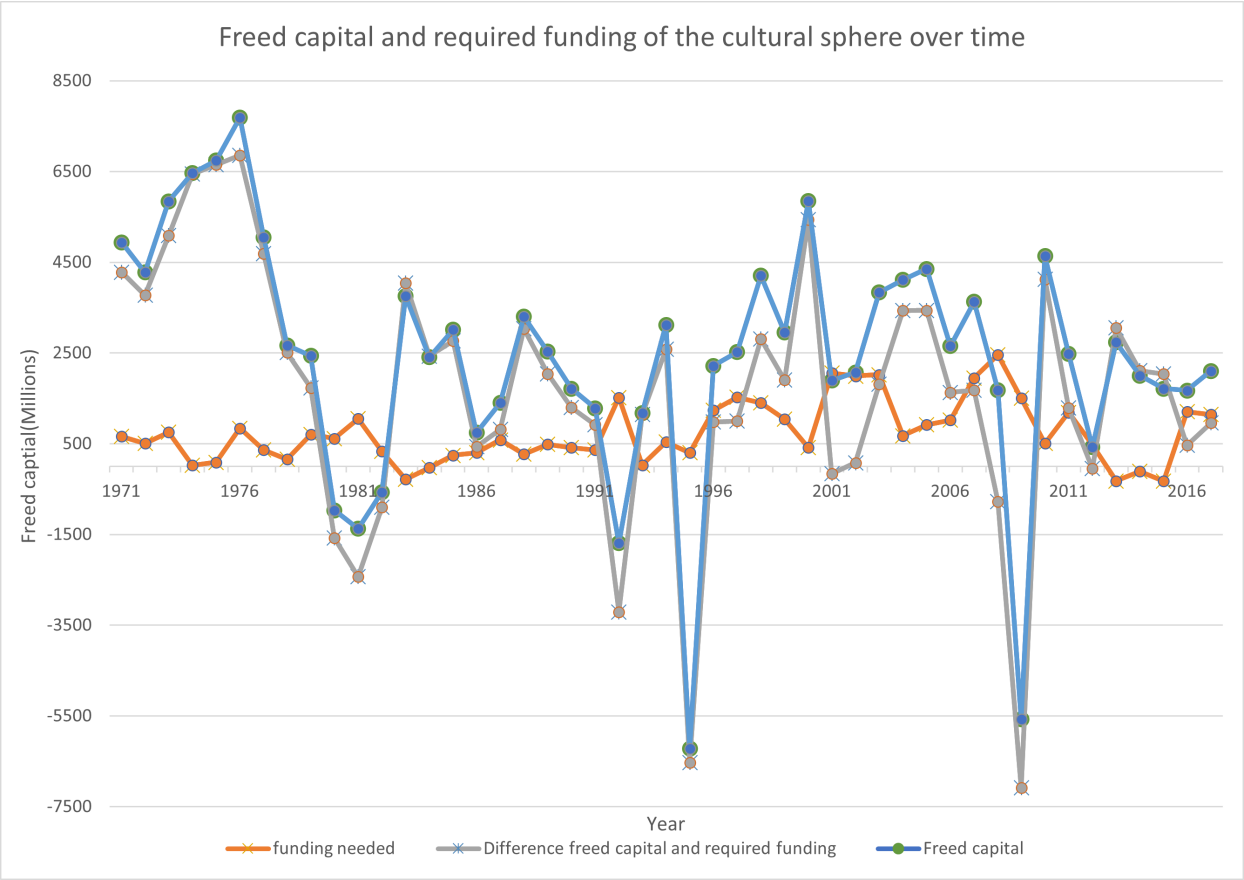

Figure 3.3: Freed capital, required funding and the difference between the two

As can be seen in Figure 3.3, the freed capital is generally high enough to fund the growth of work in the cultural sphere. There are two years where the freed capital is a large negative amount, 1995 and 2008. These are years where there is an increase in hours worked compared to the previous year, or a decrease in the real GVA. More total hours worked without an increase of even a decrease in real GVA can lead to a lower productivity in that year. Productivity only increases if the real GVA grows at a higher rate than the total hours worked. A lower productivity leads to less hypothetical hours that have to be worked, if productivity has stayed the same as last year, because now productivity declined instead of increased. A negative hypothetical hours value in turn leads to a negative freed capital. The reason why this happens in 2008 is likely the financial crisis of 2007-2008, which had a large impact on all parts of the economy and especially on the real GVA. Interestingly, the growth of work in cultural sphere and thus its required funding was at is highest during this year making the the difference between it and the freed capital almost -7.5 billion. The downwards peak in 1995 is likely due to differences in sector classification detailed in Section 2.5.

However in most years, the gray line indicating the difference between the freed capital and required funding is well above zero. In fact, in many years billions of euros' of freed capital could have been used to fund even more work in the cultural sphere. This result means that the productivity gains achieved in the economy are generally more than sufficient to fund the growth of work in the cultural sphere.

3.2.1 Two conclusions based on the results of the Freed Capital calculation

The first conclusion is that the participation problem in the first model is now addressed in the sense that it is financially possible to prevent technological unemployment. The third model of inclusive society could in that aspect be considered an improvement on the first model. Because it is concluded that there is sufficient freed capital to fund the growth of work in the cultural sphere, a third model of inclusive society that offers everyone opportunity to participate in society, is thinkable. As can be seen in Figure 3.3 productivity improvement, and the resulting freed capital, is more than enough to provide the necessary funding. This means that mass technological unemployment as described in the first model of inclusive society is not inevitable.

Participation for all, being one of the two main points of the third model, could be achieved if the feed capital is made available to fund the growth of work in the cultural sphere. Funding of the growth of work in the cultural sphere is useful on two conditions. First people's material needs have to be met by the economy and secondly the demand for services provided by the cultural sphere has to continue increasing. Funding the growth of work without there being additional demand for cultural services does not increase meaningful participation. It is likely that the demand for cultural services, as well as the price to provide them, will continue to increase over time (Moldes et al., 2021)(Baumol, 1967b). Due to these price and quantity effects a larger share of total income will have to spent on cultural services. The freed capital calculation shows that it is possible to finance them, but the productivity gains in the economy have to be used to do so (Baumol, 1993).

The next step is to determine how the third model can offer an improved solution compared to the second model of inclusive society. The second model of inclusive society already describes a future with work. In this model of inclusive society, ever increasing administrative pressure, regulation and more new public management practices over time decrease the individual autonomy of those receiving and providing cultural services. These problems with individual autonomy are, as was described in section 1.2.2, closely related to how work in the cultural sphere is funded. The money that is used to fund

the cultural sphere could come with a set of rules and conditions set by the market or government, which would lead to problems with individual autonomy. The calculation of the freed capital thus shows that the third model is an improvement compared to just the first model, the next step is to determine how the funding can be organised so that the autonomy of those working in the cultural sphere as well as those receiving cultural services can be safeguarded. Currently work in the cultural sphere is being funded, so an analysis of where this money comes from illustrates why and how funds are transferred to the cultural sphere.

In other words, what is the current source of funding for cultural services, and how does the cultural sphere contribute to productivity growth? Answering this question requires a discussion of how Freed Capital is being spent right now, and whether there are alternative methods that could suit the third model of inclusive society. If the source of funding is the productivity gains achieved in the economy, the question is what share of total productivity gains has gone towards the cultural sphere? In the third model the magnitude of the transfer of funds from the economy to the cultural sphere increases by at least an average of 740 million per year. This makes it both difficult and very important for the transfer to happen in a way so that it does not undermine the individual autonomy of those receiving the funds, and those using the services that are provided by the cultural sphere. To address the problems that are related to the second model, the strengths and weaknesses of both the current and alternative transfer methods are assessed. This assessment makes the differences between distribution policies explicit. The most important factor of a distribution method, to illustrate how the third model can be an improvement compared to the second model, is to what extent it impacts individual autonomy. The new perspective that the third model offers still has to be complemented with a recommendation for a distribution system that minimizes the decrease in individual autonomy. It is known where the money to fund work could come from, so now the way freed capital could be transferred and what the implications of how these funds are distributed are, will be analysed through the lens of an important cultural sphere activity, education.

Chapter 4

How are productivity gains transferred from the economy to the cultural sphere, and what have been implications of conventional modes of funding education for freedom of education?

In this chapter it is analyzed how freed capital can be transferred from the economy to the cultural sphere while safeguarding individual autonomy in this sphere, taking education as an example. Today, the money that funds education, research, health care etc. often comes with conditions (protocols, standards, bureaucratic, legal and administrative requirements, political or economic priorities etc.) that reduce the autonomy of those providing these 'personal services'. Funds provided by the government, businesses and even charity provide opportunities to meddle in the subject matter of education and research, which corresponds with a decrease of individual autonomy in these activities. An example of this are state exams, and a long series of education laws including the "Wet op het Hoger onderwijs en Wetenschappelijk onderzoek"(WHW). Such standards are justified by saying that they ensure a certain quality of education.

However, it means that the political system gets an increasingly larger say in what kind of education and what kind of research is funded and what is not ((Head, 2011); (Head, 2014); (O'Brien, 2016b)).

People are more than ever aware of the value of an education, and the size of the education sector grows and shrinks according to the number of pupils and students seeking education. If more money becomes available, the teacher-student ratio will probably increase. The importance of discussing distribution methods is that financing more work in education only contributes to inclusive society if it is done in a way that guarantees individual autonomy. Note that this is the definition of inclusive society that belongs to the third model and that places the highest demands on the concept of 'inclusive society'. Using examples found in the literature, the strengths and weaknesses of three different distribution methods are analysed, namely government funding, market funding, and a voucher system, and their potential to safeguard the individual autonomy of those working in education and those who are educated is assessed. The most important question for this thesis thus is how the transfer of Freed Capital can be achieved without the individual autonomy of those providing and those receiving cultural services being impeded, and by taking education as an example, a method that best suits the third model of inclusive society can be recommended.

4.1 Transfer and distribution methods

Currently, the most common forms of funding education are the funding of schools and universities (out of tax income) by the government, and financing education through the market. There is a third method of funding education, which is a voucher system. A voucher system could also be paid for through the government from tax revenue, so this is not a distinctive feature of a voucher system. Rather a voucher system distinguishes itself from the other two based on who decides which school the money goes to. When the government subsidizes schools and universities, the political sphere has an instrument to interfere with the content of education. In the voucher system, the'learner' (pupil or student) determines, based on their individual spiritual goals and choices, to which school the money goes.

Nowadays, government and market funding of education often have merged to the point that one has become indistinguishable from the other. Major reforms are taking place in education which Sahlberg (Sahlberg, 2012) collectively has called the Global Education Reform Movement (GERM) (Fuller & Stevenson, 2019). These reform packages promote "three main core policy principles, namely standards, decentralisation and

accountability" (Verger et al., 2019, p.8). An overview of what these three policy principles entail is presented in Figure 4.1, and how national assessments are used within the GERM to promote them.

GERM principle	Definition and main policies	Role of national assessments	
Standards	Prescription of a national curriculum and establishment of quality standards	National assessments used to make sure schools meet and adhere to evaluable learning standards	
Decentralisation	Transfer of competences and authority from the central government to lower administrative levels	National assessments used to control state, regional, provincial and local authorities	
	Devolution of managerial and/or pedagogical responsibilities to principals and schools	National assessments used to govern at a distance a range of autonomous providers through the principles of outcomes-based management	
Accountability	Educational actors made responsible for their actions/results through some form of evaluation linked to consequences.	*Administrative accountability*	Test results attached to incentives or sanctions for schools, principals and teachers
		Market accountability	Test results used to inform school choice and promote school competition

Figure 4.1: The roles of GERM principles (Verger et al., 2019)

Additional explanation is required to show how these principles negatively impact individual autonomy. The term decentralization sounds very positive because it refers to the transfer of powers to a lower level, such as from the central to regional government, and providing them with the freedom to make their own choices and in doing so increasing their autonomy. However, since decentralisation is part of 'outcomes-based management', the power the individual has is very limited because the outcome of what they do has already been determined elsewhere. It seems that decentralisation in a neoliberal context does not mean that administrative and managerial powers are transferred to the individual. Rather, individuals have one responsibility which is to comply with centrally determined standards, and because of the accountability principle these individuals have to be able to account for their actions at all times. So instead of being directed by a boss or supervisor, the individual urges himself to comply with rules because the organizations they work in are structured in a way that incentivizes them to do so. Especially in the context of the high demands on the concept 'inclusive', this seems to conflict with autonomy because the outcome of what an individual does has already (externally) been determined.

These reforms make standardized and measurable learning outcomes the most impor-

tant factor when measuring the quality of education. The GERM is part of the changes that New Public Management (NPM) promotes, the goal being increasing accountability and decentralization in education (Verger et al., 2019). The GERM has caused the organizational and pedagogical responsibilities of teachers to decrease, and introduced management practice that aim to run schools like businesses (Verger et al., 2019)). Because government and the market are increasingly collaborating it has become increasingly difficult to make a distinction between the two. For example, the GERM has led to "the opening of the educational sector to the commercial interests of an emerging educational testing and school improvement industry" (Verger et al., 2019, p.23). This illustrates how the government and corporate sector have merged over time. As a result, the line between the most common forms of funding (state and market) is not always clear-cut. Under the GERM policies the two common methods of funding education appear to join and they go hand in hand with various (jointly-imposed) rules, conditions and control mechanisms which, so it is said, aim to ensure a quality standard and prove that the taxpayer gets value for money. However this level of control reduces the autonomy of those receiving the funds but also of those who use the services they provide, as is described in Section 1.2.

4.1.1 Government-funded education

A large share of the funding of education comes from tax income that is re-distributed by the central government. There is however a big difference between merely distributing funds, and also determining how and where they are used. For the third model of inclusive society, the ability of a distribution method to maintain individual autonomy is the extent to which the funds that are distributed are free from any external conditions. Individual autonomy thus means that a teacher can decide for themselves how they can best meet the needs of their students, and if the student disagrees they can choose to go to another school or take a different course. Not having a government decide what the quality standards of education are provides both students and teachers with "[t]he freedom to choose and the opportunity spontaneously to develop their potentialities by learning" (Burrow, 1969, p.38).

Interestingly, universities nowadays no longer offer studies but 'opleidingen' (courses with a strong training element). Rather than studying subjects, students take courses. This subtle difference has implications for autonomy in education because a course presupposes that there is an attainment target with a predetermined start and end point. Not only MBO and HBO schools, but also universities now provide courses, which means students taking them are trained with the attainment of centrally determined targets in mind. The uniformity this creates means that there is no room for expert discussion

of different views on a topic, or for meeting the pupil's or student's specific learning aspirations, and thus it can hinder the development of individuality in human nature and the human mind (Burrow, 1969). Nussbaum's (2010) regards the current shortsighted focus, and the way it has damaged the ability of students to deal with complex problems, a "silent crisis in education" (Nussbaum, 2010). Furthermore, the focus on producing graduates for the market, the economy, means that students attending universities are not "allowed to flourish" and do not have the "intellectual courage to reject dominant ideologies" (O'Brien, 2016a). Critical thinking that helps to find alternative solutions to current problems is crucial in laying the foundation of inclusive society, and to achieve this universities must be "made free and funded" (O'Brien, 2016a).

Central exams and centrally determined 'education programmes' may also diminish the quality of the learning experience because they promote a uniformity of views in education. An example of this is found in the field of economics where "86% of teaching is concentrated on neo-classical economic theory" (Tieleman, de Muijnck, Kavelaars, & Ostermeijer, 2018). Because of this uniformity, it is concluded that even though there is some diversity between economics curricula, students are inadequately prepared to face the current challenges to civil society (Tieleman et al., 2018). The many education laws such as the mentioned WHW have caused courses to slowly become the same in all universities. The quality standards of education, as set out by the WHW, are judged by a Visiterende en Beoordelende Instantie(VBI). Before they visit, the VBI asks the teachers of the relevant course to write a management review, not a self-evaluation report, because a management review better indicates to what extent defined goals have been achieved (Rekenkamer, 2013). Based on this management review, and the judgement the VBI writes after their visit, improvement measures can be suggested. The judgement of the VBI has been criticized for being unsubstantiated, because the criteria that were used to make the judgement were unclear, and because not enough attention was paid to substantive aspects of educational quality (Rekenkamer, 2013). The idea that all schools and universities can be judged based on one set of (unclear) criteria is why education laws can lead to uniformity in education, which might decrease the quality of education (because of loss of intellectual diversity), even though the goal is to maintain or improve quality of education.

So a potential problem when governments fund schools and universities is that they can determine what quality standards are set, with possible negative consequences for individual autonomy and the quality of education. These standards can influence how a course is structured, the form of education, which topics are discussed, what tests are taken and which textbook is used. For example, a teacher may have to elaborate on the educational goals of a particular course in a pre-structured spreadsheet that is the same

for all courses. Then it has to be described which questions on the test relate to which educational goal in that same spreadsheet. These types of checklists are not well suited to the creative work of a teacher, and also contribute to uniformity in education (Vollaard, 2022). This process is designed by the university to ensure that a proper procedure is followed, which is important because failing to do so means no accreditation is given. Because accreditation is required to receive funding, this bureaucratic control is often viewed as a something that cannot be avoided, but at the same time it does not help teachers or professors to do their job (Vollaard, 2022).

This is not to say that there can be no quality control or feedback processes in education, or that quality control always reduces autonomy. Feedback can be of use, when it is provided by peers and colleagues. People who are knowledgeable in a relevant field can provide suggestions and discuss topics that they find relevant. This is different from bureaucratic control, because any suggestion that is given is completely tailored to the subject or topic that is being discussed (Vollaard, 2022). Furthermore, the suggestions are provided by someone who does not determine which research or subject does or does not get funding. The problem with centralized funding of schools and universities is that a single institution determines the quality control standards. A related problem is that the bureaucratic control that aims to increase efficiency and accountability is becoming very costly, and the costs may exceed the amount that is saved by decreasing inefficient spending((Lorenz, 2012);(Bommeljé, 2011.)), thus making it counterproductive. By trusting the intrinsic motivation of academics to teach, and the ability of their peers, the faculty, to judge their performance, the time and resources spent on exercising external control over their actions could be diminished. Making bureaucratic control a minor issue increases individual autonomy in education, and decreases the need for more bureaucratic and screen-sitting jobs that is part of the second model of inclusive society.

In sum, government policy has reduced individual autonomy in education by increasing standardization, narrowing the curriculum, and increasing the use of corporate management practices in education (Fuller & Stevenson, 2019). These developments have merged government and market-funding of education, making the two almost indistinguishable.

The strength of the centralized distribution of taxes can be seen when quality control is separated from the provision of funds. In this case, individual autonomy in education could be maintained. The sole role of the government would then be to distribute Freed Capital. I come back to this in my discussion of the voucher system.

4.1.2 Financing education through the market

Financing education through the market includes the rise of a global education and publishing industry ((Verger et al., 2019);(Lankau, 2017)), and also corporate donations [of profits] to think tanks and research foundations. The latter includes the funding of, for example, research done for textbooks used at schools and universities, which is the basis of the growth of global publishing corporations. Such methods of funding of education and research allow the private sector to meddle in the subject matter of education. For example, the value or relevance of research is determined by its economic market value which means only research that is aimed to create such value is likely to get funded. Also, the quality of education is measured with reference to the quantitative output of education, which obliges a certain percentage of students to pass within the formal duration of their courses (Lorenz, 2012). The problem of this one-dimensional approach to education is that it has led to teachers being judged on their ability to teach specified basic skills and to produce particular results or output(Evans, 2014). Furthermore, these changes took place "to the detriment of inquiry-oriented and reflective teaching practices" (Evans, 2014, p.6). It has also impacted the individual autonomy of those receiving education. For students, the reforms have led to them being taught that facts are the most important part of their education (Evans, 2014). The emphasis on having to absorb, without thinking about the topic that is being studied, as many facts as possible means that there is no space for discussion. Considering the ability of a method of financing education to maintain individual autonomy in the cultural sphere, such an emphasis is considered a weakness if it means students do not "have the opportunity to express their own ideas and react to the ideas of others" (Evans, 2014, p.2).

New Public Management(NPM) practices have introduced private sector management techniques in all (hitherto public) cultural sphere activities. Together, these practices have led to "minimizing the public sector and maximizing the market sector without considering the fundamental differences between the public and private sectors" (Lorenz, 2012, p.614). Due to the fundamental differences between economic and cultural activities, it might not be desirable to organize a cultural activity such as education in accordance with the principles of the free market, even though this is one of the goals of NPM reforms. The impact on the structure of public education institutions due to NPM is huge (Fuller & Stevenson, 2019).

As mentioned above, the collective set of reforms brought about by NPM discourse, and the coalition of the government and corporations in education, are called the Global Education Reform Movement(GERM) (Sahlberg, 2012). The three policy principles that

drive the GERM process (standards, accountability and decentralisation; see (Verger et al., 2019)) have fundamentally changed the relationship between the learner, learning and knowledge (Ball, 2003). Ball (2003) relates a shift in the nature of work in education to market (private sector) management policies that are based on these principles and "leave no space of an autonomous or collective ethical self" (Ball, 2003, p226). The GERM has also resulted in the privatization and commodification of education which in turn has led to a focus on performativity, which is the mode of regulation that uses judgements, comparison data to incentivize, control and change the way teachers work (Ball, 2003). Furthermore, the maximization of the market sector has coupled the funding of educational organizations to be determined based on output criteria that can be determined by the market sector itself (Lorenz, 2012). The connection between NPM and corporations is thus that the GERM principles resulted from the merging of the political sphere and private sector, and the private sector were able to formulate these principles. Since individual autonomy is an important aspect of the third model of inclusive society, Freed Capital that is used to fund the growth of work in the cultural sphere should not be distributed based on principles that are determined by either of these two.

How have the three policy principles of the GERM, standards, decentralisation and accountability, been promoted and co-created by the market sector? This question is discussed based on examples that describe how this process works in the US. First, through the rankings of schools and universities, corporations are able to determine the criteria on which schools can score (Verger et al., 2019).) The quality of education is assessed by corporations that compare the scores of schools and universities on certain variables using national large-scale assessments (NLSAs) (Verger et al., 2019). An example of this is when a school or university asks for an independent efficiency study of their school district. Even though they were performing well, it was recommended that they should buy a 'reform model' that introduces standardized assessments of the quality and performance of teachers (Sloan, 2008). A failure to do so could lead to lower scores in the future and eventually to "households sending school-aged children to private or charter schools" (Sloan, 2008, p.562). This shows how a corporation, by introducing NSLAs, sets the standards for the quality of education, disguised as an objective analysis. The autonomy of the teachers decreases because their performance is measured in terms of productivity and output(Ball, 2003), and the more schools and universities 'modernise' which means they start using NLSAs, the more they are legitimized as a measure of quality of education(Verger et al., 2019).

So the standards and accountability principles that the GERM has introduced, allow corporations that provide the education improvement services that helps schools achieve a

good score, to receive government subsidies that are meant to fund education. The scale of these subsidies means that these corporations are basically entirely funded by the government, yet they claim to be independent private corporations (de Vlieger, 2022). Corporations also design the 'employee management' systems, which are systems for decentralized 'micro-management' that can check for each individual whether he or she adheres to the externally set standards. These standards are therefore an important channel through which corporations reduce individual autonomy by determining the content of education. Furthermore, these corporations provide the digital educational services that schools and universities use to meet the standards (de Vlieger, 2022).

So corporations can, by making NLSAs the standard assessment for quality of education, determine the content of education and they do this hand in hand with governments that subsidize them and thereby also give them the opportunity to influence the content of education. This opportunity, which presented itself due to the three GERM policy principles that led to the opening of the education sector to the commercial interest (Verger et al., 2019), has two weak points when it comes to maintaining individual autonomy in education. The first is that this coalition of public institutions and the market has established itself outside of the public eye, with hardly any open discussion about the desirability of this (current) situation. This is a main problem of the GERM, which has created a parapolitical coalition that is both the financier of, and sets the quality requirements for education.

The second weakness is that for-profit corporations monitor the quality of the education sector, to which they also provide their services. In the Netherlands this is illustrated by the monopoly the company Van Dijk Educatie (now called 'The Learning Network') has on the sale of school books (de Vlieger, 2022). This company has a monopoly on the largely government-subsidized distribution market of school books, and part of their profits are used to influence government policy in ways that allows Van Dijk Educatie to maintain their dominant position (de Vlieger, 2022). This example follows a pattern that is described by Lankau (2017). In Germany, corporations use their profits, as a tax write-offs, to finance foundations. Then, these foundations commission research to their own interest, which is linked to the interest of the corporation that funds them (Lankau, 2017). The results of the foundation's studies are used for lobbying and agenda setting in the political sphere, which leads to policies that are in the interest of the corporation, which leads to more profits, and the circle continues (Lankau, 2017). Lankau goes on to detail how (digital) corporations, through the agenda-setting circle that was just described, are pushing government policy towards embracing digital learning as the future of education (Lankau, 2017). This shows how financing education through the market can lead to corporations indirectly determining the subject matter of education

and how the quality of education is measured.

In this section I have argued how governments and the private sector have become increasingly influential in determining the quality of education through the role they play in funding education, and how this has over time eroded individual autonomy in education. This state of affairs is related to the way freedom of education is incorporated in national laws and the constitution in the Netherlands. For example, the Dutch constitution places the responsibility for the funding as well as the control of the quality of education in the hands of the government. The foundation for freedom of education is laid in the constitution, and at the same time education is subject to government supervision. This ambiguity or friction within the constitution has led to a situation where both government and private sector funding of education tend to be combined with external quality control, which in the third model of inclusive society means that there is a lack of freedom of education. It means that those providing and receiving educational services, who have no legal or financial power like corporations and governments, do not have the freedom of self-determination and the opportunity to develop their individuality that the third model of inclusive society aims to create space for. In the next section it is argued that for the third model of inclusive society a voucher system could help maintain individual autonomy in education.

4.2 Recommendation for a distribution policy, vouchers, that is best suited to the third model of inclusive society

If the government is responsible for organising the transfer of funds to the cultural sphere, they can easily attach all sorts of conditions and rules one has to adhere to in order to be eligible for funding. This could cause major constraints on the individual autonomy of the providers and receivers of these services. Similarly if education is funded directly by businesses, they will tend to prioritise research and education that leads to economic gain. In both of these perspectives, funding by the government or "the market" (businesses), lead to them being able to meddle in the subject matter of education and research. So what could financing education in The Netherlands look like if freedom of education was considered important? Why is the voucher system considered to help maintain individual autonomy as part of the third model of inclusive society?

To safeguard the autonomy of the cultural sphere, and more specifically the autonomy

of the individual in education, three requirements would have to be met. Since there are other methods of funding education imaginable, it is important to specify why the voucher system is selected to distribute Freed Capital. The reasons for the selection of a voucher system are found in the following three requirements for maintaining individual autonomy in the third model:

- None of the three spheres dominates another
- Quality control is separate from funding education
- The wide definition of Individual autonomy is respected

The first requirement is that each sphere is autonomous and does not dominate another. This requirement follows from the difference in the nature of work in each sphere. In education the goal is to enable individuals to develop knowledge and insight, which is very different from the goal of the legal-political sphere (which establishes rules and laws while maintaining equality before the law), and from the market where the goal is to meet the material needs of people. The difference between economic and cultural activities is that the former concerns the supply of material goods and the latter the consist of (spiritual) effort and work. As was described in Chapter 2, in the cultural sphere the work itself is the product, whereas in the economy it is a means to an end. Hence, in the economy the end goal can be defined very precisely, for example, supplying a properly working phone. In education however, a teacher can help students and pupils, but not determine what he or she learns, just as a doctor can help a patient but not guarantee that all their patients will be cured. The difference is thus that in the economy there is a clearly defined desired result, the achieving of which the producer can guarantee, that is clearly described. In the cultural sphere the result is uncertain as it depends on many factors, including the person who is receiving the service. Work in the economy can be very clearly circumscribed; on the other hand, the nature of work in the cultural sphere requires freedom.

For example, a doctor needs freedom to make the correct diagnosis and the therapist needs to be free to adjust therapy if a treatment is not working. Similarly in education, a teacher must be free to provide the student with the guidance he or she needs. Concepts like "no cure no pay" and "market for higher education" endanger the freedom of the cultural sphere because these concepts pre-suppose fixed outcomes: goods or products that can be "delivered". Such concepts show how economic thinking has come to dominate the cultural sphere, also called "economic imperialism". Economic interference in education and research programs thus is an attempt by the economic sphere to manipulate education. However, education is not a market because it requires freedom to find out what the educational needs of pupils / students are, and to meet their (individual) immaterial, spiritual needs. So the task is to find a method of funding

that prevents the law-giver and corporations to dictate (through their law-giving and financial powers) how cultural activities are organized. Putting funds in the hands of those seeking education (using a voucher system) could create a situation where those receiving education determine which education meets their needs, and decide what gets funded and what does not.

The second requirement is that the funding is separate from quality control in education. This requirement is closely related to, and could be seen as a further specification of the previous one, because if funding and quality control are not separated, the sphere that provides the funding and determines the quality standards of education dominates the cultural sphere. A voucher system could meet this requirement in two ways. Firstly the government acts only as a distributor of funds, without also determining the quality standards of education. In doing so, the second way a voucher system meets this requirement is that the decision what gets funded takes place in the cultural sphere, namely by the people who are receiving education. This poses many challenges related to how the cultural sphere itself could then control the quality of education, which will be addressed in the next sections. A condition for quality control performed by the cultural sphere is that it has to be based on open discussion, but importantly, the voucher system has the theoretical potential to provide the economic basis for fulfilling these requirements, which is why it is chosen as a method of funding suitable to the third model of inclusive society.

So the reason why a voucher system can fulfil the first two requirements is mostly because it would allow people to freely choose which capacities they wish to develop and how. The importance of and focus on freedom in the cultural sphere is ultimately related to and explained by the third requirement, the wide definition of individual autonomy which constitutes the philosophical basis of the third model of inclusive society[1]. In the third model J. S. Mill's (1858) view that "the ultimate end [of human life] is the full development of human potentialities" (Downie, 1966), and that this full development requires individual liberty or autonomy, underpins the idea that society can only be inclusive as long as individual autonomy is maintained. Individual autonomy in this context means that human beings wish to, and should be allowed to grow and "flourish" through self-chosen self-development (Downie, 1966). This flourishing cannot happen when freedom in the cultural sphere, in this thesis individual autonomy of those providing and receiving an education, is not maintained. This freedom is most needed in the cultural sphere, because that is where new ideas are developed and human beings aim to "find truth" (Berlin, 1958).

[1] An average definition of individual autonomy is being in charge of, and making one's own life choices.

There are many accounts that stipulate the importance of individual autonomy in the cultural sphere and how essential freedom is for self-development. For example by Wilhelm von Humboldt who states "individuality of power and development" leads to "originality"(Mill, 1859 [2003], p.132-133), or by highlighting the importance of "self-development through the development of individuality"(Downie, 1966). Vice versa, a lack of freedom in the cultural sphere leads to "withered capacities" and "collective mediocrity" (Berlin, 1958). A voucher system could be a step towards reorganising the distribution of funds in a way that the "real values of life" (Keynes, 1930, p.366) are considered as important as one would think based on how they are described in this section. This wide definition of individual autonomy is an important distinguishing factor between, on the one hand, the first two models, and on the other hand, the third model of inclusive society.

The voucher system has the potential to provide individual autonomy and freedom of education with the necessary economic support. In doing so, a voucher system will contribute also to the rest of society (the economy and the legal-political sphere) because, if people can freely develop their potentiality this will also strengthen "the power and resources of the nation" (Burrow, 1969), as the ideas that originate in the cultural sphere will contribute to productivity gains in the economy (Wilken, 1982) as well as to better ideas and more fruitful debates in the political sphere.

4.2.1 A voucher system and freedom of education

In the third model of inclusive society people should be able to participate in ways that do not undermine their autonomy. Funding education is important in this context because self-development is achieved in the cultural sphere, and it has two prerequisites: freedom and the opportunity to experience a variety of situations (Mill, 1859 [2003]) (von Humboldt, 1792 [2009]). If freedom of education and (cultural) diversity are essential to the development of the potentialities of each individual, a mode of funding of education would be required that respects and supports both. Since the cultural sphere is likely to grow in size and importance (Keynes, 1930), the potential for self-development and the funding of education will continue to be closely related. As far as the availability of funds is concerned, we have seen in Chapter 3, that this is no problem at this time, and in principle not in the future either (Baumol, 1993) (Baumol et al., 2012). The problem to be solved regards the conditions on which this money is made available, as was made evident by the many weaknesses that conventional methods of funding education have when it comes to their ability to maintain individual autonomy that were discussed in Sections 4.1.1 and 4.1.2. It is important to keep in mind that these ideas are the initial reason why a voucher system to fund the growth of work in the cultural sphere is

considered.

During the "Schoolstrijd" Kuyper elaborated on the importance of the method that is used to fund education. He states that freedom of education can only be maintained if the funding of education is not viewed as an aspect of education policy, but as an economic problem (Kuyper, 1879). Kuyper does not mention the voucher system specifically, but based on his work it is realistic to suggest how freedom of education (mentioned in the constitution) could be safeguarded by introducing a voucher system. In Kuyper's view, the responsibility of the state regarding the economic aspect of education is not to fund schools, but to make sure (through its economic policies) that every parent can afford education for their children (Kuyper, 1879). A voucher system could achieve this goal by enabling parents to pay for the education they consider fit for their children. The voucher system implies that the funding of education would be separated from the determination of the contents of education. Education for which there is demand will get funded, but not in the same way as market-funded education. The difference being that it is the parents and not a company that determines what the quality standards of education are. A voucher system implies a direct transaction between the receiver and the provider of education, and the provider of education is not a company or government but a teacher. The more direct this connection is, the better individual autonomy for both can be maintained.

4.2.2 Freed capital and the voucher system

The larger (macroeconomic) question now becomes to explain how the circle between the creation of ideas, which tend to materialise into labour-saving innovations in the economy, and the freed capital this process generates can be closed. This circle starts at the growth of knowledge, where due to research and inspiration, new insights and ideas are attained. This growth, for the third model of inclusive society, has to be free, in the sense that it should not be determined by political or economic actors which knowledge is or is not generated. The next step in the circle is that at least a part of this knowledge will be applied in the economy, where it will tend to improve labour productivity. This productivity increase is not the goal of the growth of knowledge but it is (almost) always a result of it. The third step is then that labour is obviated, and the productivity dividend grows as a result. This leads to the creation of freed capital which could fund the growth of knowledge, completing the circle (Naastepad & Houghton Budd, 2019).

If relevant parties in the economy (companies, shareholders) do not voluntarily make these funds available, an open discussion about freed capital may be required. This may lead firstly to asking who the freed capital belongs to. Corporations, shareholders,

employees, managers, or the government may believe they are the owner of the freed capital, but who generated it, and where was it generated? An important realisation is that productivity growth and profits in the economy are a result of the growth of knowledge in the cultural sphere (Wilken, 1982). After all, labour productivity improvements arise from the human intellect, in the sense that the physical capital (machines) and organisational improvements that make productivity grow originate in human intellect (Naastepad & Houghton Budd, 2019). Thus, the word capital has multiple meanings technical, cultural and economic. Machines are just a specific (technical) form of capital called "fixed capital" or physical capital; productivity growth results in freed capital; and ideas are also called capital. Freed capital is generated by human intellect, or rather by cultural life in general (Wilken, 1982), and consists of money that is freed from production by human intelligence could be transferred back to the cultural sphere in a way that leads to the growth of knowledge and insight ('metaphysical capital'). Because if Freed Capital is (ultimately) generated by cultural life as a whole, argued Wilken (1982), couldn't we say that cultural life as a whole, being the creator of freed capital, is also its legitimate owner? A voucher system may not work until such ideas are socially and scientifically accepted, which may require a paradigm shift in common sense as well as academic thinking about capital.

The most concrete proposal for the introduction of a voucher system to fund education, that does not require an unrealistic and drastic change in in society as a whole, was written for the Netherlands by lawyer Mouringh Boeke (Boeke, 1987, p.46). For the voucher system to be an improvement compared to the conventional methods of funding education, it must help maintain individual autonomy. In Boeke's (1987) proposal for a voucher system, the financing of education would look as follows. First, a school receives a declaration (for minors signed by their parent/guardian) which states that the pupil has enrolled to said school. This declaration is sent to the government ministry that is responsible for funding education. This ministry determines the amount of funding a school is eligible to, which is the average of the total cost per pupil that is related to the age of a pupil. The school publishes a document for the parents/guardians of the pupils that contains (1) the names of the teachers (2) school hours and holidays, (3) a budget for the coming year, (4) the school curriculum and the pedagogical principles, (5) the text of the law at hand, and (6) a declaration of the education inspector that this document has been seen by him or her. This document undergoes a *marginal* review by a government inspector, meaning that the inspector checks whether the document contains the five items mentioned above. The inspector has the authority to reject the document if it does not contain these five items, or if the total number of hours per school year is less than the number of hours in public (state) education (Boeke, 1987, p.47-48). As part of its (constitutional) task to control the quality of education, the ministry can decide

to ask an (independent) civil judge to judge whether the quality of education given in a particular school is adequate; the judge will check marginally (Boeke, 1987, p.48). This means that those providing educational services are not pre-occupied with the implementation of government regulations, but can act based on their own insight and responsibility.

4.2.3 Quality control of education by an autonomous cultural sphere

The responsibility for quality control, once it is separated from funding education, can be taken over by an autonomous cultural sphere. In this section ideas of what quality control of education by an autonomous cultural sphere, supported by an open discussion of quality standards, could look like are discussed.

The intended consequence of the proposal of a voucher system is that the responsibility for the quality of education will shift from the government (the legal-political sphere) to parents, teachers and pupils / students (the cultural sphere); corporations (the economy) will also have no role to play in this matter. Moreover, the relationship between parents / students and teachers should be based on openness and mutual consultation (Boeke, 1987, p.48). Importantly, in this proposal the authority in education shifts to the cultural sphere. Obviously, the civil judge who can be asked to judge the quality of education will have to be independent; this proposal assumes that the judiciary is part of an autonomous cultural sphere. So the aspect of education that is quality control is falls under the domain of the cultural sphere. Representatives of the political and economic sphere can still discuss problems they encounter, and researchers and teachers will still contribute to solving these problems. This way, the economic and political sphere do have a role to play in the cultural sphere, but they are no longer able to impose anything on the cultural sphere.

This poses the question how the three sphere can work together in a harmonious way. The idea to address this is to create a space, a tripartite platform, where representatives of all three spheres can negotiate with each other, which is very ambitious. Currently corporations and the government have financial and juridical power, but in this proposal the cultural sphere determines the quality and content of education. In this context the three autonomous spheres can discuss how much freed capital is available and how this money will be distributed among schools and universities. In the absence of power relationships, all matters that relate to cultural sphere activities such as education, research, health care, art and recreation can be freely discussed between the representatives of each sphere. The negotiations the three spheres might lead to better outcomes for all, and when there is a disagreement that cannot be resolved easily, a way

of finding consensus or resolving the matter must be devised. This requires significant effort from all involved, but it does mean that new ideas that originate in the cultural sphere are useful because everyone sees them and can come up with suggestions and improvements. This openness and consultation is important for maintaining individual autonomy.

Some form of quality control and quality criteria are likely to be part of education, so what could this look like in a voucher system? When the cultural sphere, teachers, are not themselves the guardians of the quality of education, the state and corporations will continue to fill that vacuum (Houghton Budd, 2011). Individual autonomy in education, and a free spiritual life, can be maintained when teachers get the chance, and take advantage of this opportunity to use their insight, to objectively evaluate educational processes and competence (Houghton Budd, 2011). To organise quality control of education in the cultural sphere, Houghton Budd (2011) proposes a committee which he calls the Teacher Education Circle (TEC). New ideas, formulated within TEC, could be used as a foundation for what quality control by the cultural sphere would entail. The TEC could thwart "the imposition of criteria from outside or in a centralised manner"(Houghton Budd, 2011, p.22), and shift the responsibility for quality control of education to the cultural sphere itself.

In the TEC educators could meet regularly to, together, determine quality standards of education, and because these standards have been jointly identified and formulated by educators, they are recognised as being authoritative (Houghton Budd, 2011). This is important because this means this it is not laws or the threat of not receiving funds that makes the quality criteria authoritative. The resulting self-defining accreditation, which is what quality standards are called by Houghton Budd (2011), formulated by the TEC could be used to expose the flaws of quality control performed by the government or corporations (Houghton Budd, 2011). The TEC, or representatives of the TEC, could discuss the quality standards of education and other relevant matters with the economic and political sphere. Letting those involved in the educational process be the guardians of the quality of education thus helps maintain individual autonomy.

The economic (funding) and legal aspects of education (e.g. laws protecting freedom of education) could be discussed in a tripartite platform where representatives from the three spheres can meet to discuss, for example, how much freed capital is available and how it could be distributed while respecting individual autonomy in the cultural sphere. A tripartite body could help manage the power relations between the three spheres, by for example preventing corporate involvement in the decision-making processes in the cultural and political spheres (Nyberg, 2021). This also helps fulfill the requirement that none of the spheres can be dominant over another. In the tripartite

body discussions can be held regarding the standards and quality control of education, but the outcome of these discussions can not be imposed on the autonomous cultural sphere. The suggestions provided by the tripartite body could be willfully imposed by the autonomous cultural sphere, but importantly only if they choose to do so. Hence, the role of the tripartite body is not to determine the quality standards of education, because that responsibility is in the hands of the cultural sphere itself, rather it facilitates an open discussion between the three spheres, but representatives of the cultural sphere could use this platform to present their ideas for an autonomous cultural sphere to the economic and political sphere. So in this tripartite body, the voucher system could also be discussed between equals, and it could be examined whether such a system could be a step towards more individual autonomy in education. A voucher system, supported by an open discussion that could be facilitated by the tripartite body, could thus help maintain individual autonomy in education which is why it is recommended here (in this thesis) as a distribution policy for the third model of inclusive society.

4.3 Conclusions regarding the separation of funding and quality control

The three main aspects of education, being freedom, funding, and quality control of education, and their relation to individual autonomy, have been discussed in this chapter. The most important strength of a voucher system, and one of the requirements for a method of funding education suitable to the third model of inclusive society, is that it would separate the funding and quality control of education and thereby increase responsibility and individual autonomy in this sector. Once separated, quality control of education should be left to the cultural sphere, and the funding of education should be separate from quality control. The voucher system could put the responsibility for quality control in the hands of those giving and receiving education.

The strength of a voucher system to maintain individual autonomy is thus related to whether an open discussion, that allows education to be judged by its own criteria, can be held. This implies that assessments for schools that have different pedagogical insights would have to be designed based on these criteria. Those attending or considering attending a school will know these criteria meaning that their decision to attend (or not) is another form of quality control. When teachers educate based on criteria that (potential) pupils and students do not consider to be useful or valuable for their development, this will result in low attendance to their school. The criteria that a particular group of teachers establish also determine which teachers join the

school, and how their performance is evaluated (Houghton Budd, 2011). This shows how the responsibility for quality control in education could shift towards those who are providing and receiving education. Common methods of distributing funds leave important decisions and responsibilities to people who are not themselves engaged in the educational process (Houghton Budd, 2011), thus reducing autonomy in the cultural sphere. The strength of a voucher system is thus that it, by separating funding from quality control, facilitates individual autonomy in the cultural sphere.

Chapter 5

Conclusion and discussion

In this final chapter the conclusion and limitations of the research will be discussed.

5.1 Conclusion

Whether a third model of inclusive society, that offers everyone opportunity to participate in ways that do not undermine the autonomy of individual, is thinkable, is determined based on the same qualitative criteria that were used to evaluate the first and second model. Participation, or to what extent people have the opportunity to participate in society in a meaningful way is the first criterion. The second is individual autonomy, or the freedom people have in developing their rationality, capacities and judgement. These two are discussed based on the findings in Chapters 2, 3 and 4. The final criterion is related to the first two and concerns the financial feasibility of the third model.

Technological innovation does not have to lead to mass unemployment or a future without inclusive society. The first and second model of inclusive society show that there are possibilities for society to remain inclusive in a certain way. However, a qualitative assessment of these two models shows that the inclusiveness they offer has many limitations. The feasibility of a third model, which is based on a less limited concept of inclusiveness, is assessed depending on the answer to two sub-questions. It has to be financially feasible to allow people to participate, and there needs to be a possibility to distribute funds that are used to facilitate participation in a way that individual autonomy is not undermined.

Regarding the first (participation), the data analysis in chapter 2 showed that the hours

worked in the cultural sphere keep growing compared to the economy. This trend gave rise to the idea that technological unemployment could be prevented, if the continued growth of work in the cultural sphere is funded by productivity gains achieved in the economy. Participation would be financially feasible (and the possibilities regarding inclusive society would not be limited to the first model) if there is sufficient freed capital to fund the growth of work in the cultural sphere. In Chapter 3 it was then shown that, during the years 1970 to 2017 in the Netherlands, the productivity gains or 'Freed Capital' in the economy were sufficient to fund the growth of work in the cultural sphere. Hence, the answer to the first question is on one hand yes, there are sufficient productivity gains in the economy to fund the growth of work in the cultural sphere, which means people have the opportunity to participate. This shows that it is financially feasible to fund participation, and more importantly, it is now clear why it is feasible. After all, in the second model participation is also funded, but the source of funding wasn't made explicit. However, in the second model, it had become apparent that having the freedom, responsibility, and the opportunity to make a meaningful contribution to all aspects of society is not determined based solely on the ability to fund participation. In other words, it is found that participation in inclusive society does not mean just having a job.

Participation that is funded by productivity gains can only help achieve inclusive society in a wider, more encompassing sense if these productivity gains (Freed Capital) are distributed in a way that maintains individual autonomy. Taking education as an example, different methods for the distribution of freed capital are discussed, and their strengths and weakness when it comes to maintaining individual autonomy are assessed. The recommendation based on a comparative analysis of conventional methods of funding and the voucher system, is that the responsibility for quality control that currently rests with the government and corporations, could be reconsidered. It is found in chapter 4 that a voucher system is a promising method of funding education that seems best suited to the third model of inclusive society, because it allows for the separation of the funding of education and the control of the quality of education. Quality control could be left to the cultural sphere itself, to those giving and those receiving an education. A step towards realising such a situation could be to rethink what freedom of education means, why and how it was incorporated in the constitution, and how it relates to quality control. Taking the separation of funding and quality control as a starting point, over time a new tripartite platform could developed, for discussion between representatives from the three spheres on all matters of societal importance including the subject matter of education, and the distribution of freed capital in the cultural sphere, on equal footing.

The voucher system, as a method of distributing Freed Capital, requires more than only sufficient economic (funding) and political (regulation) support. It should also be supported by an open discussion about education and quality criteria, i.e. a free cultural life, or else it could mean little for freedom of education, no matter how well the economic and regulatory aspects are organised. Achieving a third model of inclusive society would also require a wide support for and awareness of the idea that productivity gains, (the materialisation of human ideas and intellect), originate in the cultural sphere. This makes the main challenge to the feasibility of the third model whether the required broadening of understanding (of the importance of freedom in the cultural sphere and of mutual relationships between the cultural and the economic sphere) can be brought about. Freed Capital has to be made available to the cultural sphere, and the method that is used to do so has to be supported by an open discussion of the use of these fund, without one sphere being dominant over another. Based on the three elements of the qualitative framework, it can be concluded that a third model of inclusive society that offers everyone opportunity to participate in ways that do not undermine the autonomy of individual, is thinkable.

5.2 Relevance

In this section the societal and scientific relevance of this thesis are discussed. The managerial relevance and EPA perspective can be found in the Executive summary and Relevance for Engineering Policy Analysis sections.

In this thesis a third model of inclusive society is conceptualised. In order to show how the third model is an improvement compared to the two conventional models of inclusive society, questions in to how society can remain inclusive when faced with the possibility of technological unemployment are addressed. Therefore the theoretical relevance of this thesis lies mainly in the broadening of the concept of inclusive society. In the first and second model, as they are defined in literature, the way inclusive society is maintained has significant implications for the future of employment, as is described in Chapter 1. For the first model, it was found that it was questionable whether a basic income policy should be considered inclusive, firstly because it does not focus on the true cause of exclusion (unconstrained technological innovation and the unwillingness to make financial surpluses that arise in the economy available to fund new work outside the economy), and secondly because it might have significant implications for the relationship between citizens and the government(Trojanow et al., 2015). The theoretical relevance of this insight is that a basic income should not only be judged based on its ability to provide people with the basic necessities of life; rather, it should also be asked

why it is accepted that work should be disappearing? This insight could help in future evaluations of the feasibility of a basic income to maintain inclusive society.

In the second model of inclusive society, the availability of work is not a problem, rather it is the nature of work that makes the inclusiveness of this model questionable. It was already known that the introduction of supposedly efficiency-increasing and labour-saving ICT technologies and reorganisations, has led to an increase in managerial and administrative work (Lorenz, 2012). In this thesis however, the question is asked how it is possible that there is enough money to fund all this work. Especially in light of the increased cost of labour due to productivity growth it is hard to imagine how it is possible to obtain enough funding for an ever-increasing administrative support staff. It is suggested that this is possible because this work is indeed funded by productivity gains in the economy, which makes the obvious question why this money is not used to fund meaningful work. This line of reasoning thus provides insight into where the money that funds the creation of the many bureaucratic and administrative jobs that we see today comes from.

To assess the feasibility of a the third model, three spheres of activities are conceptualised. The analysis of hours worked in Chapter 2 shows that over time more hours are being worked in the cultural sphere, and it is suggested that inclusive society could be maintained if the further growth of work in the cultural sphere could be funded out of the productivity gains achieved in the economy. In the process, Baumol's and Wilken's (1987) ideas on how education, health care and other 'personal services' (Baumol, 1967b) can be financed, are connected to ideas of how inclusive society can be maintained in the Netherlands. Furthermore, it includes Baumol's more recent research that describes why we can afford cultural services (Baumol, 1993) (Baumol et al., 2012), in the discussion of what inclusive society could look like. In Chapter 3 it is described how the productivity gains as described by (Wilken, 1982) could be used to fund the growth of work in the cultural sphere. Freed Capital is the money that is saved each year in the economy due to labour-saving technologies. The model that is used to estimate Freed Capital contributes to the discussion of inclusive society by quantifying a value that is difficult to measure directly, which shows very concretely how the cultural sphere contributes to the saving of labour in the economy, and vice versa, how the economy could support the growth of work in the cultural sphere.

The recommendation of a voucher system to maintain individual autonomy in the third model of inclusive society also broadens the discussion of what inclusive society in the future could look like. The societal relevance of bringing the discussion of inclusive society to a higher level is that it could lead to meaningful participation and cultural autonomy for individuals. The relevance of the thesis is thus that it highlights that current

research on inclusive society is very incomplete, especially because it largely ignores, on the one hand, the adverse consequences technological development can have on individual autonomy, and on the other hand, the positive consequences technological progress could have if the productivity gains that arise from it were used to support autonomous individual development. This thesis combines the findings of literature, qualitative and model-based analysis with an open debate about what inclusive society could look like.

5.3 Limitations and recommendations

This research has methodological limitations due to the sector classification that is used to sort the data that are used for the hours worked analysis, and calculation of the Freed Capital. A number of activities were re-classified between the two releases of the data set, and for most activities, after some modification, these changes were not problematic. However, "Professional, scientific and technical activities" includes legal, accounting, management consultancy and engineering activities, as well as scientific research and development activities. Because these activities can not all together be considered part of only the economy or the cultural sphere they are left out of the analysis. Scientific research however, is an important cultural sphere activity, which means the quality of the analysis would improve if this activity is included, because the hours worked in the cultural sphere would be more accurately reflected in the results. The same is true for activities such as accountancy and management consultancy, but for the economy instead of the cultural sphere. The problem is that no dis aggregated data that splits the activities within this sector are used. The data being highly aggregated also affects other sectors, albeit to a lesser extent. Research into how the detail of activities can be expanded in the sector classification, in combination with obtaining a more dis aggregated data set could thus help improve the quality of the results and the analysis.

In Chapter 4, a voucher system is proposed as a method of funding education. The analysis of government-funded education could be expanded to include more examples of how this method of funding decreases individual autonomy. In practice, a voucher system could also have many problems, such as wealthy individuals making private contributions to schools which could create a divide between the schools their children go to and other schools. In the Netherlands, minimal parental contribution to schools is the norm, yet research into rules that address private schools and other problems that could be related to the voucher system is required for it to become a more concrete recommendation. Furthermore, education is the chosen cultural sphere example, but

knowledge of how individual autonomy in the third model of inclusive society can be maintained could be expanded by analysing more cultural activities such as health care. Health care is an interesting sector because it consists of both cultural activities such as diagnosis, treatment and research, and economic activities such as the production of medicine, medical equipment and required infrastructure. Research into the voucher system itself, and its ability to maintain individual autonomy, could be expanded to not only include examples of other cultural activities but also include countries that have experimented with similar policies.

Another limitation of the current research is that the banking and insurance sector is left out of the analysis, mainly because of this sector's questionable contribution to the economy (Storm, S. Naastepad, C.W.M., 2020), meaning that the potential impact of financial intermediaries is not taken into account. Financial intermediaries could position themselves between the 'consumer' and the 'producer' of cultural services, and therefore be a factor that increases the cost of a voucher system. For example, a health care arrangement in the Netherlands called "Persoonsgebonden Budget" (PGB) provides people with money with which they can buy their own health care. So the PGB lets people choose their health care providers, just as a voucher system would allow people to choose where they want to get an education. However, the PGB arrangement was found to be vulnerable to abuse, health care contracts were being forged and bills were sent for care that was not delivered, and proposals have been made to reduce the risk of fraud (van Loghum, 2018).

Importantly, the voucher system provides funds directly to those receiving educational services, who pay this money directly to those providing education (as they pay their school fees etc.), which makes it different compared to the PGB. For example, the voucher can not be used for purchasing anything other than educational services, as it not possible to spend the voucher on car repairs or groceries. This is possible with a PGB (Zorggids, 2018). The risk of systemic fraud being committed by the employees of schools and universities, specifically those who determine how the funds are spent, is reduced because it is know which employees are responsible for financial decisions and administration. Again this implies that a voucher system has to be supported by an open debate, as the same employees that work at these schools and universities are the ones that have to assess whether the voucher funds has been spent correctly. Still, the question remains whether financial intermediaries could form a threat to a voucher system intended to provide funds in a way that maintains individual autonomy. It might be too idealistic to assume that people are able to handle the freedom and responsibility that the voucher system offers, and it is not inconceivable that people will abuse it. The bigger question that arises from this insight is whether it is possible to organise the funding of cultural

services in a way that sidelines the finance, banking and insurance sectors. Here, the tripartite body mentioned in this thesis could potentially play a crucial role, for it is only through comprehensive, society-wide debate that a socially acknowledged role of each main party in society could be agreed upon. The potential role of this tripartite body in solving major social questions would be another subject for further research.

Finally, one of the requirements to fund work in the third model of inclusive society is that productivity gains in the economy are considered Freed Capital, because the ideas that lead to productivity gains originate in the cultural sphere, and that it is the right choice to freely make these funds available to the cultural sphere. The distribution of funds would still be organised by the government, but they would not be able to determine the content of cultural activities such as education. This shift means that is has to generally accepted that productivity gains made in the economy, at least in part, originate in and are owned by the cultural sphere. Such an acknowledgement is likely not easily brought about, and achieving it may well require a rethinking of the dominant economic paradigm. Hence, further research into how a change in economic thinking can be brought about, and how it could help maintain inclusive society, is another recommendation for future research. Nonetheless this research provides a new perspective of how inclusive society could be maintained, and thereby contributes to making such a societal shift a possible reality.

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