BASIC INCOME AND EMPIRICAL RESEARCH

A LOTTERY FINANCED SOCIAL EXPERIMENT: AN ALTERNATIVE PROPOSAL FOR A BASIC INCOME SOCIAL EXPERIMENT

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I.   INTRODUCTION

What will happen after the introduction of a Basic Income?

Will the labor supply diminish? What will be the effect on families, and dependency relationships within families? And what about volunteering, health and education? Will people, being freed from the time-constraining regimes of modern labor markets, eventually find the right balance between work, family and engagement in civil society?

All of these are relevant empirical questions related to social changes which may be associated with introducing a Basic Income. However, little is known of what, if anything, will happen after the introduction of a Basic Income. As a result, some researchers have started to think about possibilities to explore these empirical issues. One research strategy is to launch a Basic Income experiment. (Groot 2004, ESF-workshop 2004). The idea of such an experiment builds on the experience of the Negative Income Tax experiments in the sixties and seventies in the U.S. Another research-strategy is to use specific lottery games (cf. annuity games) to explore possible consequences. Both research strategies have some distinct strengths. However, this paper argues that these strategies have some limitations which can be overcome by an alternative proposal.

The paper first makes the case for empirical research into the social consequences of introducing a Basic Income. In a second part, two research designs, social experiments and natural experiments, are discussed. It is argued that both designs have major limitations. In a third part, an alternative research design is proposed which combines the best features of a social experiment with ones from a natural experiment. The paper then estimates the research population which can be constructed via this design. Finally, the major advantages and drawbacks of the proposal

are discussed and some suggestions on the effective implementation of the proposal are explored.

II.   WHY EMPIRICAL RESEARCH?

It could be argued that it is impossible to conduct research into social consequences of introducing a Basic Income. First, the political and normative context in which a Basic Income will be implemented will be significantly different to any existing situation. Hence, the introduction of a Basic Income founded on clear normative principles for societal ordering and development supported by a clear political majority cannot be compared to any existing situation (see also Marx and Peeters 2004). Secondly, several macro-economic changes related to introducing a Basic Income can not be manipulated such as changes in tax-systems and labor demand.

As a consequence, it could be argued that empirical research is impossible. This argument, however, could result in a Catch-22 with regard to the discussion of the possible benefits and drawbacks of a Basic Income, since empirical arguments are clearly important in the political and academic debate on a Basic Income (for a similar discussion see also Marx and Peeters 2004). A Catch-22 is an impossible situation where one is prevented from doing one thing (empirical research) until one has done another thing (introducing a Basic Income), but one cannot do the other thing (introducing a Basic Income) until one has done the first thing (empirical research). The Catch-22 then consists of the following paradox: the argument that it is impossible to do empirical research before one introduces a Basic Income will result in the impossibility of implementing a Basic Income since one needs empirical arguments to make a valid case. The latter becomes clear when one surveys some of the major comments on introducing a Basic Income.

Leading commentators such as Robert Solow and Brian Barry note the importance of empirical research into introducing a Basic Income. Solow states that *"When incentives change, behavior changes. In principle, you would want to know these 'general equilibrium' effects of a UBI before deciding what you think about the proposal itself. No one could actually carry out the complete calculation. Fortunately only some of the ramifications are likely to be important enough to matter, and those could perhaps be traced. For example, labor supply effects are clearly of interest."* (Solow 2001, xv) In a similar vein, Brian Barry highlights the limitations of econometric modeling when he states that *"no tax and benefit simulation, however conscientiously carried out, can make allowance for the changes in behavior that would arise under an altered regime. A subsistence-level basic income would face people with an entirely different set of opportunities and incentives from those facing them now. We can speculate about the way in which they might respond, but it would be irresponsible to pretend that by cranking a lot of numbers*

through a computer we can turn any of that into hard science." (Barry 1997, 161, quoted in Groot 2004)

Whether and to what extent, this different set of opportunities and incentives will result in significant behavioral changes, is indeed an empirical question. Hypothetically, the introduction of a Basic Income could result in many different micro behavioral changes with distinct macro implications. This has been argued both by proponents and opponents of a Basic Income. In general, several socio-economic and sociological changes can occur due to the introduction of a Basic Income. For example, the introduction of Basic Income might provide an incentive to reduce the amount of time spent on the labor market or even withdraw from the labor market (micro changes). This might result in the abolition or reduction of unemployment since the amount of work will be redistributed over a greater number of people (more people work less). However, when a significant number of people decide to withdraw from the labor market it may create massive shortages on the labor market which can result in economic decline. This scare scenario is emphasized by many opponents of a Basic Income. Galston (2000, 29), for example, argues that a *"significant UBI* [...] *would have labor-supply effects that even its advocates would deem perverse."*

Finally, the debate concerning a Basic Income have mainly focused on philosophical and normative issues. It could be argued that empirical research into behavioral and sociological consequences of introducing a Basic Income is also important in order to put the philosophical debate into perspective. A crucial issue in the normative debate concerns the issue of unconditionality and the need for reciprocity. Philosophical arguments for and against reciprocity have been made. Proponents of reciprocity fear that the introduction of an unconditional Basic Income might promote free-riding. They often present an ideal-typical John Doe doing nothing all day (except maybe for surfing)[2]. This is regarded as unproductive in the long term and undermining the legitimacy of the foundations on which a society is founded. However, little is known about how the introduction of a Basic Income might influence free-riding and what the magnitude of the free-riding problem would be. It is not known if the free-ride problem would be bigger than under existing systems (some people also free-ride today, i.e. voluntary unemployed) or smaller. Surely, there are people who claim that a Basic Income would generate extreme perverse incentives to stop working (Galston). Contrary to economic theories on the inverse relationship between unearned exogenous income and labor supply, sociological theories would emphasize the importance of status-seeking and would predict that introducing a Basic Income would have little or no effect on free-riding. A

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[2] It should be noted that from an ecological perspective doing nothing all day might be considered as contributing significantly to society. If one accepts that some societies exceed the carrying capacity, it is acceptable that some members of society do as little as possible in order to balance the economic and ecological system.

Basic Income would be far too low to stop working, or significantly reduce labor supply. The importance of status seeking behavior is emphasized by many sociologists from different theoretical perspectives. Pierre Bourdieu (1984) showed how status-seeking behavior, via social, cultural and financial capital, is one of the crucial elements in social class (and inequality) reproduction as well as the social dynamics of society. James Coleman, from a rational choice perspective, noted that *"an interest in status can be regarded as being held by every person (1990, 130)"*

Hence, empirical research into the behavioral consequences of introducing a Basic Income is of obvious importance. Up until now two approaches have been suggested. Loek Groot (2004) has suggested conducting a Basic Income Social Experiment. Marx and Peeters (2004) have used natural experiments (lotteries) to explore possible labor-supply effects of introducing a Basic Income. Both proposals clearly have merit but also face limitations.

III.   BASIC INCOME AND EMPIRICAL RESEARCH: EXISTING STRATEGIES

A. A BASIC INCOME SOCIAL EXPERIMENT

One possibility is to conduct a genuine experiment. An experiment is a research design in which an 'independent' variable is manipulated under controlled conditions. As such, an experiment consists of two essential elements, namely the manipulation of a causal factor and the control – mainly via random selection – of all factors that might plausibly affect the causal relationship of interest (Gerring 2001; Orr 1999). Via an experiment – and the effective creation of a Basic Income situation for an experimental group – one would be able to monitor what happens in the experimental group and how this differs from a control group. A Basic Income experiment has never been implemented but has recently been proposed by Groot (2004) following the experience and lessons learned from the Negative Income Experiments of the '60s and '70s. This experiment *"would involve a limited group of people in a limited area who would, during a limited time, receive a basic income."* Such a proposal has to face at least two major problems/limitations (for a more elaborate discussion see Marx and Peeters 2004).

First, since an experiment will be limited in time several biases can occur. First, no assumptions can be made on behavioral adaptations over time. There is no theoretical reason to assume that behavioral changes over time will reflect any general pattern or that one can observe any changes right after, or close to, the manipulation treatment. In other words, one can introduce an experimental Basic Income, but one cannot

predict if and when people will respond to this 'stimulus'. They can after one month, after a year, but also maybe after five years. It is possible that introducing a Basic Income will, at first have no or very strong effects on labor-supply which will change over time. In other words, people will need time to adjust to the new situation and find a new 'equilibrium'. Hence, it is possible that introducing a Basic Income will, at first have no or very strong effects on labor-supply, which will change over time. In other words, people will need time to adjust to the new situation and find a new 'equilibrium'. Secondly, a limited time period might bias the answers on behavioral changes resulting from the experiment. Widerquist (forthcoming), commenting on the Negative Income Tax experiments of the '60s and '70s in the United States, notes that the limited time frame of the experiment might result in biased results, because experiments run the risk of measuring only short time responses to a policy change. He notes, for example, that participants in the experimental group might, on the one hand, face a great incentive to trade working time for leisure time since they now have the financial capabilities to do so. On the other hand, since people have to return to work after the experiment it might provide an incentive to stay in a job in order not to loose it. In other words, experiments might over- or underestimate behavioral consequences due to time constraints.

A second major limitation concerns the research budget. To conduct a representative experiment one needs an enormous research budget. The proposal by Loek Groot (2004) is in fact not aimed to be representative. One of the reasons has to do with budget constraints. The chances of obtaining a research-budget for such an experiment are rather slim.

B. NATURAL EXPERIMENTS - LOTTERY RESEARCH

One possible option to overcome some of the limitations of a real experiment is making use of natural experiments. In a natural experiment the change in the causal factor is provided by contingencies, such as natural occurring phenomena or social interventions, which are independent of the research-project. Promising natural experiments in this context are lotteries such as annuity games (Win for Life). Some lottery games grant a periodically unconditional lifelong income to winners. They can be regarded as a natural Basic Income experiment.

Marx and Peeters (2004) use these annuity games to analyze possible labor-supply effects of an exogenous un-earned income. This design offers a solution to at least one of the key limitations of an experiment, namely time. Winners of annuity games will effectively receive a lifelong income. No biases in relation to time are hypothesized to occur. However, this design also has some limitations in order to make valid inferences. The two most important limitations concern the comparability of annuity games grants and a Basic Income grant and external validity.

A first limitation concerns the difference in amount of income granted by annuity games. Annuity games are not, in monetary terms, a perfect proxy for a Basic Income. For single households, grants from annuity games are significantly higher than the subsistence level which is often referred to as an appropriate level for a Basic Income. By contrast, for couples, the grant is often lower than proposals for a Basic Income. In addition, to analyze the effect on the level of a couple household researchers have to make assumptions on how the couple divides money. Moreover, the differences between lottery grants and a Basic Income become even harder to assess since a Basic Income would be adjusted for inflation while grants from annuity games are not adjusted for inflation. As a result, this type of research can only draw limited conclusions for a subset of questions related to behavioral consequences. It can refute or support some extreme hypotheses (excessively perverse labor-supply effects) in relation to introducing a Basic Income, but cannot provide a nuanced assessment of behavioral consequences.

A second limitation concerns the lack of ad random attribution of observations to the experimental group and control group. This might limit the external validity due to selection bias, of the results. In essence, this is a problem of representativeness of the sample of annuity games winners. This representativeness is hard to assess and several issues are of importance. First of all, this type of research only covers a limited number of observations since there are only a limited number of winners. An advantage is that the number of winners grows every year, but that growth rate is rather limited. In Belgium, for example, more than 200 people won the game with approximately 20 new winners per year. By all accounts this is a small research population even under the assumption that everybody co-operates, which is not the case. Secondly, even if the sample is representative in terms of a sufficient number of observations, there is a question of how well the sample of winners is a reflection of the general population in relation to possible behavioral adaptations to an exogenous unearned income. It could be argued that people playing the lottery are not representative for the population at large (cf. risk-takers versus risk avoiders). For example, people who play the lottery might be more inclined to change their behavior since this is specifically the reason why they play the lottery in the first place. Little research is available on the representativeness of lottery players. Common sense holds that they are a specific subset of the population. However, it should be noted that many people play the lottery and that Marx and Peeters (2004) did not find obvious misrepresentations. Finally, even if there are enough observations and the sample is representative a final bias can occur due to non-response. One could solve the problem of non-response by providing incentives to participate in the research, but this will be expensive.

C. SUMMARY

In sum, the two research designs offer some potential to investigate socio-economic consequences of introducing a Basic Income. Table 1 summarizes the main limitations and key strengths of each of the research strategies. Finally, it should be noted that lottery research, in essence, provides an enormous research budget to run an experiment.

Table 1: Overview of the vices and virtues of each design

Experiment		Lottery/Annuity research	
Main Limitations	**Key-strengths**	**Main Limitations**	**Key-strength**
Time - Bias Behaviour	External Validity - Sufficient N - Random Sample - Low Non-response	External Validity - Medium N - Biased Sample - High Non-response	Lifelong income
	Comparable to a Basic Income situation	Comparability with a Basic Income	
	Randomisation	Selection Bias	
Research-Budget			Enormous Research-Budget

Although the limitations and strengths of one design are the mirror-image from the other, it does not follow that just complementing one design with the other would generate results from which the basis of valid inferences can be made. The main challenge is to develop a research-design which combines the key-strengths of each strategy and overcomes the main limitations of each strategy. A key issue in this respect is the design of a project which is politically and financially feasible. From Table 1 it should become clear that a research-design which combines the virtues of the two designs is an interesting research-design to explore possible behavioral consequences of introducing a Basic Income. The next part proposes such a design and assesses the potential and feasibility to effectively implement of the proposal.

IV. A LOTTERY FINANCED SOCIAL EXPERIMENT AN ALTERNATIVE PROPOSAL FOR BASIC INCOME RESEARCH

The basic idea of the alternative proposal is simple: Use a modified annuity game to finance and conduct a Basic Income-experiment. The winners of the game, best organized by a national lottery and supported by leaders from the scientific and political world, will form an experimental group which must participate in the research project in order to receive a lifelong experimental grant which would equal a Basic Income. Besides an experimental group, a control group will be established. In this way the proposal aims to combine the benefits of lottery research (which in a way offers an enormous research budget) with the scientific rigor of a randomized experimental design. The proposal has the potential to create a unique socioeconomic panel dataset with low exit-rates. This makes genuine longitudinal research possible. Finally, the proposal is financially feasible since it finances itself.

As has been noted, annuity games such as the Belgian Win-for-Life (W4L) game provide winners with a lifelong fixed yearly, monthly or weekly income and provide an interesting test case to conduct research into the introduction of a Basic Income or possibly other income security measures. However, there are some limitations to the existing games. Hence, modifications to the existing game are proposed. The modification to existing games will consist of three aspects:

The amount won by a single person will be lower in comparison to existing lottery games. Existing games provide an income substantially higher than subsistence level. The proposal would be to grant a subsistence level income. In the context of this paper, the experimental grant equals 540 euro (to start of with).

Income from the experimental grant will be inflation related. Income from annuity games such as W4L is not adjusted for inflation. As a result, the real value of income decreases with time. The experimental grant will be adjusted for inflation in order to keep it on subsistence level.

It is an all or nothing game. Annuity games only provide one winner per one million tickets sold. In addition, they provide small winning amounts to keep people playing. Hence, a normal distribution for a million tickets is presented in table 2 for W4L and Fun for Life (F4L), a similar game in which one wins 25.000 euro per year for the rest of your life.

Table 2: Distribution winners F4L & W4L

Fun for Life		Win for Life	
3 euro	122.550	5	180.00
5 euro	90.000	10	18.00
10 euro	20.000	25	1.80
20 euro	10.000	250	50
200 euro	200	2500	1
2000 euro	20	1.000 per month	
25.000 / year	1		

The proposal for the experiment is only to provide for life winning tickets. In this way, one can significantly increase the number of

observations per million tickets. It should also be noted that one can increase the number of winners if one does not try to make a 'profit' in order to fund charities or scientific research, as is normally done by national lotteries.

A crucial issue for the potential of such a proposal is the number of observations one can expect to finance with a lottery led social experiment. A calculation of the potential number of winners is proposed below.

A. ESTIMATING THE POTENTIAL FOR THE EXPERIMENT (NUMBER OF OBSERVATIONS)

How many people can be included in the experimental group, and is this sufficient to conduct a meaningful experiment? In order to calculate the potential of the lottery experiment several aspects should be taken into account.

- Step 1: Calculate the average period for which to pay a lifelong inflation related subsistence income.
- Step 2: Calculate the sum needed to pay a subsistence level income for that period.
- Step 3: Figure out how many people can be financed per million sold tickets.
- Step 4: Provide an estimate in relation to the magnitude of the experimental group (participation to the game/experiment)

The calculations are made for the case of Belgium since information is available. It should be noted that this proposal can only provide an estimation of the potential, and that the potential will differ from country to country. However, in order to not overestimate the potential, a conservative calculation is made. This implies that for each decision necessary to calculate the potential (interest rates, time-period) a conservative position is taken. These conservative estimates also guarantee that the logistical costs, and the funding for a control group, can be provided by the income generated from the lottery.

Step 1:
How long – on average - does one have to pay a Basic Income Experimental Grant?

The first question is answered by calculating the difference between median/average and life expectancy. The latter provides an indication of an average period for a person in the experimental group. This information is necessary to calculate how long somebody on average will stay in the experimental group and for how long the experiment, on average, needs funding. Data from W4L-winners and the general

population of Belgium (National Institute of Statistics data on population) is used to estimate the average period (see table 3).

Table 3: Average and Median Age and Life Expectancy at birth

	Age
Average Age W4L-winners	46/47
Median Age W4L-winners	42
Average Age Belgian Population	47
Median Age Belgian Population	46
Life Expectancy at birth in 2000	78.34

Sources: Marx and Peeters, 2004; National Institute for Statistics

Since life-expectancy is an overestimation for the experimental group, the scenarios for financing the Basic Income experiment are calculated for 32 and 34 year periods. In this way there are only marginal overestimates of the number of years for funding *(ie.* conservative estimation).

It could be argued that for a Basic Income experiment one does not need retired people and hence one should only allow people between 18-65 to play. Important counterarguments are:

1. If one excludes people over 65 fewer people will play and hence less observations will be generated (see step 3). In order to finance the experiment it is good that many people buy several tickets.

2. People over 65 might pass a winning ticket over to a younger relative who would not play.

Step 2:
How much money is needed to pay a lifelong (32-34 years) inflation fixed Basic Income experimental grant?

In answering this question, it is important to note from the outset that the full amount to pay for a 32-34 year period should not be available at the start of the experiment. For example, the amount required to finance a subsistence level income (540 euro per month – inflation related (I)) for 32 years is 263.660 (= I(540*12)*32). However, this sum should not be available at the time of the start of the experiment since one can invest a smaller amount of money for many years with a fixed interest rate

and a safe return on investment. Hence, the idea is that the money will be managed in an independent and socially responsible investment fund and that this investment fund yearly pays for the experiment.

How much money is needed at the start of the experiment to guarantee 263.660? Table 4 provides an overview of 2 scenario's (funding for 32 or 34 years – see step 1) and different interest rates on the investment fund (4 or 5%). The monthly Basic Income will each year be adjusted for inflation by a fixed percentage of 1.5%. Note that due to linear assumptions in the calculation it is only necessary to present two scenarios. Other scenarios can easily be deducted from the presented scenarios.

Table 4: Different scenario's for funding a Basic Income experimental grant

	32 years		34 years	
	Scenario 1	Scenario 2	Scenario 3	Scenario 4
Interest	4%	5%	4%	5%
Inflation	1.5%	1.5%	1.5%	1.5%
Basic Income first year	540	540	540	540
Basic Income final year 32/34	856	856	882	882
Start capital needed	±150.000	±130.000	±155.000	±135.000

It should be noted again that these are conservative estimations. The start capital easily covers the periods for which they are calculated. As a result, this calculation shows that one needs approximately half of the amount necessary for funding a lifetime experiment at the start of the experiment.

Step 3:
How many observations in an experimental group can one fund with this amount per one million tickets?

The number of observations per million tickets is a function of the prize of a ticket and decisions related to financing singles and couples. The latter issue is first addressed. One possibility would be to only finance the winner. For a single person this would imply that the situation reflects a Basic Income situation. On the other hand, for couples it is an underestimation. One option could be to grant a Basic Income to the partner of the partner as well. The problem is that when they split up and

re-engage/marry you end up again in an underestimation scenario. It is very difficult to keep family dynamics under control.

Another option would be to increase the amount to the winner. One could for example grant 1.080 euro per month to the winner. However, this is an overestimation for a single and provides a high incentive to change behavior. In relation to couples, one must make several assumptions on how the money would be split.

For the experiment it is probably best to provide a subsistence level income to singles and also grant a Basic Income to the partner of the winner for couples as was done in the Negative Income Tax -experiments (Kershaw and Fair 1976). A partner is defined as any blood or adopted (by marriage or co-habitation) relative living with the winner who should be legally registered at the same address for a period of six months before the announcement of the experiment. In both cases the experimental design resembles a Basic Income situation. It is important to note that a grant will be given to each individual of the couple in order not to create distorted dependency relationships. If the couple decides to split-up each partner will end up with his/her basic income. Hence, in the case of leaving a couple household the rule is that the partner can keep the grant and form, at least for a moment, a single observation. What if winner is single when he/she wins but becomes a couple later on? In other words, what happens with new partners? In the case when a recipient of an experimental grant (winner or ex-partner) gets a new partner the experiment will not resemble a Basic Income situation. Grant-holders obviously become attractive as lodging places for relatives and friends. In order to reduce incentives three rules are stipulated. First, no grant will be given to partners over the age of 65. Second, for younger people, a new partner will only receive an experimental grant after living 5 years legally together with a grant-holder. Thirdly, this new partner will loose the grant after he/she left the grant holder.

In order to calculate how many observations one can generate per million tickets for singles (1 observation) and couples (1 observation) it is assumed that in the population the distribution between single households and couple households is 1/3 (singles) and 2/3 (couples). (According to the National Institute of Statistics the distribution is: Singles (Singles + Children): 46% and Couples (+Children): 54%) Since the National Institute of Statistics do not accurately capture situations were singles live together with somebody, the distribution is corrected to a rough 1/3rd and 2/3rd split which is a conservative estimate for the number of observations and significantly lower than the number of grants distributed.

Table 5 provides the number of observations (N) per million tickets for several prices per ticket for scenario's 1 & 2 (32 years). These are low estimates.

Table 5: Number of grants and observations (N) for scenario's 1 and 2

| | Scenario 1 | | | | Scenario 2 | | | |
| | 150.000 euro | | | | 130.000 euro | | | |
Price/Ticket	# Grants	Singles	Couples	N	# Grants	Singles	Couples	N
1 euro	6	2	2	4	7	3	2	5
2 euro	13	3	5	7	15	5	5	10
2.5 euro	16	4	6	10	19	5	7	12
3 euro	20	6	7	13	23	7	8	15
5 euro	33	11	11	22	38	12	13	25

This represents the initial experimental group. It should be clear that the number of observations will increase when social dynamics within couples begin to play (re-engage, re-marry, etc.)

Step 4
How many people will eventually be included in the experimental group?

The answer to this question depends on how many people participate in the lottery game. The latter is in turn highly dependent on advertising efforts and the price of a ticket. In general W4L sells around 20-30 million tickets per year. This can go up to 40 million or more when special advertisements are launched. It could be an option to couple a media and information campaign to the experiment and a general call to the public to participate. This will surely increase participation.

A conservative estimate for the total amount of tickets sold for the experiment with a public relations campaign and the price of a ticket set at 2.5 euro (= W4L-ticket price) should be around 30 to 40 million tickets (for a population the size of Belgium) in one year. This will constitute a research population in the experimental group of around **360-480** observations (N) (in scenario 2 at price 2.5 euro (N=12)). Note that this number of observations will cover the payment of **570 to 760 experimental grants** (see step 2 – scenario 2). As a result a conservative estimate shows that the Lottery financed social experiment will generate a substantial number of observations.

B. ADVANTAGES OF THE PROPOSAL

The proposal has several advantages over existing proposals for a Basic Income experiment and existing annuity games.

a.   It should provide detailed information on several issues related to behavioral consequences of an exogenous unearned income or an unconditional Basic Income. Besides issues related to labor market, behavior such as labor supply, entrepreneurship, negotiating position, quality of work, stress and labor mobility; the experiment can also shed light on the relationship between income security and other social outcomes such as health care (malnutrition, health care prevention), education (mobility, grades, drop-out, school trajectories) and child care (pre-schooling child care and its effect on social mobility). In other words, the experiment should, as was the case of the Negative Income Tax-experiments in the '60s and '70s, allow an exploration of many different socially relevant issues.

b.   It finances itself. By using the lottery as an income generator and socially responsible investment funds to manage the income, the experiment finances itself. This increases the political feasibility of the project since no significant public investment is necessary (such as buying every citizen a lottery ticket.) It will need a coordinated effort from scientific, public (politics and lottery) and private (media) bodies to launch the experiment, but they do not need to invest heavily financially. The estimated budget in this proposal also leaves room to fund a control group and (part of the) logistical costs to run the experiment. This is a crucial advantage to any existing proposal for an experiment. As Groot (2004) notes the NIT-experiments were extremely expensive and one can not expect a similar budget to be made available for a Basic Income experiment. As a result, the design of experiments is constrained by financial resources.

c.   It is a genuine lifelong income. Each winner will be guaranteed an income set at subsistence level for life. This makes longitudinal research possible and eliminates some biases which are related to a restricted time-frame of an experiment (supra). For example in relation to labor issues a limited time period might provide incentives to both change and not-change labor supply. In case of the former, the limited time-frame provides a one-off opportunity to take a break. In relation to the latter, it could be argued that since people will have to return to the labor market anyway (after the experiment) they will never leave the labor market in the first place in order to secure their job.

d.   The proposal will also generate a sufficient number of observations in the experimental group. Contrary to for example proposals where governments would grant one lottery ticket to each citizen, proposed by the ESF-workshop, which will lead to a very modest

experimental group (in size) this proposal has the potential to create a significant experimental group.

e.   Data-collection can easily be obtained from administrative records. Winning will be conditional on granting access to administrative records. On the other hand, the research team will commit to full confidentiality and no personal information will be made public in order not to create incentives for auto-selection bias. Access to administrative records will also significantly reduce overhead costs related to data gathering and management.

f.   Participants of the experimental group will have a strong incentive to participate since the experimental grant will be conditional on participating. As a result, exit from the experiment is hypothesized to be marginal. This is a key-strength in relation to many other panel designs which suffer from medium to high exit of respondents. In this way, the proposal has the potential to create a unique socio-economic panel data-set for the analysis of the relationship between income security and social outcomes.

g.   A similar design can easily be implemented in other countries which will facilitate the investigation of institutional variation (see Marx and Peeters 2004) and significantly increase the number of observations. A European experiment, organized by the European Lottery, should generate an experimental group which will consist of several thousand observations.

h.   Finally, it should be stressed that this proposal is fully in line with the mission of the national lotteries which support scientific research. In addition, investing the money in socially responsible investment funds will generate additional social benefits.

C. POSSIBLE DRAWBACKS OF THE PROPOSAL

a.   Auto-selection bias. The proposal hinges on the fact that many people will participate and buy tickets. As a result, the proposal has the possible major drawback of not being completely random and suffers from possible similar biases which occur in other lottery research (overrepresentation of high risk players, people who intend to change behavior, etc.). It is an additional challenge to randomize the process of ticket distribution. Possible ideas are the use of advertisements, an ad random distribution of winning tickets by researchers, etc. However, it will anyway be crucial to estimate possible biases. This can be done via a

parallel research project which assess to what degree lottery players are similar or different from the general population.

b.   Taxes. A Basic Income scheme needs to be financed. Several ideas have been proposed in this respect (flat tax, taxes on consumption, etc.) It is impossible to include different financing mechanisms in the experimental design since it is not possible to change the tax-system. One option would be to make winning the experimental grant, not tax exempt (contrary to winning the lottery). This will allow for an analysis of the effect of introducing a Basic Income in the current tax system. However, it can also provide a disincentive to play which will reduce the number of observations and generate a selection bias. A position on the issue of tax needs to be further explored.

c.   Several issues relevant to the debate of a Basic Income can not be assessed such as macro-economic implications for redistribution. Also possible social influence effects on behavior cannot be assessed. Social influence will produce behavioral changes. For example, threshold models have been developed to show that in many cases a critical threshold (cf. tipping point) has to be reached before a significant number of people will change behavior. This line of research has recently gained much momentum with the focus on social networks. The adoption of innovation or the imitation of behavior mainly occurs via networks which transfer information (Gladwell 2000; Granovetter 1978; Schelling 1978). In relation to introducing a Basic Income, the above might imply that at first few or insignificant changes in labor market behavior will occur, but as time goes on and a certain threshold is reached, many others will follow. For instance, once a few people shift from full-time to part-time work and can still afford a decent life, more people will start to do the same. In many cases these developments are non-linear and extremely hard to model. The crucial issue here is that behavioral effects are not only a result of rational decisions, but also of social contagion. To be clear, these effects cannot be discounted in any research project. One could argue to include one community in an experiment but this would generate other problems.

d.   An additional problem with regard to experiments concerns the Hawthorne-effect, this is the fact that people, possibly under media influence, will adopt their behavior in favor of the experiment (Gillespie 1993). It will be very hard to exclude the experimental group from information on expected behavioral outcomes of the experiment. Once this information is available, the experimental group may act accordingly. However, it can be assumed that this effect decreases over time.

D. HOW TO PROCEED? CAPACITY BUILDING IN THE POLITICAL AND SCIENTIFIC WORLD

In order to launch such an experiment, commitment of several stakeholders is required.

First, lotteries have the most experience in running lotteries and have in most countries the monopoly, and legal status, to do so. Hence, co-operation from the lottery and the public authorities managing the lottery is of crucial importance. This will require political will and commitment to support the idea for an experiment.

Second, the experiment will need much expert input, both substantial knowledge from different areas such as labor markets, education, health, etc. as well as methodological input from experts in social experiments. Expert input will have to be organized via special workshops which will need to be funded in advance and separately. The most appropriate institutions to fund such workshops would be National Science Foundations and Councils.

Thirdly, the experiment will need sufficient public attention to have an impact both in terms of decreasing selection bias as well as in generating income. Hence, private support, mainly from the media, should be obtained in order to launch the experiment and increase the number of observations.

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