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AN UNCONDITIONAL BASIC INCOME AND LABOR SUPPLY RESULTS FROM A SURVEY OF LOTTERY WINNERS[1]

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INTRODUCTION

John Maynard Keynes (1973(1935)) submitted that 'full employment' was one of two central social goals for government, the other being the reduction of inequality. For decades this goal has been pursued by governments across the world. However, many countries are still faced with high levels of unemployment. In countries with low levels of unemployment, many people have been trapped in low paid and flexible 'hamburger' jobs. People working in these jobs have to combine several jobs at the same time to survive and are constantly confronted with temporary unemployment, putting them in a permanent state of insecurity. Hence, unemployment – structurally or temporarily - seems to persist. Even in the booming '90s with high growth rates governments seemed incapable of achieving full employment, despite the implementation of many different kinds of active labor market policies (Auer, Efendioglu, Leschke, 2005; Schmid & Gazier, 2002).

As a result, some renowned academics have proposed more revolutionary changes (Meade, 1990; Offe, 1992; Dahrendorf, 1994; Van Parijs, 1995; Beck, 1999; Simon, 2001; Standing, 2002). They suggest the introduction of an Unconditional Basic Income (hereafter BI) as the desirable policy measure to achieve full employment. A BI is "an income paid by a government, at a uniform level and at regular intervals, to each adult member of society. The grant is paid, and its level is fixed, irrespective of whether the person is rich or poor, lives alone or with others, is willing to work or not (Van Parijs, 2003, p. 5)."

Proponents argue that a BI would lead to reduced levels of unemployment due to two dynamics. First, a significant number of people might reduce their labor supply by working less and opening up opportunities for unemployed people to enter the labor market. Secondly, labor participation will increase due to the unconditional character of BI which abolishes unemployment and poverty traps which plague many existing welfare states. The latter will also result in the availability of jobs which are momentarily priced out of the market (cf. so-called low productivity jobs). As pointed out by Fred Block (1990, p. 207), "the fact that individuals were guaranteed a minimal level of income would increase the attractiveness of relatively poorly reimbursed service activities to formal employment". In addition, a BI might not only reduce unemployment but also stimulating entrepreneurial activity and in this way contribute to economic growth. In this context it is argued that a BI would provide incentives to set up a business (Euzéby, 1987). In addition, it is argued, the introduction of a BI will change the concept of work by rewarding non-wage work such as care for the elderly and children and voluntary work.

However, the idea that BI would lead to more available jobs and to a better dispersal of labor supply is not shared by all. Opponents predict quite the opposite. They reason that a "significant

BI […] would have labor-supply effects that even its advocates would deem perverse (Galston, 2001, p. 29)" because granting everyone a 'free lunch' would lead to massive shortages on the labor market. Also with regard to labor demand, opponents see negative social results, since they reason that a BI would encourage the growth of unattractive jobs (Myles, 1988 in Block, 1990). Hence, both regarding labor demand and labor supply strong disagreements exist on the consequences of BI.

Given these unresolved questions, the lack of empirical research into the consequences of BI is regrettable. Thus far, the only available information is provided by the Negative Income Tax (NIT) experiments. Between 1968 and 1980 in the United States and Canada five experiments were conducted to assess the effect of an unconditional minimum level of income. Even though these experiments were not directed towards testing the effects of BI, the similarity between a NIT and BI is striking and the results of these experiments could provide meaningful insights to scholars who are interested in empirically assessing the effects of BI.[2] However, apart from the fact that no clear consensus is reached about the main results of the experiments (Widerquist, 2005), the experiments have some characteristics that make the generalisability to the current (European) context quite limited, the most important being the differences in cultural and historical context (see Groot, 2004, pp. 100-101).

In order to assess the labor market consequences of BI for the current European context, a logical empirical possibility would be to conduct a European BI-experiment. Such an experiment in which "a limited group of people in a limited area would, during a limited time receive a BI" has recently been proposed by Groot (2004). While such a proposal has some merits, it also has serious shortcomings such as a limited timeframe of the experiment (Marx & Peeters, 2004, pp. 9-14). Since one of the key features of a BI is that it is a *lifelong* unconditional income a limitation in time might bias results in two directions. On the one hand, the experiment might provide an extreme incentive 'to take a break' and in this way overestimate labor supply reduction effects. On the other hand, the experiment might provide an incentive to stay in a job since it will only last for a limited timeframe and people do not want to risk loosing a job and their position on the labour market (Widerquist, 2005).

In this article another strategy is suggested to gain insight into the labor supply effects of BI. It is argued that specific lottery games generate interesting research populations for BI-research. In fact, some games exist – such as the Belgian *Win for Life* (henceforth W4L) – where winners are

[2] Under a BI regime everyone is given a BI and all other income is taxed. Under a NIT scheme the taxes that have to be paid are subtracted from the unconditional grant. Hence, under a NIT scheme, depending on the earned income, some receive a net transfer while others have to pay net taxes. This is just a difference in design, however, because both can achieve the same end result. See Van Parijs (2004) for a discussion.

granted a periodically unconditional lifelong income. In this way, they can generate insights into some hypotheses concerning the labor market consequences of introducing a BI.

The article discusses the results of a survey designed to assess the labor supply effects of BI by analyzing changes in labor market behavior of W4L winners. To this end it is divided in three paragraphs. In a first paragraph an assessment is made of the comparability of winning W4L and receiving a BI. It is argued that even though the similarities are striking, the differences are just as important and should be taken into account when interpreting the data. In a second paragraph the design and results of the pilot project are discussed. By providing a description of the labor market situation of W4L winners before and after winning, a tentative exploration of the labor supply consequences of introducing BI is presented. In a third paragraph the major limitations of this research strategy are discussed.

1. WHAT CAN BE LEARNED FROM THE BELGIAN WIN FOR LIFE CASE?

The proposal for BI is not to give everyone a winning lottery ticket. Hence, the question of to what extent W4L is a valid case for investigating the consequences of introducing BI has to be addressed. The difference between a BI situation and a W4L situation depends among others on the level of the proposed BI. Thus, a distinction can be made between a full BI, which is sufficient to cover basic needs and a partial BI which is not. The remainder of the article will focus on a full BI since this is most often proposed by BI proponents. The level of the BI will be set at 613 euro, i.e. the level of Belgian social assistance for a single person (situation on 1/1/2005).

This part discusses to what extent W4L is a good proxy to analyze possible labor supply effects of introducing BI. Several issues have to be taken into account in order to assess the similarities and differences between winning W4L and receiving BI, including changes in inflation and taxes, the constitution of the household (singles and couples[3]) as well as the labor market effect under investigation (stop working, start up a business or reduce working time[4]). Each will be discussed in the following paragraphs. For reasons of clarity the different labor-market related options in the context of a comparison between W4L and BI are discussed via a hypothetical example. At the end a summarizing table is presented.

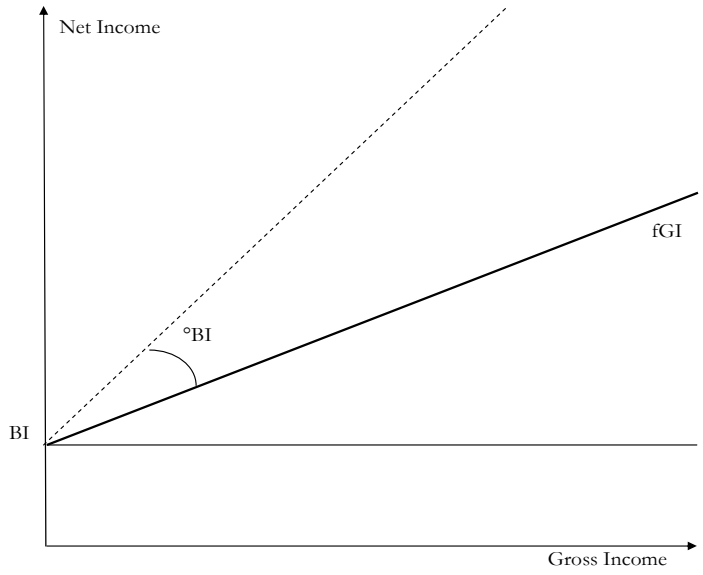
[3] Children are not included in the analysis. It is assumed that a BI for children and the existing Belgian universal child allowance are equivalent.

[4] A transition from unemployment to employment is not considered in this research project due to a lack of data.

1.1. TAX REGIMES AND INFLATION

A first difference between a BI and a W4L situation concerns the difference in tax-regime which will influence net income. In Figures 1 to 6 the relation between gross and net income of BI recipients and W4L winners is represented. Figure 1 represents a *BI regime financed with a flat tax* (hereafter UBI). On the X-axes gross income is presented, on the Y-axes net income. The 45° dotted line represents a situation where everyone receives a BI but no taxes are paid. The difference between the dotted line and the line representing the relation between gross and net income (fGI) points to the amount of taxes that has to be paid. In order to finance BI a tax rate °BI is needed. Because BI is sufficient to cover basic needs there is no need for social assistance.

Figure 1. UBI



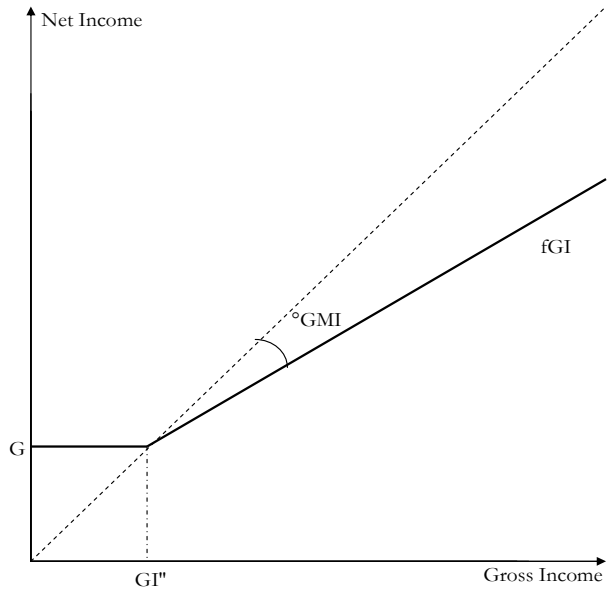
Source: Based on Van Parijs (2004, p. 32)

How do these BI regimes compare with the situation of a W4L winner? Figure 3 represents the case of a single *W4L winner under the conventional guaranteed minimum income scheme* (hereafter GMI/W4L). In order to fully understand this figure, it may be useful to first consider Figure 2. This figure is a schematic presentation of the existing *guaranteed minimal income scheme* (hereafter GMI).[5] Under GMI if one earns less than GI" (under certain conditions specified in social assistance legislation) one's income is topped up until a net income of G (=BI). If one earns more

[5] For the schematic presentation of GMI and GMI/W4L several simplifying assumptions are made. Most important, it is assumed that there is only one flat tax rate, in contrast to the existing progressive tax rate. Furthermore, it is assumed that social assistance is the only existing transfer income. Finally, it is assumed that those earning less than GI" are exempted from taxation. These simplifying assumptions will have no bearing on the arguments further developed in the empirical part of the article.

than GI" one has to pay taxes equal to °GMI. Because under GMI less people are entitled to a transfer, the amount of taxes to be paid (°GMI), is smaller than under UBI. Figure 3 presents the situation of a single W4L winner. The figure is identical to Figure 2, be it that because W4L in Belgium is not taxed, at every level of gross income the W4L grant of 1000 euro must be added to the net income (see fGI').

Figure 2. GMI, single person



Source: Based on Van Parijs (2004, p. 29)

Figure 3. GMI/W4L, single person

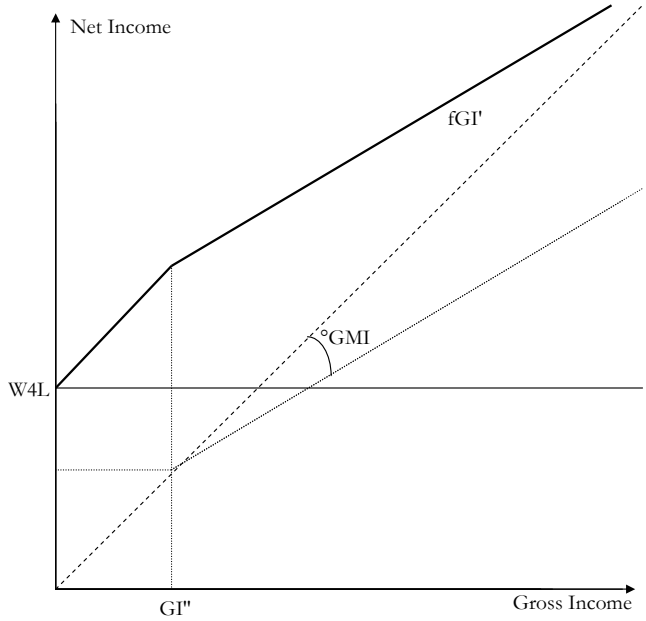
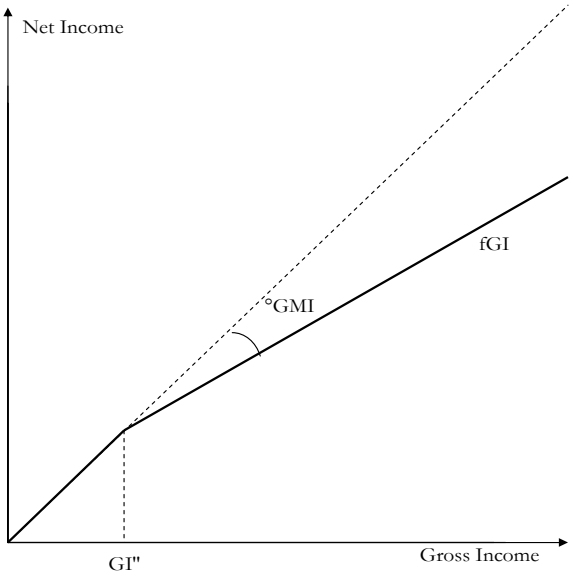
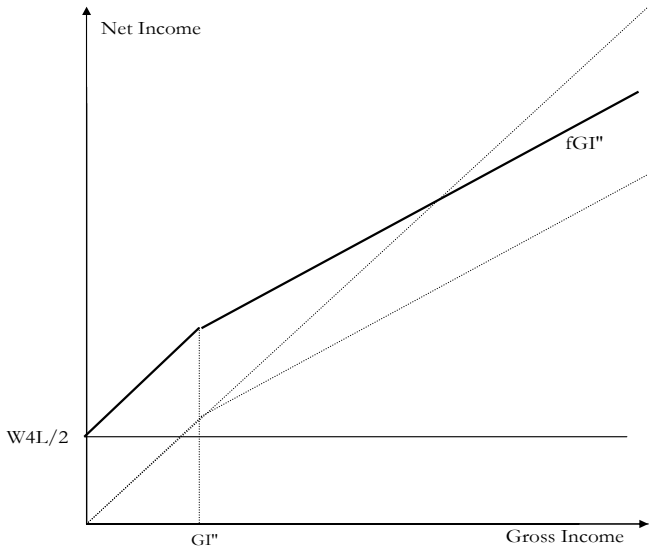


Figure 4. GMI, one partner of a couple



What about the situation of couples winning W4L? The situation of one of the two partners is presented in Figure 5. For ease of comparison Figure 4 presents the situation of one partner under GMI is presented. Figure 4 is an exact replication of Figure 2, except from the fact that because it is assumed that at least one partner works, no social assistance is received if one earns less than GI". As becomes clear from comparing Figures 4 and 5, for one partner of a couple, at any level of gross income net income is raised by W4L/2 euro (under the assumption that the W4L grant is divided equally between the partners).

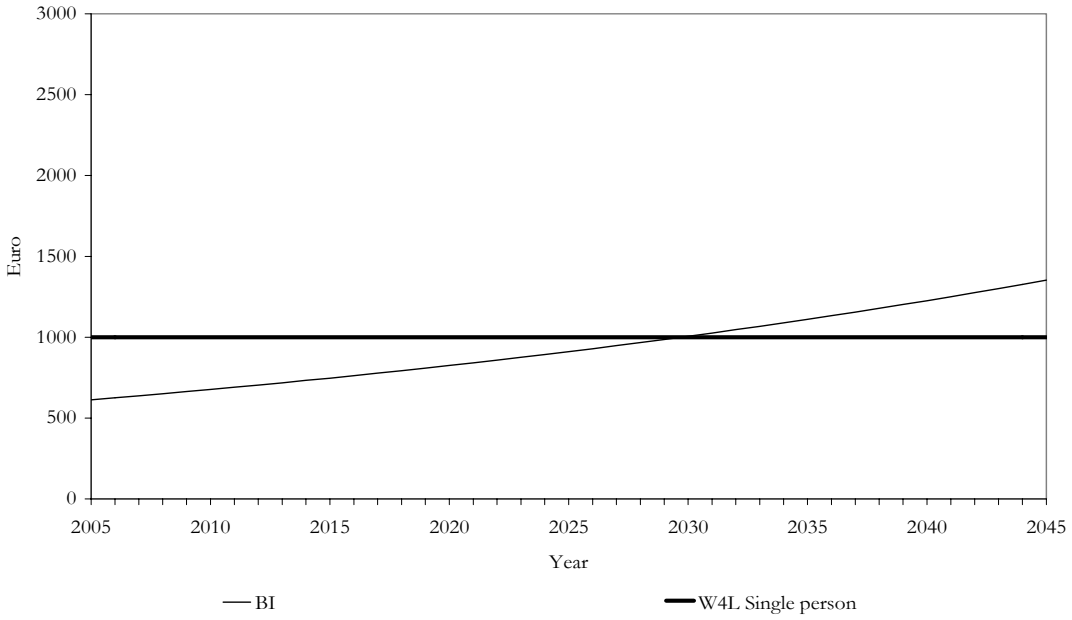
Figure 5. GMI/W4L, one partner of a couple



From comparing Figures 1 and 2 with Figures 3 and 5 the first difference between UBI and GMI/W4L becomes clear. Whereas under UBI, the received BI for those employed is (at least partly) taxed away, the W4L grant under GMI/W4L is just added to the previous income situation, without having to pay any taxes. A second difference concerns the fact that W4L is not adjusted for inflation, while BI, under every serious proposal, would have to be adjusted for inflation. Assuming a yearly inflation of 2.1% (as in Figures 6 and 7) this implies that in the year 2030 a BI would equal 1006 euro while the W4L winners still receive 1000 euro. [6]

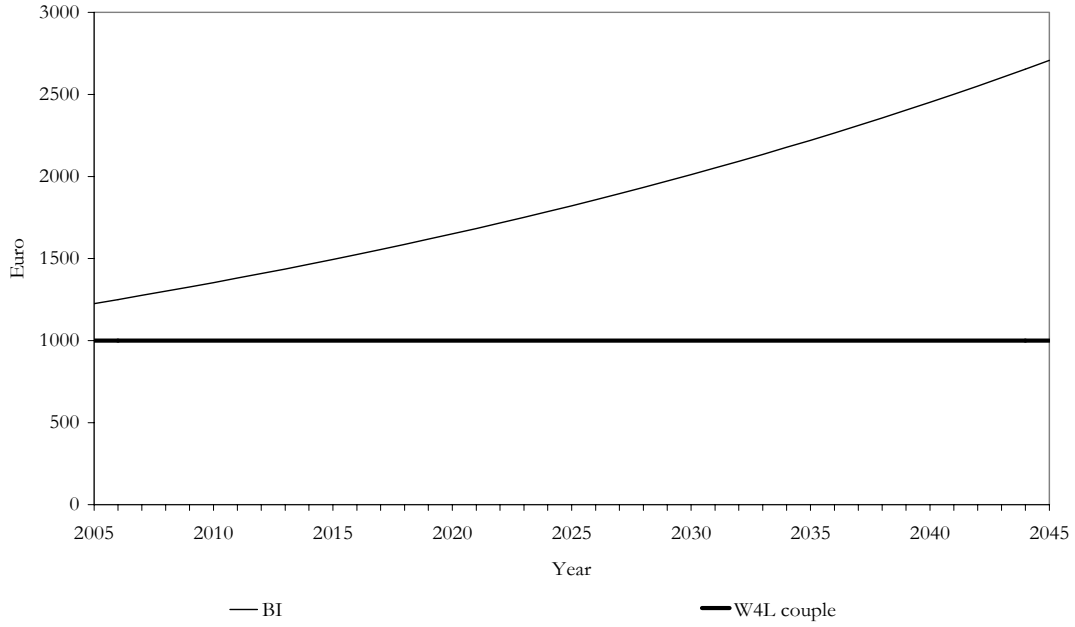
As becomes clear from Figure 6 for singles this implies that that the W4L grant will for a significant amount of time be higher than BI. At some point the two grants will have the same value (in this example after 24 years). After this time period BI will be higher than the W4L grant. For couples, different conclusions should be drawn because while the W4L grant remains the same, BI will be paid out twice. Figure 7 shows that in this case BI will be higher than the W4L grant and this difference increases as time goes by.

Figure 6. Evolution W4L versus BI, single person



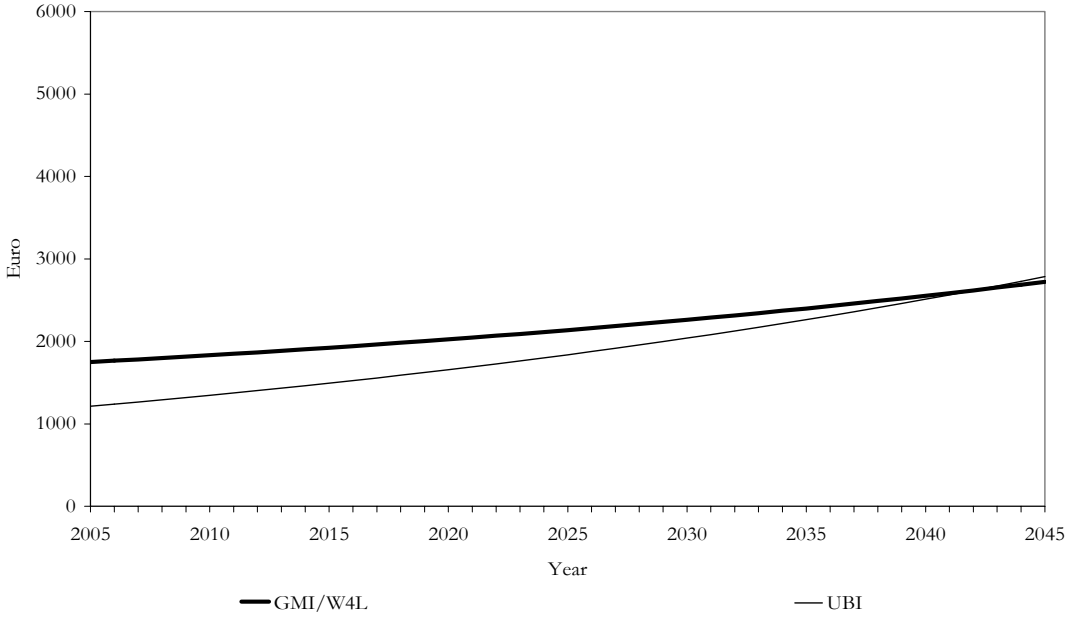
[6] The figures are purely illustrative. However, 2% inflation seems to be a realistic estimate. According to World Bank figures average inflation (calculations based on consumer prices) in Belgium for 1990-2002 was 2.1%.

Figure 7. Evolution W4L versus BI, couple



As will become clear in the next section Figures 6 and 7 are crucial in interpreting the empirical data. However, notice that not only the level of the grant but also the tax regime will be different under GMI/W4L and BI (cf. supra). Recall that the tax rate necessary to finance BI will be higher than the current tax rate. Thus in comparing a BI recipient and a W4L winner one should take into account these different tax regimes. How this influences the difference between the net income situation of W4L winners and BI recipients will depend of course on whether one is comparing GMI/W4L with UBI. As became clear from Figures 1, 3 and 5 it is also dependent on the level of the tax increase and on the gross per capita income. Figure 8 discounts these issues and assumes that under GMI a flat tax of 50% holds, under UBI one of 60%. In that case Figure 8 compares the net income situation over time of a single person with a gross income of 2500 euro. This figure shows that the real difference in income between UBI and GMI/W4L for those employed will be bigger than one would expect on the basis of Figure 6.

Figure 8. Evolution net income GMI/W4L versus UBI, single person



Figures 9 and 10 present the evolution of net income for couples. In Figure 9 the situation is presented of a couple with only one partner working, in Figure 10 both partners work. The comparison between GMI/W4L and UBI is more difficult however. Even though the income under UBI in the figures is almost consistently higher than the income under GMI/W4L, this is strongly dependent on the assumptions made.

Figure 9. Evolution Net Income GMI/W4L versus UBI, couple, one working

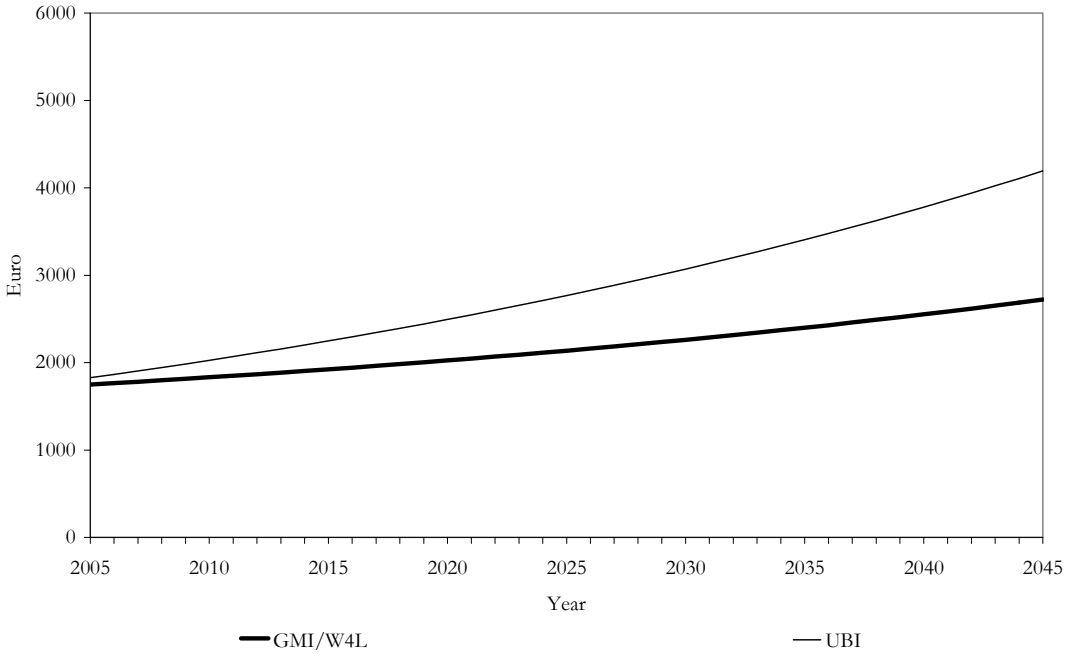
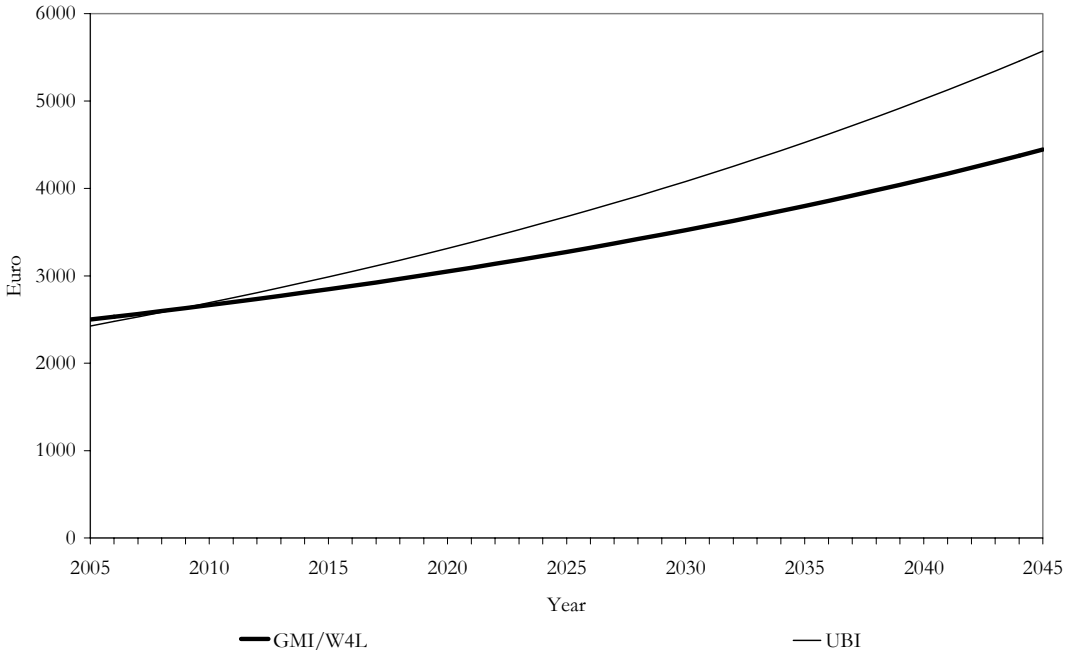


Figure 10. Evolution Net Income GMI/W4L versus UBI, couple, two working



Finally, it is informative to compare Figure 9 with Figure 10. Clearly, since the net income of a couple is significantly higher under all three regimes if both partners work, one should not generalize from those situations to situations where only one partner works. In interpreting the data a clear distinction thus has to be made between both couple situations.

In order to illustrate the theoretical discussion figures and formulate hypotheses how W4L compares to UBI, a hypothetical example is used. In the next section we will look at the case of a single who wins W4L. Afterwards, the couple situation will be discussed (cf. 1.3).

1.2. EXTREME, NOT ABSURD: CARLA WINS W4L

Consider Carla. She works fulltime at a university and earns a gross income of 2.500 euro per month. She pays a 50% tax and hence receives a net income of 1.250 euro a month. Every once in a while Carla buys a lottery ticket on her way home. She is lucky and wins W4L. A 1.000 untaxed euro extra for the rest of her life! She now earns 2.250 euro per month (an 80% increase in income). What will Carla do? With regard to her position on the labor market she has three options: She can decide to start-up her own business, she can stop working or she can decide to work less. The three options are considered one by one.

Suppose Carla has always dreamt of opening her own boutique. She has always been willing to use some of her savings for this purpose but as a shop needs a few years to become profitable

and the first few years are very costly, she has never taken the risk. After winning W4L prospects look very different. Even if the shop is not successful in the beginning and hence cannot make enough profit to live off, she always has her unconditional monthly W4L grant as a security. For Carla, W4L makes her dream come true.

Will Carla have started her boutique under UBI? Maybe she would, but not necessarily. It could be that the level of BI is a sufficient incentive for Carla to start her shop. However it could also be that after she has made all the calculations she decides that the minimum she needs is more than 613 euro a month. What seems to be clear then is that if Carla does not decide to open her boutique under GMI/W4L, she is expected not do so under UBI.

The above example makes clear that W4L is an extreme but not absurd case. It is extreme because the granted amount clearly exceeds a BI (1000 euro as compared to 613 euro). As a result, incentives to change behavior are bigger under GMI/W4L than under UBI. Therefore, if people do not change their behavior under GMI/W4L one can expect that they will not do so under UBI. However, the unconditional income provided by W4L is not absurdly high. Not everyone is willing to substitute a job for the risk of a possible successful boutique. Remember, Carla earned 1.250 euro before winning W4L. Starting-up a shop implies she will loose 250 euro a month during the first few years (and more as time goes by, see Figure 6).

Regarding the stimulation of entrepreneurship W4L research allows us to explore two issues. First of all, if singles do not become self-employed under GMI/W4L, it can be expected that they will not do so under UBI (extreme case). Secondly, if they do start up a business, one cannot conclude that they will do so under UBI because of the difference between GMI/W4L and UBI (see Figure 3 and 5). However, the information that they will start-up a business indicates that these singles are willing to start-up a business given sufficient – not absurd - financial incentives to do so. In order words, it can inform us on the presence of a preference to become self-employed.

Consider Carla's second option: stop working. Suppose in this case that Carla just works at university out of necessity. Her big passion is surfing and she wants to substitute everything to maximize the possibility to surf. Will she continue to work at university after W4L? After all, W4L provides her with enough income to stay alive and keep on surfing (surfing is not such an expensive sport). Again W4L is an extreme, but not absurd case. It is extreme because the W4L grant exceeds BI by a significant amount. If one does not stop working under GMI/W4L it is expected that one will not do so under UBI. However, the case is not absurd, as most of us will consider it impossible to live a comfortable life with just a 1.000 non-indexed euro per month. By

contrast, if singles stop working after winning W4L one is not able to conclude that they will do so under UBI because of the difference between a BI and a W4L-grant. However, it gives us an indication of the preference to stop working.[7]

Finally, suppose that Carla is not such an enterprising person nor the 'lazy' type we supposed she was in the previous paragraphs. Instead, Carla enjoys working at university. But she has always found it very difficult and stressful to combine her fulltime job with her extensive circle of friends and her love for playing the piano. What will she do after winning W4L? If she would work less, she would obviously earn less. Recalculating her income under the assumption of a part time job of four days a week she ends up with the following sum: 2.000 (income 4/5) - 1000 (tax rate of 50%) = 1000 euro + 1.000 (W4L grant) = 2.000 euro per month. With foregoing 12.5 percent of her income she buys a day off per week and still earns 750 euro more than before W4L. Due to the lottery game Carla faces very strong incentives to reduce work.

Suppose Carla reduces her working time. What does this tell us about Carla's behavior under UBI? In contrast to the quit working and starting up a business cases the conclusions to be drawn depend on the differences in tax structure under GMI and UBI. Thus, if the taxes to be paid would be lower under UBI than under GMI, this could mean that the income left under UBI after diminishing working time would be higher than under GMI/W4L and hence people who remain in the workforce after winning W4L might not do so under UBI. However, this does not seem to be a realistic assumption. In fact, it seems to be an uncontroversial statement that granting everyone BI would require an increase in tax rate as compared to GMI. Thus, even more pronounced than in the 'boutique' and 'stop working' examples, we can say that if Carla does not reduce working time under GMI/W4L, it can be expected that she will not do so under UBI. If she does, this might indicate the presence of a preference to do so, given sufficient, not absurd, financial incentives.

To conclude, if single persons with a high annual additional tax-free W4L income do not become self-employed, withdraw from the labor market or reduce working time, the expectation is that they will not do so under UBI. Some of the criticism against the introduction of BI resolves around this specific issue, since some opponents argue that the introduction of BI will provide significant disincentives to work and hence reduce labor supply. Investigating these claims via an extreme but not absurd case is a valid research strategy which could empirically explore this claim.

[7] However, in this case the preference to stop working does not necessarily imply a lifelong preference for not working. W4L can provide a strong incentive to maximize surfing over working for a certain amount of time since it is now financially possible. However, this does not necessarily imply that Carla will surf for the rest of her life. After a few years surfing she may return to the labor market. Hence, there might be different behavioral changes as time proceeds (see 3. Discussion).

1.3. CARLA AND JOHN

Imagine Carla is married to John when she wins W4L. What will they do? Carla and John could decide that Carla (or John) gets all the money and can do whatever he/she wants with it. In this case we are back to the extreme but not absurd Carla case. However, they could also decide to share the money equally between them. In this case, a distinction should be made between the situation where both Carla and John work and the situation where Carla is the sole breadwinner.

Imagine both Carla and John work at university when Carla wins W4L. For the rest of Carla's life an additional income of 1000 euro will be added to the joint income of her and John. What will Carla do? As in the Carla case three options are considered: She can become self-employed, she can quit working or she can reduce working time.[8] Since the discussion of quitting work and becoming self-employed leads to the same result the quit working case is not discussed.

Suppose again that Carla has always dreamt of opening her own boutique. By winning W4L her dream comes true. What can Carla's behavior under GMI/W4L lead us to expect about Carla's behavior under UBI? Consider again the discussion of Figure 9. It was concluded that the way in which one should generalize to a UBI situation was strongly dependent on additional assumptions and hence no clear conclusions can be drawn, except for the detection of preferences.

What if Carla after winning W4L decides to reduce her working time? How does GMI/W4L compare to UBI? The comparison between GMI/W4L and UBI is again harder to make since the lower amount of W4L grant (as compared to the BI) is offset by the fact that the tax rate under UBI can be expected to be higher than under GMI/W4L. Thus, as shown, what can be learned from reducing working behavior under GMI/W4L for UBI is strongly dependent on additional assumptions.

What if Carla is the only person working when she wins W4L? This situation was depicted in Figure 10. As could be seen from comparing Figures 9 and 10 both situations are different and in no circumstance should one generalize from a couple case with one earner to a couple case with two earners. However, the interpretations with regard to how to generalize to UBI situations are mostly comparable with the ones made when both Carla and John were working. The only exceptions concern the comparison between GMI/W4L and UBI regarding becoming self-employed and quitting work. In Figure 7 the situation of a couple that relies only on the W4L

[8] For reasons of space the cases where both Carla and John change their behavior will not be considered since this would seriously increase the number of possibilities.

grant or on BI is depicted. As could be seen in this graph, BI is higher than the W4L grant. Hence the conclusion that if Carla becomes self-employed or quits working under GMI/W4L, one can expect that she will do so under UBI.

1.4. SUMMARY

Table 1 summarizes the conclusions concerning labor supply that can be drawn from W4L-research. If couples start up a business or stop working under GMI/W4L they are expected to do so under a UBI since W4L provides lower financial incentives than a UBI. If they do not start up a business or stop working, no clear expectations can be formulated with regard to UBI (indicated by ?). For singles, the inverse is true. If singles do not start up a business or stop working under GMI/W4L they are not expected to do so under UBI since in this case the financial incentives to do so are more pronounced under GMI/W4L. No expectations can be formulated regarding reducing working time since this is highly dependent on assumptions regarding income from labor, tax rates and future inflation. It should be noted that even for cases where no clear expectations can be formulated W4L-research enables the detection of preferences with regard to specific options.

Table 1. GMI/W4L versus UBI, a summary.

Labor supply changes under GMI/W4L		Labor supply changes under UBI	
		Singles	Couples
Stop Working	Yes	?	Yes
	No	No	?
Become self-employed	Yes	?	Yes
	No	No	?
Reduce working time	Yes	?	f(assumptions)
	No	No	f(assumptions)

2. EMPIRICAL RESULTS

2.1. DESIGN OF THE SURVEY

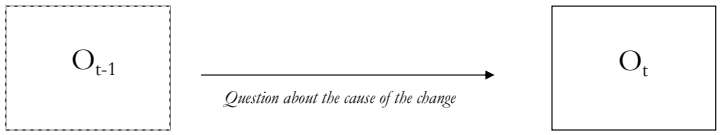
The design of the survey had to discount some limitations. A major limitation for any research project that investigates Belgian lottery winners is that winners have the right to remain anonymous. Winners could therefore not be contacted directly. For all communication the Belgian National Lottery was an intermediary. A mail survey was therefore the only possibility for data collection.

The major weakness of mail surveys is its tendency to generate low responses (Mangione, 1995). In addition, low-response rates are also influenced by the length of the survey. Hence, it was decided to draft a very short mail questionnaire. Apart from background topics such as age, education and lottery behaviour, mostly questions related to labour market position of winner (and spouse) before winning and at the time of the survey were asked. In case of a job change, the respondent was asked for his/her motives. The questionnaire was structured using mostly closed answer categories. At the end a general open question invited respondents to share any information they considered relevant in the context of the research-project.

In March 2004 the questionnaires were sent to all 189 Belgian W4L winners. Of these, initially 55 winners responded. A month later a recall questionnaire was sent, resulting in 29 more responses, totaling 84 respondents. Nineteen surveys returned due to changes in the address of the winners. As a result, 53% of the winners who received the questionnaire participated with the survey.

In sum, a more formal presentation of the proposed research design is put forward in Figure 12. The dependent variable is measured twice, one time before winning (t-1) and again at the time of the survey (t). The observed value of the dependent value is presented by O. O_{t-1} then refers to the observed value before winning, O_t to the observed value at the time of the survey. The square around O_{t-1} is drawn with a dotted line to point to the fact that the observed value was not really 'observed' at t-1 but based on a retrospective question asked at t1. If O_t was different from O_{t-1} it was asked whether the change could (at least partly) be related to winning W4L or not. If the respondent mentioned that the change could indeed be related to winning (one of the categories in the question with regard to reason of labor market change), a causal relation between winning and the change on the dependent variable was assumed.

Figure 11. The design of the pilot project



2.2. DESCRIPTIVE ANALYSIS

The Carla and 'Carla and John' cases showed that W4L research can lead to some clear expectations regarding labor supply effects of unearned exogenous income. For singles GMI/W4L is an extreme case: If they do not stop working, diminish working time or start up a business they are expected not to do so under UBI. If they do change their labor market behavior, one can infer that they will do so given no absurd financial incentives. One cannot conclude however that they will change their labor supply under UBI (see Figure 8). For couples, if one or two of the partners quit working or becomes self-employed under GMI/W4L it can be expected that this will also happen under UBI since W4L provides lower incentives to do so.

Bearing in mind these insights, this paragraph aims to provide a first tentative exploration of the labor supply consequences of UBI. The paragraph is structured as follows. First, an assessment is made of the number of winners, working at the time of winning, who quit working after W4L. Secondly, it is investigated how many winners have become self-employed. Finally, the amounts of people who did not quit but diminished their working time are assessed.[9]

[9] From further analyses respondents who are students or not working and above 55 were excluded from the analyses because they do not (yet) participate in the labor market.

2.2.1. From Working to Not Working

Table 2 presents the working situation at the time of the survey of those working at the time of winning. In the table a distinction is made between singles, couples where both partners work and couples where only one partner works since these categories constitute separate units of analysis (cf. 2.1.). Furthermore, changes that have occurred between winning W4L and the time of the survey and who are not related to winning W4L are distinguished from those changes (at least partly) caused by winning W4L. The latter changes are represented by numbers in between brackets.

Table 2. Employment of singles and couples (working at the time of winning) at the time of the survey

	Working at the time of winning	Working at the time of the survey	
		Yes	No
Singles	14	13	1
Couples, 2 partners working	41	37	4(1)
Couples, 1 partner working	11	11	0

Of the fourteen *singles* working at the time of winning, thirteen were still working at the time of the survey. It can be expected that these thirteen would also remain employed under UBI. One single, a 44 year old mechanic at the time of winning, quit working. There is no information available on the reason for his withdrawal from the labor market.

Forty-one couples were both working at the time of winning. In 37 cases these couples were still both working at the time of winning. In 4 cases one of the two partners quit working. For one partner this is related to winning W4L. This person is a 45 year-old nurse in an old age home who quit working to spend more time with her children. Of the 11 couples where only one partner worked at the time of winning no one quit working. As indicated before, generalizations to UBI are not straightforward since they are strongly dependent on additional assumptions.

2.2.2. From Employee to Self-employed

Table 3 indicates how many respondents, not (at least in part) self-employed at the time of winning, were self-employed at the time of the survey. As becomes clear from this table, no

respondent became self-employed after W4L. A similar effect can be expected to occur under UBI.

Table 3. Employment of singles and couples (not-self-employed) at the time of the survey

	Not self-employed at the time of winning	Self-employed at the time of winning
Singles	13	0
Couples, 2 partners working	36	0
Couples, 1 partner working	10	0

It could be objected that the extra monthly income could be invested in a business of a friend or relative and that therefore introducing BI would result in more changes than predicted on the basis of the above analysis. While this is indeed a probability, no actual evidence of such decisions was found in the sample. This question was specifically posed in the survey and no one (either single or couple) has ever invested in the business of a friend or relative.

2.2.3. Diminishing Working Time

Another possible labor supply change caused by winning W4L consists of reducing working time (apart from quitting work). Table 4 provides information on the number of winners who have reduced the amount of hours worked.

Table 4. Employment of singles and couples (not working at the time of winning) at the time of the survey

	Working at the time of winning	Diminished working time at the time of the survey
Singles	14	0
Couples, 2 partners working	41	4(3)
Couples, 1 partner working	11	1(1)

Table 4 shows that no single person reduces the hours worked after W4L. It can be concluded that these single persons would also not do so under UBI.[10] Regarding the couples, of those where both partners were working at the time of winning, 3 diminished their working time because of W4L, 37 did not. Again generalizations to UBI are dependent on several assumptions.

Consequently, the analysis of diminishing working time shows that most households do not reduce labor supply by working less. However, it should be noted that a proportion of households does have a preference to reduce labor supply by working less given sufficient financial incentives.

To conclude, another important finding should be stressed. At the end of the survey many respondents voluntarily stressed that the major effect of winning W4L was the reduction of uncertainty about the future. W4L provides security for the future and generates a more relaxed way of living, in which people are able to make balanced choices. This is an important finding which seems to resonate with some arguments made in favor of introducing a UBI (Standing, 2002).

3. DISCUSSION

These are tentative conclusion on the basis of a first empirical assessment of possible labor supply effects of introducing a BI. However, there are limitations to any research design that attempts to assess the effects of introducing a completely new policy proposal.[11] Thus, research which only includes a small subset of the total population can never generate representative answers.[12] In addition, there are clearly important differences between the existence of an unconditional income on a small scale (lottery population) or market wide. First, the implementation of BI would be preceded by a legitimization of the intended policy proposal which might affect the legitimacy of specific labor market behavior which now is regarded as illegitimate. Furthermore, labor supply will be affected by changes in labor demand and every interpretation of empirical results will have to take these changes into account (Widerquist, 2005). These labor demand changes cannot be included in natural experiments which use lotteries[13]. Finally, the fact that everyone receives an unconditional income could lead to information diffusion that would not occur if only a small group receives a BI (Greenberg & Shroder, 2004).

[10] Of course this conclusion only holds if no changes occur in labor demand. This is of course debatable because UBI might lead to more part time jobs. In this respect it might be interesting to investigate W4L winners in other countries with different labor market structures (see also 3. Discussion).
[11] True, in Alaska a BI has been introduced, but this is hardly a representative case (see Goldsmith (2004),
[12] For a discussion of the representativeness of the sample, see Marx & Peeters (2004).
[13] Thus whether this will lead to the emergence of previously unavailable but intrinsically rewarding low paid jobs or whether it would encourage the growth of unattractive labor (cf. introduction) remains an open question.

Apart from these constraints, which cannot be overcome by any research, the current research design is subject to five limitations which should be addressed in future research.

A first limitation concerns a bias related to answering behavior in surveys. In the survey W4L winners were asked for their labor market behaviour at the time of winning and at the time of the survey. If a change occurred it was asked whether it could, at least partly, be attributed to winning W4L. In this way, the impact of W4L could be assessed. Given the specific conditions in which survey was conducted (only passed W4L winners are known and only a limited amount of W4L winners exist) this design seemed to be valuable. However, it could also generate a bias in answering behavior. To what extent did W4L really contribute to the observed change (cf. infra 'non-changes')? In the survey respondents were asked whether a labor market change could be attributed to winning W4L. However, sometimes there is a crucial difference between reality and what people think has happened (Smith, 2005). In order to assess whether a change can be attributed to winning, the winner would have to be able to compare the factual situation with the counterfactual situation that would have happened had the winner not won W4L. Since numerous factors, often intertwined in complex ways, influence behavioural changes (such as labor market behaviour) during the life course, making the assessment whether winning W4L was of causal importance is very difficult. This bias might be strengthened by the fact that the winners had to give an assessment of their labor market situation at the time of winning. Even though one's labor situation is an important dimension of one's life and even though research has shown that people are more able to recall past situations if they can be linked to a significant event, such as winning the lottery (Mangione, 1995, p. 35), the fact remains that some people might have difficulties answering questions about their behavior sometimes more than 5 years ago (W4L was introduced in Belgium in 1998).

Secondly, in the present study only *changes* in labor supply were related to winning W4L. However, also non-changes could be the result of winning and might have relevant labor-market consequences. To give an example, suppose someone finds herself in an intrinsically rewarding but low paid job and wins the lottery. Winning W4L makes it possible for this person to stay in her job even though it does not pay well. Suppose she did not win the lottery. In that case it could very well be that the person would have quit her job. Thus, besides focusing on changes in labor-market behaviour, non-changes due to an unearned exogenous income should also be analyzed. This, however, is very difficult to establish with the used research design. It is even more complex for respondents to assess whether non-changes are the result of winning W4L than are changes.

These first two limitations can only be overcome by introducing a control-group in the research design. However, for lottery experiments the constitution of a control group is (logistically) not straightforward.

A third limitation concerns the validity of observations made relatively close to an important event (winning the lottery) and its ramifications over a life course. Respondent's labor market behavior was only measured at one moment in time, between half a year and six years after winning. In this way only a limited understanding of the dynamics of introducing an unearned exogenous income is provided. Research in several different areas has shown that the diffusion of an innovation (such as BI) - and behavioural adaptations to this innovation – is among other things a function of time (Gladwell, 2000). How behavioural effects of introducing BI will play out over time, remains to be seen. There is no reason to assume that introducing BI will have some kind of tornado-effect (short causes – short outcomes, *i.e.* the introduction of a stimulus and immediate behavioural responses) where you can directly observe the behavioural consequences of introducing such a scheme. In fact, introducing BI could be more akin to an ecological adaptation process. In this case, the time horizon to examine outcomes should be long (Pierson, 2004). Hence a longitudinal design might be of crucial importance.[14]

Fourthly, it is important to note that observed changes or non-changes do not take place within a vacuum. The current pilot project investigated the impact of introducing BI by investigating *Belgian* W4L winners. The observed behaviour is therefore not independent from the specific Belgian institutional structure of the labor market and thus introducing BI in other countries might have different consequences. For example, introducing BI in Belgium with its high minimum wage will have different consequences than in the United States where minimum wages are lower. Because introducing BI will not imply a complete deregulation of the labor market, research into the interaction between BI and different institutional settings might generate insights regarding which labor markets or economic development policies best complement BI schemes. Therefore, a major challenge for future research is to expand W4L-research to other countries to allow for institutional variation. Especially interesting in this respect is a comparison of Belgium with the United States, where many similar annuity games exist in different forms for some years.

[14] In the current research project steps in this direction are already taken. All winners who received the short mail questionnaire were asked to cooperate with an extended face-to-face interview. People prepared to cooperate will be contacted for a more elaborated structured interview on the effect of winning W4L. This interview aims to document a more detailed picture of changes in life patterns and to bind the respondents to the research team in order to set up a longitudinal design.

Finally, the current research-project is limited in that only an insight is generated into the effects of a *monthly* income. A BI design could, however, vary according to frequency of payments.[15] This choice is potentially not without implications. It might be argued that people will behave differently under different frequencies of payments due to different mental accounting processes which refer to the fact that people develop different preferences when a similar amount of money is offered under different conditions (Langer & Weber, 2001). Making use of natural experiments such as lotteries can be used to analyze the way in which labor supply changes are related to the frequency of payment of an unconditional income. Particularly interesting in this regard is the effect of another proposal for reform, the Stakeholder Grant. The idea of a stakeholder grant is to give 'each (American) [as he/she] reaches maturity, [a] guaranteed … stake of eighty thousand dollars. [This would] point the way to a society that is more democratic, more productive, and more free (Ackerman & Alstott, 1999, p. 3).' Since almost every country has lottery games which grant a one-time sum of approximately 80.000 euro or dollar, the research population is huge and the potential for research high. The labor supply effects of a one time lump sum could in a next step be compared to that of monthly payments. This comparison could contribute to recent debates on the possible different advantages and disadvantages of BI versus stakeholder grant (Ackerman, Alstott, van Parijs & Wright, forthcoming).

4. CONCLUSION

In *Seeing like a State: How Certain Schemes to Improve the Human Condition Have Failed,* James Scott (1998) warned against implementing big ideas without thoughtful empirical consideration or experimentation. Local diversity and unintended consequences, among other things, made theoretical ideas for societal improvement go astray. Although the cases analyzed by Scott were mostly technical engineering cases – building cities, increasing agricultural productivity, etc. – his message can be extended to other big ideas. One such idea that has received increasing attention is that of a Basic Income (BI).

Even though the advantages and drawbacks of the introduction of BI have led to an impressive literature on the subject, empirical research on the consequences of introducing BI is however lacking, sometimes leading to extreme statements. Thus, opponents often point out that introducing BI will lead to a decrease in labor supply and consequently an economic crisis. Proponents often reply by stating that BI will on the contrary lead to 'full' employment by a better distribution of jobs or by its positive consequences on the stimulation of ownership.

[15] Proposals regarding frequency of payment often coincide with different national traditions in organizing social security benefit payments. For instance, most proponents of BI in the UK propose a weekly payment, while in Belgium a monthly payment is mostly proposed (Van Trier, 1995).

In order to find a way out of this impasse, this article investigated in what way studying lottery winners can provide meaningful information on the labor supply effects of introducing BI. The results point to no extreme consequences of introducing a BI akin to W4L, with very few changes regarding quitting work, diminishing working time or becoming self-employed.

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