The New Ordoliberalism - A Case for UBI? [*]

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Abstract

This article presents and discusses New Ordoliberalism, implemented though the introduction of Universal Basic Income, as such an alternative approach within economic policy to handle the global challenges of the 21th century, like increasing inequality. New Ordoliberalism develops the basic ideas of traditional Ordoliberalism as well as constitutional economics further by considering both ex-ante aspects of justice on the constitutional level but also incorporates concepts of justice in the outcomes in the post-constitutional level. The article discusses New Ordoliberalism from a standpoint of a paradigm shift regarding normative assumptions in society, and presents applications of New Ordoliberalism and UBI within game theory and in a model comparing the individual utility of UBI with means-tested social security system.

1. Introduction

The Covid-pandemic, although starting as a global health crisis, evolved to be a social and economic crisis, by (among other factors) affecting global production chains and contributing to rising levels of inequality. It has shown how vulnerable our societies are to socio-economic shocks (Blum & Neumärker, 2021; Karabag, 2020; Kish et al., 2021). To prepare for and handle the risk of future health crises has become highly prioritized on political agendas around the world.

At the same time, humanity (as well as the planet) is facing threats from the climate crisis and rising global and local inequality (Blum & Neumärker, 2021; Moriatry & Honnery, 2020; Gills, 2020; Bergman, 2020). Thereby, the ecological and social crises are not only an expression of past developments in the global economy and the use of natural resources but are also in a self-reinforcing process (Bergman, 2020). The human-made effects of a growing economic system on climate, the environment, the food security, and on inequality and justice have recently been a threat to long-term human and planetary health (Burkle, 2020; OECD, 2020; Qiu, 2017; Watson & McMichael, 2001).

In this context, the capitalist dominance of neoliberal economic policies leads to income inequality, so that especially performance-related incomes are disproportionately affected by the crisis risk and burdens, while, in contrast, unearned incomes hardly absorb the crisis burdens at all (Neumärker et al., 2021). Some authors, therefore, see neoliberal-led economies as drivers of the crises of the 21st century. The risk is that, while laissez-faire liberalism promotes market coordination, extreme economic liberalism may prioritize markets as ends in themselves and neglect the needs of citizens (Fehl et al., 2002, p. 48).

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Aiming to establish a functional and humane economic order, the Freiburg school of economics developed the theory of Ordoliberalism. It recognizes the role of enabling and controlling markets to serve the citizens effectively, emphasizing the need to counteract large concentrations of power in both markets and politics (Eucken, 1989, p. 239; Eucken 1952, pp. 334, 375-376).

However, there are several points connected to social justice and conflict prevention in the post-constitutional level that the traditional Ordoliberalism neglects (Neumärker, 2017). Therefore, this article presents New Ordoliberalism as an evolution of traditional thinking that systematically addresses the weaknesses of Ordoliberalism and contributes to a stable and sustainable system to face the challenges of the 21st century.

Thereby, the article is structured as follows. Part Two discusses the five criteria of New Ordoliberalism and how it addresses the weaknesses of classical Ordoliberalism and leads to social justice and post-constitutional stability of the system. Part Three continues the discussion in terms of resilience, equity, and risk reduction. In this context, the Universal Basic Income (UBI) is proposed and analyzed as a useful tool. Here, New Ordoliberalism can be understood as a paradigm shift in mainstream research on economics and social justice. Part four offers two applications of the concepts. First, New Ordoliberalism is applied in the context of game theory and the potential of UBI to achieve socially optimal equilibrium is examined. Second, the implications of UBI on the utility function and consumption tax revenues are presented and analyzed in a simple economic model. Part Five concludes.

2. From classical Ordoliberalism to a new ordo-thinking: The New Ordoliberalism

In a market society, the distribution of goods is a mixture of individual decisions, the corresponding efforts, endowments, and capabilities. The first fundamental theorem of welfare economics shaped economists' research by connecting the market with Pareto-efficiency. It identifies markets to provide competitive equilibria under ideal conditions (Blaug, 2007, p. 185). This finding motivates economists to recommend market mechanisms where possible to foster efficiency improvements. For example, laissez-faire liberalism is eager to recommend markets instead of governmental action to coordinate economic tasks. However, extreme economic liberalism may fail to implement markets that serve the needs of the citizens. Instead, markets become a goal in themselves (Fehl et al., 2002, p. 48).

The Freiburg school of economics emerged developing the political theory of Ordoliberalism as a research program fostering the political implementation of a market society in contrast to laissez-faire liberalism. Ordoliberalism aims to serve the citizens by developing a functional and humane economic order (Eucken, 1989, p. 239). Further, Ordoliberalism recognizes the tasks of enabling and controlling markets to succeed in serving the citizens. For example,

dissipating large concentrations of power in the markets and politics (Eucken, 1952, pp. 334, 375-376).

The Freiburg school was initiated by the economist Walter Eucken and the lawyer Franz Böhm in Freiburg in Breisgau, Germany, in end of the thirties of the 20th century (Fehl et al., 2002, p. 50). Economists and Lawyers worked together to sketch out the eponymous concept of constitutional policy to provide a sufficient framework for markets to operate.

To reduce interruptive governmental behavior, rent-seeking, elective gifts, and inter-generational appropriation Eucken (1952) formulated a detailed program consisting of three categories of principles (Dyson, 2020, p. 438). The first category is the stand-alone fundamental principle to create and maintain an efficient price system under complete competition (Eucken, 1952, p. 254). The second group of principles constitutes the aim of the fundamental principle (Eucken, 1952, p. 255). These are the primacy of monetary policy among other economic politics, open markets, private property, freedom of contracts, liability rules, and consistency in the economic policy (Eucken, 1952, pp. 255-289). Additionally, to maintain the price system under complete competition, Eucken (1952, pp. 291-304) proposes the four regulating principles of monopoly control, income policy, economic accounting, and anomalous supply.

The primary motivation for Ordoliberalism is to use the efficiency of the price mechanism as an instrument to improve people's well-being. Additionally, a respective societal order should also be humane, socially just, and liberal (Wörsdörfer, 2011, p. 18). To this aim, Eucken (1952, pp. 314-315) considers care for those in need to be an important constitutional element, which relies on the prerequisite of an efficient society. Further, Eucken (1952, p. 317) warns that striving for social justice may harm the efficient price mechanism. A finding that became prominent in the words of Hayek (1978, pp. 110-111) is that "nothing has done so much to destroy the juridical safeguards of individual freedom as the striving after this mirage of social justice".

In contrast to the "unhampered market" (Von Mises, 1998, p. 238) of laissez-faire liberalism, Ordoliberalism aims at a constitutional order for a functional market economy. This order consists of accepted rules, in which the market was "an artistic construction and an edifice of civilization" (Dyson, 2020, p. 43). Thus, the role of political economy is specified to contribute principles for policy (Dyson, 2020, p. 99). A constitution is a long-term-oriented set of rules of high legal weight. Historically, these properties "offered a defense against both the ideological enemies of liberalism in general and the flaws of laissez-faire liberalism and social liberalism" (Dyson, 2020, p. 438).

Further, Müller-Armack coined the term "Soziale Marktwirtschaft" (English translation: social market society) (Fehl et al., 2002, p. 156) to describe his take on political design along the lines

of the ideal of Ordoliberalism (Ptak, 2004, p. 219). How close Ordoliberalism and 'Soziale Marktwirtschaft' are, is a matter of debate (Ptak, 2004, p. 212). The Freiburg tradition got continued by Hayek (1945), (1975) having a stronger focus on the deprivation of information. And in a third stage, mediated by Vanberg (1986), (1994), and (2004), Buchanan's concept of a social contract tackles the normative justification of these rules via democratic decisions (Dyson, 2020, p. 123).

However, Eucken (1952, p. 301) mentions the "importance of a tax progression and a limit for this progression at the same time" showing the contrasting underlying motivations (Palermo Kuss, 2019, p. 4). Progressive taxation follows a social aim, whereas the distribution distorts the market mechanism. Thus, "[r]edistribution is a question requiring a specific answer in the ordoliberal tradition" (Palermo Kuss, 2019, p. 7). Therefore, an endogenous perspective requires the democratic process of each country to specify its fiscal policy (Palermo Kuss, 2019, p. 5).

Along the lines of the guiding motive of Ordoliberalism, the elimination and reduction of concentration of private power, the labor market is an interesting topic (Wörsdörfer, 2011, p. 206). Eucken (1952, p. 322) comments as follows: "Um Ausbeutung zu verhindern, ist der Vermachtung entgegenzuwirken. Zwischen den Partnern sollte Gleichgewicht herrschen" (English translation: To prevent exploitation, it is necessary to counteract the process of exploitation. There should be a balance between the partners). The question of how private property can be instrumentalized for a proper societal order remains the primary focus (Eucken, 1952, p. 273).

However, the labor market is special, especially concerning the fourth regulating principle of anomalous supply. While such anomalies in the supply of workforce may arise due to political changes, migrations, or trends, one could consider this issue solved due to trade unions and the agricultural associations irrelevant (Fehl et al., 2002, p. 53). In contrast, raising the bargaining power of workers by social security is prominent, however controversially discussed, in the debate for a UBI (Widerquist, 2013; Birnbaum & Wispelaere, 2016). Depending on the perspective, the labor market does not face 'unnaturally' strong employees. Instead, the threat point of rejecting labor market participation may be natural, however not linked to humanitarian values. The selection of the point of threat in labor bargaining is an important constitutional question. However, when considering redistribution to secure citizens against unemployment, Eucken (1952, pp. 12-13) recommends careful consideration based on a gateway to a centrally planned economy.

The second fundamental theorem of welfare economics emerged indirectly out of doubt on efficiency as the single relevant goal. While using lump-sum taxes during research on marginal

cost pricing due to them not affecting the behavior via a price effect on good markets, it was noticed that the efficiency of the market's results is not affected by lump-sum redistribution (Blaug, 2007, p. 198). Thus, lump-sum transfers are a tool for redistribution while markets continue to deal with the selection of an efficient distribution. It offers flexibility in touch with other relevant social norms by stating that selection among the Pareto-optima is possible by redistribution of the initial endowments (Stiglitz, 1996, p. 45).

Thus, our approach motivates transfer payments by the Pareto-criterion. The Pareto-criterion ensures that all parties will agree. All distortions in the market are the result of mutually beneficial preconditions from the contractarian perspective. Then, they reflect an agreement that could have been reached in the market by mirroring market logic into the political sphere (Brennan, Kliemt, & Tollison, 2002, p. 243). Based on this justification, all implications for markets are justified by the higher-level decision.

From this perspective, the distortion in the labor market may not be an 'unnaturally' strong employer. Instead, for the 'well-balanced' employer, basic rights and basic needs must be guaranteed (Rawls, 1971, p. 53). The same applies to distortion of demand or taxation. They may be justified by the reason for the transfer payment, depending on the perception of justice of the people. For example, eliminating absolute poverty and therefore eliminating the risk to lose out on a living wage (Widerquist, 2013).

The tradeoff between costs via taxation to finance a transfer program and the expected benefit of the program requires a political decision on the normative basis. On this matter, Buchanan (1999, pp. 140-142) suggests the carry-over of unanimous voting in the political realm as Wicksell (1896, p. 111) suggests. Unanimous voting guarantees all preferences of the individuals are reflected in the decision. Therefore, Buchanan (1962) argues that the Pareto-criterion should be applied on this level only, since in market decisions the issue of externalities may occur if third parties are affected even if they are not part of the contract.

If decisions are to be made on a constitutional level, the discussion of their content remains a complex theoretical matter. However, due to its democratic nature, ultimately it is an empirical and political question only answered in a democratic process. This process incorporates notions of justice, preferences, and their effect on economic relations. Therefore, the investigation of the positive implications of normative criteria may help to improve the functionality of the democratic process. Claims external to the participants of such a contracting process are ignored (Buchanan, 1962, p. 353). This is in line with Ordoliberalism assigning the responsibility concerning social justice to the individual (Dyson, 2020, p. 443).

Nevertheless, it is difficult to see how the sense of economic justice can be sustainably connected to liberalism in the absence of rules that compensate those who lose out from events beyond their control. This requires a political program in the sense of Ordoliberalism

that allows everyone to actually live a worthwhile and, if possible, also economically productive life. Due to the lack of information in advance to running a real society, a social contract stage is limited to setting up fundamental rules that allow for an improved ex-post situation. This point of view combines well with the conditions that are required for markets to run smoothly (Goldschmidt & Neumärker, 2008, p. 2).

Therefore, Neumärker (2017) suggests developing a New Ordoliberalism by integrating the constitutional decision and feasibility considerations into the ordoliberal program.

To derive a normative justification of the rules they have to be endogenized (Neumärker, 1998; Neumärker, 2017). Therefore, methodological individualism and constitutional democracy are assumed as conditions. In this context, methodological individualism considers the individual as the last valuation unit and implies rational decision-making. Moreover, Buchanan (1990) does not see objective rationality as necessary in constitutional decision making, rather "it is [..] only required that individuals who should decide on a rule be able to classify it as good or bad" (Blum, Neumärker, & Simoneit, 2019, p. 90). Constitutional democracy follows directly from the application of methodological individualism. Since individuals, in the sense of methodological individualism, with their preferences, constraints, and choices, constitute the value-forming basis, decisions about rules of a society are to be made exclusively under unanimity (Neumärker, 2017, p. 831). Through this unanimity, rules are normatively grounded and endogenized at the constitutional level, in that individuals mutually enter into collectively agreed constraints and thus voluntarily give up individual freedoms in favor of the common good. In this way, the constitutional approach follows analogously the exchange paradigm of economics (Neumärker, 2017, p. 832). The voluntary nature of rule formation at the constitutional level ensures normative consistency with modern social contract theory, in which rules are negotiated as mutually valid contracts.

Another condition is that of constitutional uncertainty (Brennan & Buchanan, 1985), which applies to the choice of long-term rules. Long-term rules, such as decisions on rules for a society, are associated with high uncertainty about the individual's future position and about environmental conditions. Depending on parameters such as technological progress, the progress of climate change, or the individual life course of a person, the current rule decision can only be predicted with a high degree of uncertainty on future well-being, which is why a constitutional uncertainty is assumed.

The assumption of the veil of ignorance (Rawls, 1971) further influences the choice of appropriate rules at the constitutional level. This abstracts individuals from their future position in society. Neumärker (1995, pp.43-45) extends the Rawlsian veil by the criterion of uncertainty about environmental conditions and thus derives collective uncertainty, which serves as a normative basis for collective decisions at the constitutional level.

Since rules for social coexistence are central to society, the exclusion of individuals in decision-making leads to extremely high discrimination costs. Therefore, all individuals (inter- and intragenerational) must have equal rights of approval and disapproval for this rule (Erlei, Leschke, Sauerland, 2016, p. 467).

From this derives the next condition, that of constitutional efficiency in the sense of Pareto efficiency (Buchanan, 1962). Buchanan (1962, p.353) defines this under the unanimity rule as: „if a presumed or apparent nonoptimal rule cannot be changed through an agreement among members of the group, the hypothesis stating that the rule is nonoptimal is effectively refuted". Following this logic, rules can only pass the constitutional efficiency test if they are chosen in the interest of all with equal participation in the rule-making experience and with equal recognized and enforced weighting of interests.

The Pareto criterion, familiar from mainstream economics and used post-constitutionally, is transferred to the constitutional level (Buchanan, 1962) applying the normative logic of the exchange paradigm to rule building itself. Within the constitutionally found rules under unanimity, individuals are free to act at the post-constitutional level in the sense of classical Ordoliberalism. The New Ordoliberalism (Neumärker, 2017) thus differs essentially from classical Ordoliberalism in that the efficiency criterion is applied at the constitutional level instead of representing the normative maxim in the post-constitutional decision-making context.

New Ordoliberalism aims at developing the constitutional economic approach further. The values to be considered for the design of the constitutional rules are not exogenously given.

Such a constitutional rule building process, as defined here, is intended to fulfill two conditions. The first condition is to apply the justice principle of equality at the constitutional level. By applying social contract logic, a special form of equal opportunity and constitutional fairness is enforced (Neumärker, 1995, p. 48). This implies the implementation of ex-ante equity as a justice principle. The second function is to generate efficiency at the constitutional level and thus to make the rules found implementable.

Let's look at how equity and efficiency are to be understood and applied at the constitutional level. While redistributive equity makes a general claim to distributive justice and thus grants everyone a right to certain resources and standards, recognitive equity ensures political recognition and equality of different social and ethnic groups. Participatory equity also involves legal equality (Fraser, 1998; Eizenberg & Jabareen, 2019). Thus, participatory equity concerns the right of everyone to have a say about the distribution of common resources. This implies a democratic approach to the process by which a societal development is to be shaped. Applied at the constitutional level, the concept in principle considers all members of a society living today and a society living in the future as equal decision-makers with equal voting rights

over the decisions of common capital. This, in turn, includes the decision on the distribution of human-made capital, natural capital, social capital, and human capital. In this way, equity can already be achieved as an ex-ante restriction in the decision-making about common rules, which is defined as an ex-post outcome.

Since New Ordoliberalism allows for social preferences, the axiom of mere self-interest of the homo economicus gets weakened (Neumärker, 2017, p. 836).

A central point is the thereby possible reduction of inequalities as a central problem of neoliberally managed economic systems (Blum & Neumärker, 2021). However, the neglect of the aspect of social justice is to be criticized in classical, ordoliberal approaches (Neumärker, 2017, p. 833). This circumstance is taken care of via the application of social contract logic at the rule formation level in this approach. Nevertheless, constitutionally formed rules should consider the post-constitutional level as well and thus consider potential justice and conflict problems and address potential reform problems (Neumärker, 2017).

The proposed concept of New Ordoliberalism provides five criteria to prevent these problems at the level of justice, conflict, and reform.

The first and central criterion is freedom from conflict, represented as envy-freeness. Envy is associated with negative social preferences and plays a crucial role in the consistency of an equilibrium allocation (Neumärker, 2011a; Neumärker, 2011b). An allocation of resources is envy-free if one's resource bundle is preferred over the resource bundle of another and vice versa (Arnsperger, 1994, p. 155). Post-constitutional envy-freeness thus implies post-constitutional unanimity. A post-constitutional envy-free order must thus be renegotiation-proof and conflict-proof, thereby precluding erosion of rules (Neumärker, 2017, p. 836). This also requires freedom from conflict, which only allows rules for the constitution that avoid the corresponding order conflicts at the post-constitutional level. Thus, rules must also pass the post-constitutional efficiency test and be chosen without conflict over property and disposition rights.

The second criterion, which is conditioned by the freedom from conflict, is renegotiation proofness. In terms of regulatory policy, rules should therefore be found in such a way that, post-constitutionally, no situation arises after implementation in which these rules have to be renegotiated again due to conflicts arising (Neumärker, 2017, p. 836).

The third criterion is strategic non-manipulability. Conflict scenarios can arise through strategic behavior at the constitutional level as soon as agents position themselves in a strategically manipulative way by exploiting the rules (Neumärker, 2017, p. 836) so that the biased indication of one's preferences at the constitutional level improves one's positioning (Serizawa, 2002, p. 220). Thus, there should be an incentive for truthful disclosure of preferences in the rulemaking process. However, this can be partially resolved by assuming collective

uncertainty. By not knowing one's position in the future and further uncertainty about the future evolution of one's position as well as that of environmental conditions, it can be assumed that concealing preferences or strategically distorting them is not a dominant strategy for actors.

The fourth criterion is the self-enforceability of the rule. If rules are envy-free and cannot be strategically manipulated, they are equally constitutionally (ex-ante) implementable and post-constitutionally (ex-post) enforceable and thus self-enforcing (Neumärker, 2017, p. 836). Due to the nature of the rules by the aforementioned criteria, no incentive exists for agents to renegotiate the respective rules and build up pressure for reform. The problem of reform that arises due to the absence of the principle of justice at the societal level or due to strategic manipulability of the rules is thus eliminated (cf. Neumärker 2017, p. 836).

The fifth and last criterion is the renegotiation option as the second-best solution. This concerns the fact that the aforementioned reform problem arises as soon as the regulatory framework is either not conflict-free, not renegotiation-proof, not strategically safe, or not feasible at the post-constitutional level. In this case, second-best solutions must be found as an alternative (Neumärker, 2017, p. 836). This case can occur when there was unanimity about the rules before implementation, but disagreement about the rules after implementation. Accordingly, assuming that agents assume post-constitutional conflict-freeness in advance, rules can again be defined ex-ante. Thus, rules that represent, for example, the agents' envy-free expectation of these rules can be implemented constitutionally. However, ex-ante fairness and thus agreement on a regulatory framework need not mean ex-post fairness (Neumärker, 2011a; Neumärker, 2011b), which is why allowing renegotiation in a case of conflict is a necessary condition.

The first two criteria demand the constitution to be in line with social preferences, e.g., envy, as well as the egoistic motivations of the individuals to prevent conflicts. The third and fourth criteria ensure that constitutional rules are met. Only rules designed to be followed as intended and based on truthfully revealed preferences fulfill their purpose as non-manipulability demands. Since the constitution is the ultimate law, there is no additional exogenous enforcer. Therefore, the constitution is required to be self-enforcing to be respected at all. The two first criteria ensure the constitution is self-enforcing (Neumärker, 2017, p. 836). Finally, New Ordoliberalism considers contracts to be incomplete in practice. Thus, a compensation mechanism in case of failure concerning the previous criteria is required. Neumärker (2017, p. 837) suggests a tolerance premium of sufficient level to defend the constitution against renegotiation.

It can be concluded that rules formed under those five criteria of New Ordoliberalism are resilient in the sense of Holling's (1973) and Holling & Walker's (2003) definitions and the three characteristics of resilient systems. First, such rules are robust to disruption and thus to renegotiation if they are made under the assumption of unanimity and collective uncertainty

and can be changed only under unanimity and collective uncertainty, and are also envy- and conflict-free, strategically non-manipulable, and thus renegotiation-proof and self-enforcing. Second, they have a high degree of self-organizing capacity in that they are constitutionally Pareto optimal in choice and thus can only be changed if they are identified as sub-optimal in terms of Pareto logic. Such a constitutional order is thus subject to a self-evaluation process that adapts to changing conditions, provided that the formed order becomes sub-optimal and without thereby being formed, changed, or identified as sub-optimal by factors external to the system. Third, the presented logic implies the possibility that rules are system-emergent adapted to changed framework conditions and thus the rule construct itself is adaptive. Namely, if at least one actor can be made better off by changing the rules without making another actor worse off.

An example of such a sustainable order that conforms to the New Ordoliberalism could be the Universal Declaration of Human Rights (A/RES/217, UN Doc. 217/A-(III)), which was adopted by the UN in 1948. Even though it is not legally binding for the global community, it has gained widespread global acceptance and is, in its overwhelming principle, undiscussable.

3. The Role of UBI: A paradigm shift in social welfare functions?

In the following, the fundamental relationship between a UBI and the New Ordoliberalism as well as its integration in a social welfare function will be discussed. First of all, we will have a look on what are the central underlying concepts of the New Ordoliberalism, namely resilience, equity and risk reduction and how a UBI can contribute to them. After that, we will show how a paradigm shift in the classical social welfare function should look like, that takes social preferences in the sense of the New Ordoliberalism into account.

As shown above, the concept of resilience describes the regenerative capacity of a socio-economic system or a social contract as well as its ability to be robust against external disturbances and thus to represent a stable construct. To summarize once again, a social contract built under the assumptions of New Ordoliberalism (freedom from envy and conflict, renegotiation-proofness, strategy-proofness, self-enforceability, renegotiation as second best) is robust to disruption. The strict requirement of Pareto-optimality of the rules gives them a high degree of self-organizing capacity that makes the constitutional order itself system-emergent and thus highly adaptive.

Rules build under the criteria of the New Ordoliberalism are intended to fulfill two functions. The first function is to apply the concept justice at the constitutional level. By applying social contract logic, a special form of equal opportunity and constitutional fairness is enforced (Neumärker, 1995, p. 48). This implies the implementation of ex-ante equity as a justice principle. However, this primarily only reduces inequalities at the constitutional level. The

second function is to generate efficiency at the constitutional level and thus to make the rules found implementable.

It is now necessary to show how equity and efficiency are to be understood in an intra- and intergenerational context and applied at the constitutional level.

The concept of equity can be divided into redistributive, recognitive, and participatory equity (Eizenberg & Jabareen, 2019; Fraser, 1998). Equity is always interpreted and understood normatively and can therefore be interpreted in different ways, so it is often understood in terms of quantities such as benefits, opportunities, and possibilities. For example, recognitive equity encompasses general political recognition and equality, while participatory equity encompasses legal equality for all social and ethnic groups (Eizenberg & Jabareen, 2019; Fraser, 1998). In particular, participatory equity implies the approach of democracy by demanding the distribution of material resources under the independence and voice of all, thus applying equality to respect, opportunity, and social esteem.

While redistributive equity makes a general claim to distributive justice and thus grants everyone a right to certain resources and standards, recognitive equity ensures political recognition and equality of different social and ethnic groups. Participatory equity also involves legal equality (Fraser, 1998; Eizenberg & Jabareen, 2019). Thus, participatory equity concerns the right of everyone to have a say about the distribution of material resources. This implies a democratic approach to the process by which sustainable development is to be shaped.

Applied at the constitutional level, the concept in principle considers all members of a society living today and a society living in the future as equal decision-makers with equal voting rights over the decisions of common capital. This, in turn, includes the decision on the distribution of human-made capital, natural capital, social capital, and human capital. In this way, equity can already be achieved as an ex-ante restriction in the decision-making about common rules, rather than being an ex-post outcome restriction.

However, neither the parameter of resilience nor the concept of equity are sufficient as a normative basis alone to evaluate rules as sustainable.

To evaluate a constitutional order as sustainable in the sense of the New Ordoliberalism under the requirements of equity and resilience, the reduction of risk under given uncertainty, therefore, serves as a third parameter to build a normative basis for the New Ordoliberalism. The reduction of risk is closely related to the concept of uncertainty. Uncertainty can be related to the development of oneself and one's social position (individual uncertainty), as well as to the development of the living and surrounding environment (collective uncertainty). The demand for risk reduction thus requires a system that covers the individual and collective risk and the resulting uncertainties for social, spatial, structural, and physical variables as well as

possible. This includes, for example, crisis-preventive economic policies and a crisis-preventive constitutional order (Blum, 2022; Blum & Neumärker, 2021).

Such rules reduce ex-ante risk and uncertainty as parameters of social sustainability and increase the degree of safety, since constitutional and collective uncertainty are relevant conditions for rule formation and are therefore already considered in the decision-making at the constitutional level.

Let us now discuss how a UBI fits into these considerations. A UBI is described in terms of five key elements (van Parijs, 2004; Torry, 2013). These are (1) payments at regular intervals, which are paid (2) on an individual basis in (3) monetary means[1] (4) universally[2] and (5) unconditionally[3].

In particular, the properties of an individual basis, universality, and unconditionality place all basic income recipients on an equal footing in principle and thus create an equity basis. This implies both recognitive equity and participatory equity. If a basic income is also defined in terms of a living wage or a participatory wage, redistributive equity could also be seen as an equal right to participation and existence in society in the UBI approach.

It is obvious that the UBI is close to the elements of social sustainability in its basic features[4], which is why its proponents portray it as more than a political measure. Neumärker (2018) for example, interprets the UBI as an ordoliberal concept of a social market economy. Proponents, in particular, see a UBI as a right rather than a simple political measure (De Wispelaere & Morales, 2016)[5].

Moreover, a UBI could represent a regulatory rule that fulfills the criteria of New Ordoliberalism. Resilient as a regulatory rule, a UBI chosen in this way implies that the unanimity requirement is renegotiation-proof and self-enforcing, making it robust to external disturbances and highly self-organizing. In addition, the fifth criterion of renegotiation as a second-best solution in conjunction with the constant application of constitutional efficiency implies that the rule construct itself is adaptive and thus capable of learning, making it resilient to changing conditions.

Considering the five conditions of New Ordoliberalism, a UBI also fulfills the requirement of risk reduction as well as resilience. Since individuals are expected to decide without knowledge

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[1] For example, a cash transfer that leaves open the use of the basic income.

[2] Without a means test and without discrimination based on personal characteristics.

[3] Without the obligation to render a service in return, e.g. work requirements.

[4] For example, empowerment, equity, accessibility, and participation as well as risk and uncertainty reduction, safety, and resilience.

[5] At this point, the normative question of the legal entitlement to a basic income will not be discussed. See also De Wispelaere & Morales (2016) with a line of scientific argumentation that adds the legal perspective to the discussion.

of their subsequent position under collective uncertainty and unanimity as well as constitutional and post-constitutional envy and conflict, a rule construct that minimizes individual risk in the future is intuitive. Haagh (2019) also argues for lifelong security in the design of basic income, so that potential livelihood risk due to labor market insecurity can be reduced. Social contract experiments could already show that basic income variants are in principle subject to social contract choice (Frohlich & Oppenheimer, 1992; Frohlich & Oppenheimer, 1990; Wolf & Lenger, 2014).

As mentioned, New Ordoliberalism integrates individual justice needs, so accounting for justice preferences is necessary for generalization and predictive power of economic models. Even when restricting the relevant measures of justice to those of economic relevance, the realm of distributive justice knows plenty of norms feasible to judge distribution dating back to the known origins of our western culture resembled by Aristotle's Nichomachean Ethics and Plato's Republic (Cohen, 1987, p. 20).[6] However, we go along with Konow (2003) for his condensed categorization of distributive preferences into three groups.

The first group "Equality and Need" resembles the humanitarian desire to prioritize satisfying the basic needs of all individuals (Konow, 2003, p. 1194). Therefore, egalitarian notions are organized into this group aiming at equal distribution. Answering the question 'equality of what', several concepts have been developed (Tondani, 2009, p. 251), such as equal distribution of primary goods (Rawls, 1971), of resources (Hajdin, 2018), of capabilities (Sen, 1997), of consumption goods (Varian, 1975), and of "real freedom" (Van Parijs, 1997).

The second group "Utilitarianism and Welfare Economics" (Konow, 2003, p. 1200) contains notions of justice aiming at the effects and relations of the distribution. For example, utilitarianism, efficiency, or envy may be a value by themselves depending on the entire distribution of goods. As such, these are well-developed in modern economics, which got highly inspired by the works of Bentham (1781), Mill (1985), as well as Smith (1976) to give a few examples.

The third group "Equity and Desert" (Konow, 2003, p. 1206) incorporates the process of how the distribution emerged in contrast to the previous two groups, which were focusing on the final distribution from a consequentialist perspective. On one side, this group contains rules of proper distribution concerning the inputs or the effort, for example, Aristotle's proportionality rule. However, it also contains notions of fairness as contractarianism. This includes Rawl's social contract, despite the conclusion of his concept suggesting satisfying basic needs first fits the first group.

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6 4 For example, Young (1994) provides a broad overview.

The New Ordoliberalism reflects on the feasibility of constitutional rules concerning their implementation and enforcement. However, it is difficult to motivate homines economici to follow any set of rules, as it must perfectly align with their purely egoistic motives. Therefore, considering the individuals to have an intrinsic interest in the rules and their benefits in the form of a 'homo socialis' increases the range of feasible constitutional designs (Bowles, 2016, pp. 9-38). This approach can be specified by integrating kindness into classic social dilemma games, such as the prisoner's dilemma (Rabin, 1993).

Economic research has already shown several reasons for Pareto-desirable redistribution, for example: due to altruism (Brennan, 1973a), for reasons of insurance and security (Olson, 1983), due to malice (Brennan, 1973b), or for social compensation (Wyss, 2011). If the payer benefits from the redistribution, the policy is assumed to be a Pareto-improvement since the recipient benefits directly from the transfer payment (Hochman & Rodgers, 1969).

Since New Ordoliberalism aims at incorporating social preferences a functional categorization is necessary to supplement the present content bundling. In his book *Free Market Economics: A Critical Appraisal* Andrew Schotter (1990) describes the different approaches of exogenous versus endogenous theories of justice. These can be combined with process-oriented or end-state-oriented theories in economics to create four different categories of approaches to economic justice (Schotter, 1990, pp. 121-123).

Nozick (1974) differentiates between "historical" and "current time-slice" (Nozick, 1974, pp. 153-154) principles of justice. The first accounts for the emergence of a situation to be evaluated and got further described as sequential. In contrast, the latter describes the facts of a current situation and ignores its emergence. This category is also known as consequentialist. Schotter (1990, p.123) exemplifies the consequentialist and exogenous theories with classic welfare functions like egalitarianism, utilitarianism, Rawlsian justice etc., which sets an agenda for the desired outcome in society based on the exogenously set normative principle of justice regarding how to aggregate individual utility to create the social welfare function.

	Sequential theories		Consequentialist theories	
	Ex-ante	**Ex-post**	**Ex-ante**	**Ex-post**
Exogenous approaches	*Constrained Economics (rule-governed)* Rules of the social game by ethical principles e.g., Nozick's theory of just processes		*Constrained Economics (outcome-governed)* Outcome of the social game by (ethical) principles e.g., Welfare functions	
Endogenous approaches	*Constrained Justice (rule-governed)* Formation of rules of the social game by economic logic of collective action e.g., Blame-freeness		*Constrained Justice (outcome-governed)* Outcome of the social game governs collective decision-making e.g., Envy-freeness	

Figure 1: Essential properties of economic analysis of social justice

Endogenous theories of justice on the other hand are dependent on the preferences of the individuals in the society and the outcomes will therefore change between different societies. No outside "expert" can decide upon what is fair since the normative principles for justice are created within the model (Schotter, 1990, p.121). Schotter (1990, p. 123) raises envy-freeness as a consequentialist type of endogenous theory as it depends on the individuals' preferences regarding if they would feel like they would be better off being allocated someone else's bundle. It is an end-state concept given that only the feeling of envy over the final distribution is considered and not the process of reaching that distribution. Furthermore, Schotter (1990, p.124) presents blame-freeness as an endogenous and procedural theory of justice. He defines blame-freeness as a state where individuals judge other individuals' actions based on if they would have done the same in the other person's situation. If no individual would have acted differently given someone else's situation then the procedure, and therefore the outcome, can be labelled as socially just (Schotter, 1990, p.124-125).

The exogenous approaches to economic justice can be considered *Constrained Economics* in the sense that exogenously given normative statements regarding justice create limits for economic activity. The objective function to solve the problem of collective action in this case is the economic principles while justice principles set the constraints, leading to second-best economics. The justice constraints can cover either, or both, procedural aspects or restrictions regarding outcomes in society.

$$\max economics$$
$$s.t. \quad \textit{just outcome}$$
$$s.t. \quad \textit{just rules}. \tag{1}$$

In contrast, the theories within endogenous theories for economic justice can be regarded as *Constrained Justice* where principles of justice are taken as the objective function of the collective action problem. Given some economic constraints on the rules or outcomes, or both, in society not to be violated the aim is to maximize the principles of social justice, leading to alternatives of second-best justice. In the endogenous approaches, the formation of the rules of the social game is shaped by the economic logic of collective action. The maximization problem is constrained by the economic principles that guide collective rule-formation, which any policy aiming at justice must consider. Moreover, the economic principles of outcome formation limit the possible distributions among which selection along equity criteria occurs.

$$\max justice$$
$$s.t. \quad \textit{economic outcome creation}$$
$$s.t. \quad \textit{economic rule formation}. \tag{2}$$

The difference between having Constrained Economics or Constrained Justice as the prerequisite when examining economic justice is an essential matter since it dictates which principles are the focus of investigation and which are exogenous constraints. Schotter (1990, p. 122) argues that individuals believing in property rights, who are fully rational and self-interested logically will support any distribution of the market as a just one. This is an exogenous procedural approach to economic justice in line with Nozick's theory of just processes. Given the assumption of individuals as Homo Economicus in mainstream economics, Constrained Economics would be the established take on the social problem in economics today. By, therefore, changing from an exogenous to an endogenous theory of justice there would be a paradigm shift in mainstream economics. The change would imply going from Constrained Economics and economic principles being the objective function and focus of research to instead Constrained Justice where social justice principles are the objective function in solving the social problem of collective action. Social justice based on economic logic, therefore, becomes the main area of interest and research.

New Ordoliberalism contributes to this paradigm shift by applying constitutional economics to the formulation of rules endogenously (Neumärker, 2017). An important aspect is Schutter's (1990, p.128-130) notes that blame-freeness, although an endogenous approach, can conflict with desired outcomes in society and the violation of property rights leading to conflicts. Even

if someone would have done the same in that situation and the state can be called blame-free it does not guarantee that the end state is considered fair by society. This aligns with the criticism directed at Ordoliberalism, where fairness in the ex-ante process of creating the rules of the game does not guarantee a just outcome in the post-constitutional stage, risking the stability of the contract and leading to erosion of the rules (Neumärker, 2017). New Ordoliberalism goes beyond Ordoliberalism, constitutional economics and the ideas of Schotter's (1990) concept of blame-freeness by considering not only the procedural take on endogenous justice theory through social contracting and unanimity rule but also includes end-state justice and considers the stability of the contract ex post. For example, ex-post envy-freeness is one of the main criteria of New Ordoliberalism to prevent assaults and erosion of the constitution. New Ordoliberalism further develops a stable paradigm shift in economics by not taking exogenous normative principles for granted. Instead, within the New Ordoliberalism the principles to be considered by the individuals in society are given by empirical testing of general consent, thus suggesting an endogenous process. This distinguishes New Ordoliberalism from traditional Ordoliberalism.

4. Applications

This chapter presents two examples of possible applications of New Ordoliberalism. These are far from exhaustive. It should also be said that the broad claim to validity of New Ordoliberalism is accompanied by the need for limiting operational assumptions

4.1. UBI in Chicken Game situations

Rabin (2004) suggested incorporating fairness into game theory by altering the payoffs according to fairness in the goal function of the players, e.g., a kindness parameter. This tool combined with the construction of a societal dilemma as simple game allows for the analysis of constitutional cooperation and commitment problems. As such, Kuang et al. (2023, p. 134) show how constitutional uncertainty over kindness dispositions may demand a more generous transfer program to prevent the social dilemma in the Prisoner's dilemma (PD) to take place.

Kuang et al. (2023, pp. 136-138) additionally develop the scenario where the cooperative action of both players is hindering the optimal outcome. Instead, a coordination issue of exactly one "hawk" and one "dove" is required in the chicken game. In a society, this may be the case if some action is required. However, only one leader is required and receives a favorable position, e.g., one political party ruling successfully while the others follow and do not sabotage. Analyzing this setting is a straightforward application of how New Ordoliberalism operates in developing political solutions.

	B	
	x	**y**
x	$a(x,x) , b(x,x)$	$a(x,y) , b(x,y)$
y	$a(y,x) , b(y,x)$	$a(y,y) , b(y,y)$

Figure 2: General 2x2 strategic form game (reproduced Wang & Yang, 2003, p. 79)

Consider the game represented in Fig. 2 . For a PD this condition

$$a(x,x) < a(y,x) \; and \; b(y,x) < b(y,y), \tag{3}$$

and for a hawk-dove game (also known as chicken game) the payoffs must fulfill the following condition (Wang & Yang, 2003, p. 80)

$$a(x,x) < a(y,x) \, and \, b(y,x) > b(y,y), \tag{4}$$

in addition to adopting the assumption of the game being symmetric and anti-diagonally symmetric, as well as the ordering of the payoffs to prevent permutations of the games (Wang & Yang, 2003, p. 79)

$$a(x,x) \; > a(y,y) \; and \; a(y,x) > b(y,x). \tag{5}$$

While in the PD a single pure strategy Nash equilibrium in dominant strategies (non cooperate, non cooperate) exists, in the hawk-dove game the selection of the two available Nash equilibria in pure strategies is a new problem (Kuang et al. 2023, pp. 137-138). Additionally, a constitutional solution must prevent the Nash equilibrium in mixed strategies, which sets the requirement for coordination to prevent disaster.

According to New Ordoliberalism the constitutional rule must change the payoffs to foster the societally desired solution. This means transforming the game into an "Efficient dominant-strategy game", where every players following their dominant strategy leads to the Pareto efficient outcome. In terms of payoffs this means (Wang & Yang, 2003, p. 80)

$$a(x,x) > a(y,x) \, and \, b(y,x) > b(y,y). \tag{6}$$

For the hawk-dove game only the first condition needs to be changed (and its respective anti-diagonally symmetric pendant). Therefore, the transfer amount must be at least the transfer t to the payoff a(x,x) (and its symmetric pendant) in comparison to a(y,x)

$$t > \; a(y,x) - a(x,x). \tag{7}$$

In contrast, for a PD this means changing both of these inequalities (and their respective anti-diagonally symmetric pendants). A transfer t as described for the hawk-dove game is required in addition to a transfer d to b(y,x) in comparison to b(y,y) (and its symmetric pendant)

$$d > b(y,y) - b(y,x). \tag{8}$$

This setup allows for straightforward integration of social preferences. Therefore, the payoffs, e.g., a(x,x), can be varied according to the direction and extend of the social preference. The effect on the required transfer policy is specified by the inequalities for t and d.

Additionally, the partial effect of the social preference on the transfer can be derived of the partial derivative of respective payoffs in these inequalities. Therefore assume an equality in the inequality of t to provide the marginally to small transfer. E.g., for t and a social preference z for cooperation changes a(x,x) to a function also depending on z: a(x,x,z). The partial derivative is

$$\frac{\delta t}{\delta z} = \frac{\delta a(x,x,z)}{\delta z}. \tag{9}$$

Sandler (1998, p. 225) identifies the change of a PD situation towards a hawk-dove game in situations where a disaster must be stopped by a costly action being taken by one player. For example, in addressing the global climate warming cutting the own emissions is costly, however helpful. Therefore, every single decision at a time is a PD, where only both cutting the emissions is sufficient to end in the general optimum. However, if this behavior gets repeated disaster eventually strikes, which may force a "hero" to sacrifice their wealth to reduce emissions sufficiently by their own. While this concept has been integrated into bargaining situations of political reforms (Alesina & Drazen, 1991) the New Ordoliberalism suggests in line with Sandler (2004, p. 2) that a policy should prevent the PD (Kuang et al., 2023, pp. 134-135).

In situations where the hawk-dove game is at hand, a constitutional policy may adjust the transfer program to offer the required coordination. This may apply to political initiatives where one of many competing concepts needs support to be enforced. New Ordoliberalism suggests solving this by institutionalizing this support towards the selected project, e.g., by transfer payments. This way, the appropriate selection mechanism to choose among the competing concepts can operate upstream to the constitutional coordination and enforcement mechanism.

4.2. Laffer Curve vanishes depending on preferences

In the following, we examine the implications of an UBI on the utility function and consumption tax revenues in a simple static model.

It is often argued that the lack of incentives in an unconditional subsistence securing transfer system leads individuals to drop out of the labor force (e.g., Jaimovich et al., 2022). This argument follows standard economic theory and the principal agent theory. The agent will not

work if the principal who hired him to perform a job does not (or cannot) sufficiently monitor him. In the context of UBI, this translates into individuals who are not willing to work if they are not exposed to appropriate extrinsic incentives to work. Since an UBI must be financed by taxes the argument of unsustainable funding arises. If people stop working or drastically reduce their working hours, the state's tax revenues are also reduced and, as a consequence, it cannot sustainably finance the transfer system.

Why do scholars nevertheless argue for the introduction of a UBI? Proponents of the UBI assume that individuals are willing to work not only because of extrinsic incentives but also because of intrinsic motivation. Moreover, it is argued that intrinsic motivation is becoming increasingly important in a changing world of work (Straubhaar, 2017). The perception of work is evolving. Digitalization and globalization are driving the importance of education (Vogler-Ludwig & Kriechel, 2013). This, in conjunction with the high level of economic prosperity, leads people to choose their jobs in line with intrinsic motives such as self-fulfillment (Prendergast, 2008). At the same time, this development requires a certain financial and time freedom to find the right profession for oneself and to achieve the necessary level of education. This is where the UBI becomes relevant. Means-tested social security systems are often characterized by a lot of bureaucracy and a flawed incentive structure. The incentive structure of a means-tested social security system is flawed if it encourages people to choose jobs that do not match their skills. This can then lead to rising mismatch unemployment in the long run (Sachverständigenrat Wirtschaft, 2019). An UBI, on the other hand, is non-bureaucratic and allows every citizen a higher degree of freedom in choosing a profession (e.g., Liebermann, 2012)

Hence, our underlying hypothesis is that the UBI is based on fundamentally different assumptions about the utility calculus of individuals than those of mainstream economics. Therefore, we endogenize the utility function with respect to the social security system and differentiate between a utility function that is adapted to the UBI and one that reflects the utility calculus of an individual living in a means-tested social system. Based on this, we then calculate the consumption tax revenue in a static model given an unconditional transfer to the representative individual.

By doing this, we are closely related to the body of research by Hiraga and Nutahara (2016, 2018, 2019a & b, 2021, 2022) that consists of two main research foci. The first research path studies the sensitivity of the tax revenue curve with respect to the utility function (Hiraga and Nutahara, 2016, 2019a & b, 2021). The authors compare the effects of additive separable and multiplicative utility functions on the consumption, labor and capital income tax rate in a neoclassical setting. Thereby, it is shown that the consumption tax rate cannot be hump-shaped for a multiplicative utility function, while it can be hump-shaped for an additive separable utility function. The second research path, on the other hand, focuses on the

difference in shape of the tax revenue curve for the consumption- and the labor income tax (Hiraga and Nutahara, 2018, 2022). By manipulating the multiplicative utility function of King and Rebelo (1999) for a UBI and then applying it to the consumption tax, we thus contribute to the research on the relationship between the consumption tax curve and the utility function.

4.2.1 The Model

We differentiate between the additive-separable utility function, (10), as representation for means tested social security system,

$$U^{MS}(c,n) = \frac{c^{1-\eta}}{1-\eta} - \kappa \frac{n^{1+\lambda}}{1+\lambda}, \tag{10}$$

and the multiplicative UBI utility function (11), which is given by,

$$U^{UBI}(c,n) = \frac{1}{1-\eta}\{c^{1-\eta}[1-(\kappa-\rho)(1-\eta)n^{1+\lambda}]^{\eta} - 1\}$$

$$for\ \eta > 0,\ \eta \neq 1,\ (\kappa - \rho) > 0. \tag{11}$$

We argue that the multiplicative utility function captures the utility calculus of an individual socialized in a UBI system for two reasons. First, the multiplicative linkage of work and consumption represents the time sovereignty that individuals gain through a UBI. That is because individuals in a UBI system are no longer obliged to work or to accept any acceptable job (i.e., exit option for the labor market). Rather, they are empowered to derive *positive* utility not only from consumption but also from productivity, respectively work. Second, intrinsic motivation to be productive is a central argument of UBI proponents and hence must be considered in the utility calculus. The intrinsic factor, ρ, in the utility function is defined as the intrinsic motivation to work. Here, it is integrated into the function in an additive manner with labor suffering, and primarily affects *n*. Since it is assumed that it may still be rational for individuals to accept a job in which they suffer, but for which they receive a decent wage (compensating for labor suffering), labor suffering is also integrated into the UBI utility function. Moreover, it is likely that there will never be a job in which one enjoys all aspects and every day. Thus, in a sense, labor suffering is reduced by intrinsic motivation.

The additive function, on the other hand, represents the utility calculus of an individual in a means-tested social security system. Here, utility results from consumption subtracting labor multiplicated by labor suffering. This is in line with the principal agent theory and thus not applicable to a UBI as labor is exclusively associated with suffering, the individual cannot derive any positive utility from working (Murdock, 2002). Hence, this is contradictory to the basic assumptions of UBI (Liebermann, 2012). Note that in Neumärker and Weinel (2022) a

detailed discussion of the derivation and justification of this endogenization of the utility function is given.

The constant relative risk aversion is given by η which, in the static model, can be interpreted as an index of the curvature of the utility function (Hiraga & Nutahra, 2019a). λ is the inverse of the labor supply elasticity. The labor weight and the intrinsic factor are given by κ, and ρ.

The Production function is given by,

$$y = n, \tag{12}$$

where labor *n* is the only input. The resource constraint is given by,

$$y = c. \tag{13}$$

Output and consumption are y, and c.

The public budget constraint is

$$T = s. \tag{14}$$

The unconditional transfer to households (UBI) is given by *s*.

Since we are particularly interested in the tax revenue of consumption taxation, we exclude any other taxes in our baseline model. Thus, the total tax revenue is

$$T = \tau^c c. \tag{15}$$

The wage and the consumption tax rate are given by *w* and τ^c. Hence, the household budget constraint is,

$$(1 + \tau^c)c \leq wn + s. \tag{16}$$

Solving this model for an unconditional basic income scheme and a means-tested security system (i.e., endogenized utility function) leads to the following results.

4.2.2. The Unconditional Basic Income Scheme

Applying the utility function consistent with the assumptions of UBI proponents and paying an unconditional transfer *s* to the representative individual, we obtain the following results in this simple static mode.

The consumption labor supply condition is given by,

$$\frac{1}{\left(1 + \tau^c\right)} \times w = \eta(\lambda + 1)\left(\frac{c(\kappa - \rho)n^\lambda}{1 - (\kappa - \rho)(1 - \eta)n^{\lambda+1}}\right). \tag{17}$$

Since the total tax revenue is given by the tax rate times the consumption, we observe the following total tax revenue,

$$T = \tau^c \times [(\kappa - \rho)(\eta\left(\left(\tau^c + 1\right)\lambda + \tau^c\right) + 1)]^{-1/(1+\lambda)}. \tag{18}$$

The partial derivative of the tax revenue is,

$$\frac{dT}{d\tau^c} = \frac{\eta\lambda\left(\tau^c + 1\right) + 1}{(\eta\left((\lambda + 1)\tau^c + \lambda\right) + 1)((\kappa - \rho)(\eta\left((\lambda + 1)\tau^c + \lambda\right) + 1))^{1/(\lambda+1)}}. \tag{19}$$

The elasticity of consumption to the consumption tax rate in the case of the UBI utility function is then given by,

$$\left|\frac{dc/c}{d\tau^c/\tau^c}\right|$$

$$= \frac{\tau^c}{(1 + \tau^c)} \times \left(\frac{n^{\lambda+1}\left(\eta - 1\right)\left(\eta(\lambda + 1) - 1\right)\left(\kappa - \rho\right) + \lambda}{n^{\lambda+1}\left(\eta - 1\right)\left(\kappa - \rho\right) + 1}\right. \tag{20}$$

$$\left. + \frac{n^{\lambda+1}(\kappa - \rho)(1 - n^{\lambda+1}(\kappa - \rho)(\eta - 1))^{\eta-1}(1 - \eta)\eta(\lambda + 1)}{(1 - n^{\lambda+1}(\kappa - \rho)(1 - \eta))^\eta} + 1\right)^{-1}.$$

It can be shown that the consumption tax revenue curve is monotonically increasing iff $\lambda > 0$ and $\tau^c > 0$ (see Appendix A & B for a more detailed explanation on this result).

4.2.3. Means-tested Social Security Scheme

The total tax revenue is again used for an unconditional transfer to households only, that is that $s = T$ holds. The preferences of the representative individual are defined by the additive separable utility function, U^{MS}. That is, following our reasoning, it is associated with a means-tested welfare system.

Here, the consumption labor supply condition is the following,

$$\frac{1}{(1 + \tau^c)} \times w = \kappa n^\lambda c^\eta. \tag{21}$$

Hence, the total tax revenue is given by

$$T = \tau^c[\kappa(1 + \tau^c)]^{-1/(\eta+\lambda)}, \tag{22}$$

and

$$\frac{dT}{d\tau^c} = \frac{(\lambda + \eta - 1)\tau^c + \lambda + \eta}{(\lambda + \eta)(\tau^c + 1)(\kappa(\tau^c + 1))^{1/(\lambda+\eta)}} \qquad (23)$$

is the partial derivative of the tax revenue.

Thus, the elasticity of consumption to the consumption tax rate is as follows,

$$\left| \frac{dc/c}{d\tau^c/\tau^c} \right| = \frac{1}{\eta + \lambda} \times \frac{\tau^c}{1 + \tau^c}. \qquad (24)$$

The consumption tax revenue curve is humped shaped iff $\eta + \lambda < 1$ holds. The revenue is maximized at $\tau^c = \frac{\eta+\lambda}{1-\eta-\lambda}$ (Hiraga & Nutahara, 2016) (see Appendix A & C for a more detailed explanation on this result.).

4.2.4. Numerical Example

To illustrate the results of the model we are providing a numerical example. Figure 3 shows the consumption tax revenue for the UBI- and the means-tested scheme of the model as a numerical example. Note that for the consumption tax revenue curve to be humped shaped in the case of the additive separable preferences, $\eta + \lambda < 1$ must hold. The relative risk aversion, η, as well as the inverse of the labor supply elasticity, λ, are set at 0.25. The labor weight, κ, is set to be 2.5. The intrinsic value, ρ, equals one here. The empirical plausibility of the parameter values is the concern of the following discussion.

In case of the UBI utility function the consumption tax revenue curve is increasing (Figure 3). One can easily see that this holds iff $\lambda > 0$ and $\tau^c > 0$ hold. In case of the MT utility function, on the other hand, the consumption tax revenue curve is humped shaped and peaks for these parameter values exactly at $\tau^c = 1$ ($\tau^c = \frac{\eta+\lambda}{1-\eta-\lambda}$) for these values. This is in line with the results by Hiraga and Nutahara (2016) who find that the consumption tax revenue curve is sensitive to the utility function. However please note again that this only holds iff $\eta + \lambda < 1$. The (MT utility) consumption tax revenue curve is increasing for $\eta + \lambda > 1$.

There are three main observations in Figure 3. First, the tax revenue grows faster at lower tax rates for the MT utility case than for the UBI case. As the curve approaches its peak the growth flattens out. Second, while the MT utility function results in a classical tax Laffer curve, the UBI utility function results in an increasing function. This is in line with the results by Trabandt and Uhlig (2011) and Hiraga and Nutahara (2016) who show that the consumption tax revenue curve does not peak for the multiplicative utility function by King and Rebelo (1999). The third aspect is the difference in revenue. The tax revenue for the UBI function far exceed those for the MT function for any given tax rate.
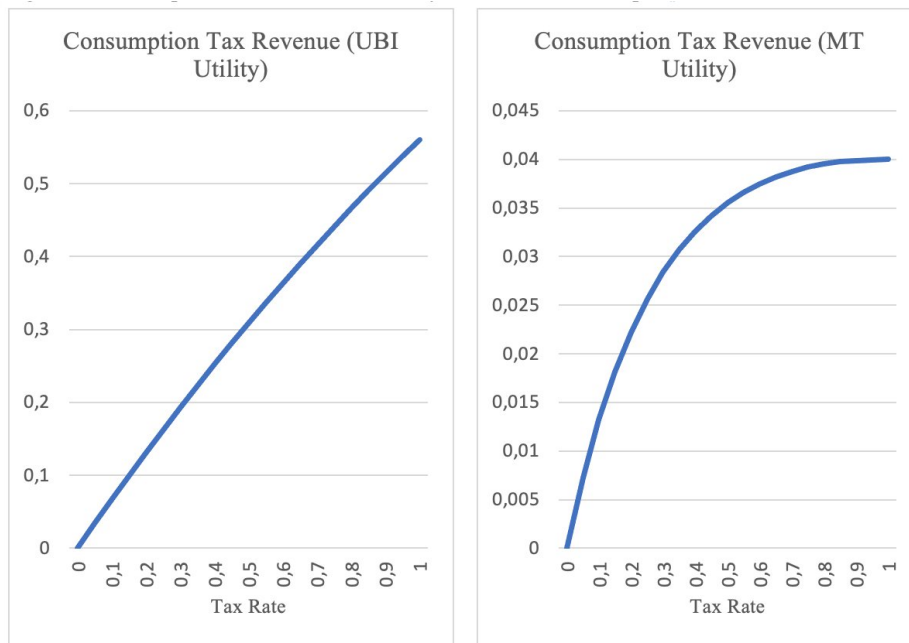
Figure 3: Consumption tax revenue curves of the numerical example

Note: MT stands for means-tested social security system. The y-axis shows the tax revenue. The x-axis shows the tax rate. Parameter values: $\eta = 0{,}25$; $\lambda = 0{,}25$; $\kappa = 2{,}5$; $\rho = 1$.

In Figure 4 one can see that the difference in revenue is quite large. It is often argued that a UBI is not feasible because of its financial unsustainability. Our results indicate that if one accounts for the behavioral adjustment associated with an UBI the tax revenue far exceeds that of the MT utility function (with an unconditional transfer).
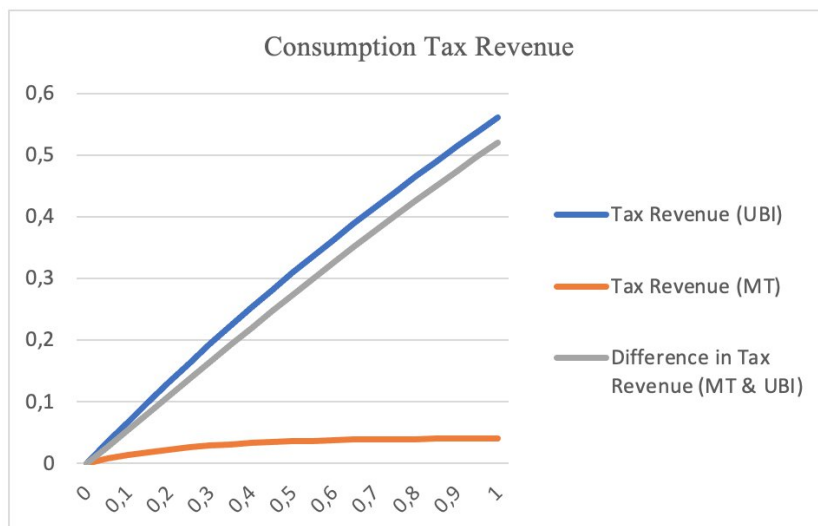

Figure 4: Consumption tax revenue curves (different utility functions)

Note: MT stands for means-tested social security system. The y-axis shows the tax revenue. The x-axis shows the tax rate. Parameter values: $\eta = 0{,}25$; $\lambda = 0{,}25$; $\kappa = 2{,}5$; $\rho = 1$.

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Figure 5 illustrates the effect of the intrinsic factor and the time sovereignty on consumption tax revenue. The intrinsic motivation effect on the tax revenue is the difference in consumption tax revenue that arises through the consideration of the intrinsic factor. Therefore, it is not the difference that arises between the MT- and the UBI utility function but the difference between the multiplicative utility function with and without ρ. The time sovereignty effect, on the other hand, is the difference in tax revenue that arises between the multiplicative- (without ρ) and the additive separable utility function. In order to isolate the effect from the intrinsic motivation effect, ρ, is not considered. Time sovereignty is defined as a *true* freedom of time, i.e., no obligation to work. It is indicated by the multiplicative linkage between consumption and work in the utility function. One can see that, independent of the tax rate, the time sovereignty effect on consumption tax revenue is lager than the intrinsic motivation effect. This is in line with many UBI proponents who argue against the reasoning of the *"lazy individual"*.
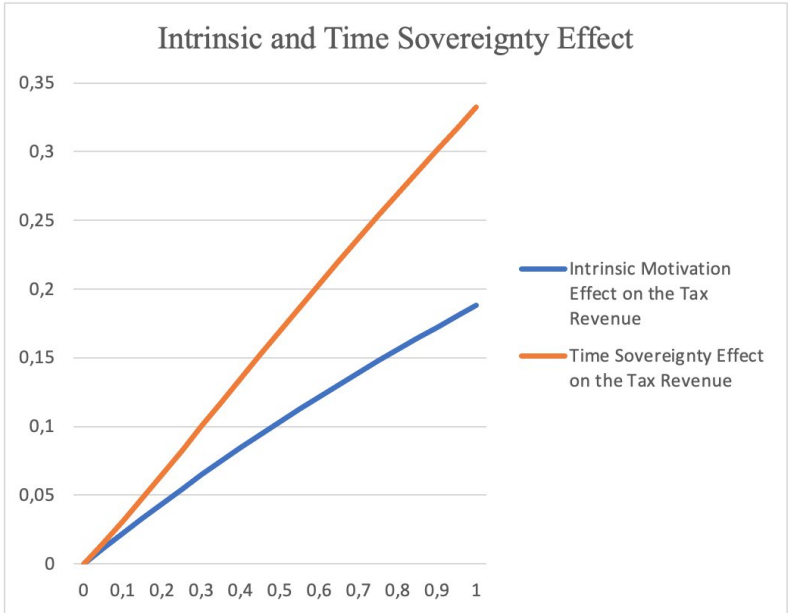

Figure 5: Intrinsic and time sovereignty effect

Note: MT stands for means-tested social security system. The y-axis shows the tax revenue. The x-axis shows the tax rate. Parameter values: $\eta = 0{,}25$; $\lambda = 0{,}25$; $\kappa = 2{,}5$; $\rho = 1$.

It is, however, obvious and important to notice that these results are not applicable in any real sense. The main result is rather the importance of modeling the right underlying assumptions and the magnitude this can have.

4.2.5. Discussion

The following discussion is concerned with the plausibility and the implications of the parameter values of the numerical example as well as contextualization of the results.

The parameter values of the numerical example are not given by specific values from the literature. There are three reasons for that. First, the literature lacks these estimates for a UBI system. Even though the literature on UBI is growing significantly, there has never been a full scale UBI system in place which makes it very difficult to predict how the labor supply would react. Second, while we would have been able to use estimates for the risk aversion, labor supply elasticity and disutility of work from one study (e.g., Trabandt & Uhlig, 2011), we still would have been obligated to use an estimation of the intrinsic value from a different study. Given that the literature lacks estimations of intrinsic motivation for the labor force, we would be forced to use values that are not in line with the other parameter values. There are multiple reasons for this, among them are differences in the underlying data sets and economic and econometric assumptions. The third reason is the estimation of intrinsic motivation to work itself. The large body of literature on intrinsic motivation focuses mainly on specific categories of work. Furthermore it is challenging to estimate intrinsic motivation, given its nature. Yet, even if we would have been able to find an estimate of intrinsic motivation for labor, it is likely to be inadequate for our purposes as it was obtained in a specific social security system. The reason for this is that we expect that the value of intrinsic motivation in a UBI system differs from that in a means-tested system, given that we endogenize the utility function with respect to the social security system. Again, a detailed explanation regarding this issue can be found in our previous paper (Neumärker & Weinel 2022).

These concerns led us to choose *fictional* parameter values that are, however, not unreasonable (Nevertheless, in our previous paper (Neumärker & Weinel, 2022) one can find a numerical example with parameter estimates from the literature.).

We set both, the relative risk aversion and the inverse of the labor supply elasticity, relatively small. This is because they must meet the assumption $\eta + \lambda < 1$ for the means-tested utility function to be humped shaped. As the inverse of the labor supply elasticity is set at 0.25, the actual labor supply elasticity is four. In general, the calibration of the labor supply elasticity (or Frisch elasticity) is relatively volatile (Peterman, 2016). While it is usually higher in macroeconomics than in microeconomics, four is a high value even for macroeconomics. However, King and Rebelo (1999) also calibrated it as such in their RBC model. Since the multiplicative utility function originates from this work, it seems justified to choose the value accordingly for the purpose of the numerical example. The constant relative risk aversion is set to be 0.25. Since this is a static model without frictions, the risk behavior is irrelevant. However, η can be understood as an index for the curvature of the utility function (Hiraga & Nutahara, 2019a; Meyer & Meyer, 2005). The disutility of labor is set to be 2.5. Compared to Trabandt and Uhlig (2011), who set the disutility of labor at 3.46 for the benchmark for a balanced growth of labor of 25 percent of the total time, and Hiraga and Nutahara (2022), who set the disutility of labor equal to one in their numerical example, in our example the chosen

value is in a window between these two. Nevertheless, note that we still account for the intrinsic value and thus obtain a lower overall value for $(\kappa - \rho)$ for the UBI utility function compared to the two other papers mentioned. The intrinsic value is assumed to be one. As we have already indicated before, the measurement of intrinsic motivation is somewhat difficult. However, there are two reasons why we have chosen to use this value in the context of this paper. For one, to avoid that the disutility of labor and the intrinsic value cancel each other out in the calculation. Secondly, the term $(\kappa - \rho)$ is to be kept positive. Consequently, the intrinsic value must be smaller than the disutility of labor. Within these two limits, however, it could have taken any value.

Although we would like to avoid this chapter being too similar to the previous paper (Neumärker & Weinel, 2022), we think it is still relevant to address the hypothesis of the endogenous utility function with respect to social policy. Throughout this chapter, we argue that a social policy shift from a means-tested social security system to an unconditional basic income implies a paradigm shift in time sovereignty. This paradigm shift is due to the fact that individuals in a UBI system are no longer forced to work and thus become truly time sovereign. That time sovereignty, in turn, then allows individuals to take intrinsic motivation into account in their utility calculus. This is most easily illustrated by principal agent theory, although it can also be found in many other economic models, such as the Shapiro-Stiglitz (1984) efficiency wages model. In the classic understanding of the employer-employee relationship, the employee is only motivated to work by extrinsic incentives and constantly tries to assert his own interests, which are inconsistent with those of the employer. Not only working conditions but also the design of the welfare state is based on these assumptions. Thus, many social security systems consist of numerous control mechanisms for jobseekers, which are intended to ensure that they get back into employment as quickly as possible. However, UBI advocates assume that individuals aim to be a productive part of society on their own initiative. Thus, the absence of these control and incentive mechanisms is a key component of UBI, as it gives each person absolute freedom over their own time. We, therefor, argue that such a drastic shift in social policy affects the utility calculus of individuals and thus endogenizes the utility function with respect to it. Hence, our approach is a rigorous implementation of UBI logic.

In this context, the results of this study, and in particular those of the numerical example, do not have any direct political implications. However, there are economic implications. Conversely, the hypothesis regarding the utility function implies that any calculation concerning the UBI is based on false assumptions if it does not take behavioral changes into account. Thus, it is particularly interesting that, in the numerical example, we observe significant differences in tax revenues between the schemes that take behavioral adjustment into account and the ones that do not. Moreover, we see that time sovereignty is more important in the utility calculus than the intrinsic factor. This can be interpreted as a clear argument in favor of a UBI,

since it is possible to promote a higher integration of intrinsic motivation in the existing system through various measures, but the same cannot be said about time sovereignty.

5. Summary

Given the growing consensus that out current capitalistic-dominated systems are contributing to, or even causing, the global crises we see today there is a need for new solutions to secure the well-being of both the planet as well as people living today and the generations to come. We argue that New Ordoliberalism is a strong such alternative. With its five criteria to secure the specific ideas of justice within a society, at both constitutional and post-constitutional levels, New Ordoliberalism aims at producing a fair framework that is feasible to implement and stable in the long-run.

UBI as a way to implement the criteria of New Ordoliberalism contributes to resilience, equity and risk reduction which is increasingly important in a world where the Covid-pandemic showed how unprepared our societies are to handle unforeseen shocks. UBI can also help by further create acceptance for the constitutional social contract and be the solution to support society by creating an incentive for people to chose a, from a collective point of view, more beneficial alternative than they would have done without it, as analyzed within a game theory setting. These results can be interesting for example to make individuals willing to support long-term investments so lower emissions and fight climate change.

Furthermore the introduction of New Ordoliberalism and UBI at a constitutional level can lead to a paradigm shift in different areas within society. Within economic research and policy making the endogenous takes on social justice that New Ordoliberalism implicates leads to a shift of focus of research and policies from maximizing economic output to maximize justice outcomes to solve the problems of collective action within set limits. Within the labor market an introduction of UBI in the utility function both challenges the mainstream assumptions regarding the incentives individuals have for working and can lead to a shift towards time sovereignty and more freedom for individuals, increasing their well-being. Our model based on earlier research also shows that the financing of a UBI though tax income must not be infeasible even though the tax revenue might change when the assumptions of peoples incentive to work changes.

To conclude, New Ordoliberalism with policy measures like UBI could challenge mainstream ideas within policy making and economic research. Ideas within constitutional design, concepts of efficiency and assumptions about individual preferences, behavior and incentives as well as normative statements regarding social justice could come to change to better serve the needs of today. New Ordoliberalism as a way to assure long term sustainability and stability of rule-formation by combining ex-ante and ex-post concepts of justice is therefore an

interesting alternative to research further in considering the need for new economic approaches to tackle the global challenges of the 21 century.

6.   References

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7. Appendix

Appendix A

To derive the consumption tax revenue in the model, we apply the conditions by Hiraga and Nutahara (2016, 2018, 2019 a & b, 2021).

The household's consumption-labor choice is given by

$$-\frac{U_n}{U_c} = RPL. \qquad (25)$$

The relative price of leisure, RPL, is

$$RPL \equiv \frac{1}{(1+\tau^c)} \times w. \qquad (26)$$

The equilibrium elasticity of consumption with respect to the consumption tax (is

$$\left|\frac{dc/c}{d\tau^c/\tau^c}\right| = \left|\frac{dRPL/RPL}{d\tau^c/\tau^c}\right| \times \left(-\frac{cU_{cc}}{U_c} + \frac{nU_{nn}}{U_n} + \frac{cU_{cn}}{U_n} - \frac{nU_{cn}}{U_c}\right)^{-1}, \tag{27}$$

where the elasticity of the relative price of leisure, RPL, with respect to is given by

$$\left|\frac{dRPL/RPL}{d\tau^c/\tau^c}\right| = \frac{\tau^c}{1 + \tau^c}. \tag{28}$$

Hiraga and Nutahara (2018) have also shown that a necessary condition for the consumption Laffer curve to be humped shaped is that,

$$\frac{dc/c}{d\tau^c/\tau^c} < -1, \tag{29}$$

holds.

Appendix B

Multiplicative Utility Function

In the case of the UBI utility function, (16) leads to the following,

$$\frac{1}{(1 + \tau^c)} \times w = \eta(\lambda + 1)\left(\frac{c(\kappa - \rho)n^\lambda}{1 - (\kappa - \rho)(1 - \eta)n^{\lambda+1}}\right). \tag{30}$$

Given that c is equal to n in this model, we get the following result when rearranging the equation with respect to c,

$$c = [(\kappa - \rho)(\eta((\tau^c + 1)\lambda + \tau^c) + 1)]^{-1/(1+\lambda)}. \tag{31}$$

The total tax revenue is given by,

$$T = \tau^c \times [(\kappa - \rho)(\eta((\tau^c + 1)\lambda + \tau^c) + 1)]^{-\frac{1}{1+\lambda}}. \tag{32}$$

The derivative of the tax revenue is

$$\frac{dT}{d\tau^c} = \frac{\eta\lambda(\tau^c + 1) + 1}{(\eta((\lambda + 1)\tau^c + \lambda) + 1)((\kappa - \rho)(\eta((\lambda + 1)\tau^c + \lambda) + 1))^{1/(\lambda+1)}}. \tag{33}$$

To derive the elasticity of consumption with respect to the consumption tax, we obtain the following intermediate result.

$$-\frac{cU_{cc}}{U_c} = \eta,$$

$$\frac{nU_{nn}}{U_n} = \frac{n^{\lambda+1}(\eta - 1)(\eta(\lambda + 1) - 1)(\kappa - \rho) + \lambda}{n^{\lambda+1}(\eta - 1)(\kappa - \rho) + 1},$$

$$\frac{cU_{cn}}{U_n} = 1 - \eta,$$

$$-\frac{nU_{cn}}{U_c} = \frac{n^{\lambda+1}(\kappa - \rho)(1 - n^{\lambda+1}(\kappa - \rho)(\eta - 1))^{\eta-1}(1 - \eta)\eta(\lambda + 1)}{(1 - n^{\lambda+1}(\kappa - \rho)(1 - \eta))^{\eta}}.$$

Due to condition (18) this yields the following results,

$$\frac{dc/c}{d\tau^c/\tau^c}$$

$$= \frac{\tau^c}{(1 + \tau^c)} \times \left(\frac{n^{\lambda+1}(\eta - 1)(\eta(\lambda + 1) - 1)(\kappa - \rho) + \lambda}{n^{\lambda+1}(\eta - 1)(\kappa - \rho) + 1} \right. \tag{34}$$

$$\left. + \frac{n^{\lambda+1}(\kappa - \rho) 1 - n^{\lambda+1}(\kappa - \rho)(\eta - 1)^{\eta-1}(1 - \eta)\eta(\lambda + 1)}{1 - n^{\lambda+1}(\kappa - \rho)(1 - \eta)^{\eta}} + 1 \right)^{-1}.$$

Hence, the elasticity of consumption to the consumption tax rate is given by

$$\left| \frac{dc/c}{d\tau^c/\tau^c} \right|$$

$$= \frac{\tau^c}{(1 + \tau^c)} \times \left(\frac{n^{\lambda+1}(\eta - 1)(\eta(\lambda + 1) - 1)(\kappa - \rho) + \lambda}{n^{\lambda+1}(\eta - 1)(\kappa - \rho) + 1} \right. \tag{35}$$

$$\left. + \frac{n^{\lambda+1}(\kappa - \rho) 1 - n^{\lambda+1}(\kappa - \rho)(\eta - 1)^{\eta-1}(1 - \eta)\eta(\lambda + 1)}{1 - n^{\lambda+1}(\kappa - \rho)(1 - \eta)^{\eta}} + 1 \right)^{-1}.$$

For $\lambda > 0$ and $\tau^c > 0$.

If $\tau^c = 0$, then $\left| \frac{dc/c}{d\tau^c/\tau^c} \right| = 0$. If τ^c is increasing, then $\left| \frac{dc/c}{d\tau^c/\tau^c} \right|$ increases.

C.

Additive separable Utility function

In the case of the additive separable utility function (i.e., means-tested social security system) we observe the following results.

The consumption labor supply condition is given by

$$\frac{1}{(1 + \tau^c)} \times w = \kappa n^{\lambda} c^{\eta}. \tag{36}$$

Solving this condition for c yields to

$$c = [\kappa(1 + \tau^c)]^{-\frac{1}{\eta+\lambda}}. \tag{37}$$

The total tax revenue is

$$T = \tau^c [\kappa (1 + \tau^c)]^{-\frac{1}{\eta + \lambda}}. \tag{38}$$

and the partial derivative is given by,

$$\frac{dT}{d\tau^c} = \frac{(\lambda + \eta - 1)\tau^c + \lambda + \eta}{(\lambda + \eta)(\tau^c + 1)(\kappa(\tau^c + 1))^{1/(\lambda + \eta)}}. \tag{39}$$

For elasticity of consumption to the consumption tax rate we derive the following intermediate result,

$$-\frac{cU_{cc}}{U_c} = \eta, \qquad \frac{nU_{nn}}{U_n} = \lambda, \qquad \frac{cU_{cn}}{U_n} = 0, \qquad -\frac{nU_{cn}}{U_c} = 0.$$

It follows, that the elasticity of consumption to the consumption tax rate is,

$$\left| \frac{dc/c}{d\tau^c/\tau^c} \right| = \frac{1}{(\eta + \lambda)} \times \frac{\tau^c}{(1 + \tau^c)}.$$

If $\eta + \lambda \neq 1$, then

$$\left| \frac{dc/c}{d\tau^c/\tau^c} \right| - 1 = \left(\frac{1 - \eta - \lambda}{\eta + \lambda} \right) \left(\frac{1}{1 + \tau^c} \right) \left(\tau^c - \frac{\eta + \lambda}{1 - \eta - \lambda} \right).$$

Assume $\eta + \lambda > 1$, then $\left| \frac{dc/c}{d\tau^c/\tau^c} \right| \leq 1$.

Assume $\eta + \lambda > 1$ and $\tau^c \leq \frac{\eta + \lambda}{1 - \eta - \lambda}$, then $\left| \frac{dc/c}{d\tau^c/\tau^c} \right| \leq 1$.

If $\tau^c > \frac{\eta + \lambda}{1 - \eta - \lambda}$, then $\left| \frac{dc/c}{d\tau^c/\tau^c} \right| > 1$.

If $\eta + \lambda = 1$, then

$$\left| \frac{dc/c}{d\tau^c/\tau^c} \right| - 1 = \frac{1}{(\eta + \lambda)} \times \frac{1}{(1 + \tau^c)} \left((1 - \eta - \lambda) \tau^c - (\eta + \lambda) \right) < 0.$$

See also Hiraga and Nutahara (2016) and Neumärker and Weinel (2022) for a detailed supporting explanation of this result.