



KATHOLIEKE
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WIN FOR LIFE

What, if anything, happens after the introduction of a Basic Income? ¹

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INTRODUCTION

In an interesting book “*Seeing Like a State. How Certain Schemes to improve the Human Condition have failed*”, James Scott (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 analysed 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 a Universal Basic Income (hereafter Basic Income). “A Basic Income [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)”. A Basic Income is defended on various grounds. “Liberty and equality, efficiency and community, common ownership of the earth and equal sharing in the benefits of technical progress, the flexibility of the labour market and dignity of the poor, the fight against unemployment and inhumane working conditions, against the desertification of the countryside and interregional inequalities, the viability of co-operatives and the promotion of adult education, autonomy from bosses, husbands and bureaucrats – all have been invoked in favour of a (...) Basic Income (Van Parijs, 1992, p. 3)”.² Thus, like most Big Ideas, a Basic Income might change society profoundly. Indeed, as Brian Barry (in Groot, forthcoming), stipulates “A subsistence-level basic income would face people with an entirely different set of opportunities and incentives from those facing them now”.

Whether and to what extent this different set of opportunities and incentives will result in significant behavioural changes, is an empirical question. Indeed, hypothetically, the introduction of a Basic Income could result in many different micro behavioural changes with distinct macro implications. This has been argued by both 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. In this paper we concentrate on changes in labour market behaviour. For example, the introduction of Basic Income might provide an incentive to reduce the amount of time spent on the labour market or even withdraw from the labour 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 labour market it may create massive shortages on the labour market which can result in economic decline.

² For a comprehensive overview of what a basic income is, why we need it and whether it is affordable or not, see (Van Parijs, 2004).

Given these unresolved questions, empirical research into the behavioural consequences of introducing a is of obvious importance. It should be noted however that these empirical questions do not affect all arguments for a Basic Income in an equal way. As indicated by Brian Barry (1996) it is useful to distinguish between pragmatic and principled arguments about a Basic Income. “Pragmatists are those who assume that social policy should serve certain ends. (...) [They] suggest that the introduction of basic income would be the most effective way of reforming existing welfare states. (...) In contrast (...) the principled argument seeks to show that the case for basic income can be derived directly from the concept of social justice (Barry, 1996, p. 243)”. Evidently, empirical arguments are more important to pragmatics than they are to defenders of principled arguments.³

Since empirical arguments are important in the Basic Income debate the question remains on how to proceed with research into this counterfactual phenomenon. True, in Alaska a Basic Income has been introduced, but this is hardly a representative case. For one, the amount of the dividend is too low in comparison to most proposals for a Basic Income. For another, as anyone who visited Alaska will know, the external validity of research in Alaska to any, for example, urban setting is very difficult. Alaska is geographically, but also socially, quite a unique place.⁴

In the absence of the actual introduction of a Basic Income, second-best solutions for empirical research must be considered. A key-challenge for such research is to design a research project which enables researchers to make valid inferences. An “inference is the process of understanding an unobserved phenomenon on the basis of a set of observations (King, Keohane & Verba, 1994, p. 55)”. In other words, to what extent do research results enable us to draw valid conclusions about what might happen when a Basic Income is introduced?

³ Of course, the dividing line between pragmatic and principled arguments is not always that clear cut. As Van Parijs (1992, p. 29) argues “The importance of such arguments [that derive basic income from an explicit formulation of the ideal of a free, equal or good society] does not make more limited efficiency arguments irrelevant, (...) because many of these fit, as partial components, into arguments of the more ambitious sort (...)” Furthermore, utilitarian inspired defenses of a Basic Income (for instance most green arguments for a basic income) can be wedded to a certain conception of justice but entirely depend on pragmatic arguments.

⁴ Another possible interesting actual implementation of a Basic Income might result from the recent June 2003 reforms of the Common Agricultural Policy (CAP) of the EU which includes a shift from production-based subsidies to direct payments to farmers which will provide them with a guaranteed minimum level of income that is not linked to production. The basic idea is to replace most of the direct subsidy payments for farmers by a single farm payment. The European Commission states that “A major aim of the single payment is to allow farmers to become more market-oriented and to release their entrepreneurial potential. Management decisions that in the past have been influenced by what the CAP offered in subsidies can now be taken on the basis of market requirements. Where a particular production activity is profitable farmers will continue to follow it. The reformed CAP is designed so that farmers take advantage of such opportunities (European Commission, 2004)”. The member states will have to decide on the specific implementation of the reform. It is however important to note that the amount of the payment will be calculated on the basis of the direct subsidies farmers received in a reference period (2000 to 2002). In addition, the payment is not unconditional but conditional on the fact that beneficiaries of direct payments will be obliged to keep their land in good agricultural and environmental condition. Even though a single farm payment is not equal to a Basic Income, it might still constitute an interesting case.

There are limitations for any research project which cannot be overcome due to the nature of the proposal. For example, the introduction of a Basic Income and a related partial deregulation of the labour market, will clearly influence the demand side of a labour market which can result in different wages, the emergence of new types of previously undervalued jobs, etc. Since this will affect the entire labour market one cannot empirically assess the impact on the demand side before the effective introduction of a Basic Income.⁵

However, questions related to human behaviour are open for empirical investigation. Preferences in relation to willingness to work are assumed not to be that different before and after the introduction of a Basic Income.⁶ The Basic Income might influence the capability to implement preferences (for example maximising free time) but not necessarily the preferences as such. In other words, the claim that people would retreat from the labour market once a Basic Income is introduced is open for empirical investigation.

Since many factors influence labour market behaviour the challenge for research is to design a project which takes into account the complexity of this behaviour. To this end two possible research designs can be thought of which both rely on the logic of an experiment.⁷ As Groot (forthcoming) has argued “There

⁵ For a discussion on the hypothesized effects of a Basic Income on the demand side of the labour market, see (Widerquist, forthcoming).

⁶ It could be argued that it is sheer impossible to conduct research since the political and normative context in which a Basic Income will be implemented will be significantly different to any existing situation. This change in context might legitimise behaviour which is now regarded as politically and socially ‘unacceptable’ such as voluntary unemployment. The introduction of a Basic Income founded on clear normative principles for societal ordering and development supported by a clear political majority will imply a transformation of the concept of work and contribution to society which cannot be compared to any existing situation. As a consequence, empirical research is bound to be impossible. This argument, however, could result in a Catch-22 with regard to the effective implementation of a Basic Income since empirical arguments are clearly important in the political discussion of a Basic Income. 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). For example, Pels and van der Veen (1995) report in the case of the Netherlands, that many arguments of the opponents of a Basic Income concern the negative effects of a Basic Income on human behaviour. These are empirical arguments about how an unconditional income will influence human behaviour. The Catch-22 then consists out 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 political case. An insight – via empirical research - in what happens when people receive an unconditional income might break the Catch-22.

⁷ No doubt, other research-designs may exist. First of all, one could re-analyse existing socio-economic databases. In this case, one could argue that since introducing a Basic Income has mainly to do with income-effects, one can rely on existing survey material and official statistics to analyse the effect of increases in income on several parameters such as labour supply, entrepreneurship, etc. However, this approach is limited since existing datasets hardly ever contain information about significant exogenous non-earned incomes (Imbens et al., 2001, p. 779). Furthermore, existing databases do not contain any information about periodically paid exogenous non-earned income similar to a Basic Income. This makes it almost impossible to make any inferences from such databases to a Basic Income situation. Secondly, one could survey people and ask them what their attitude is towards a Basic Income and what they *might* do under Basic Income conditions (for instance, see (Késenne & Van Durne, 1989)). However, the results of such a research-strategy are hard to interpret since there is an important difference between attitudes (what people say) and behavior (what people do). Although one could argue that attitudes influence behavior (opinion and attitude research in sociology), the relationship can also be reversed (see for example cognitive dissonance theory in

are numerous factors at work which influence labour supply decisions. One cannot hope to include all these factors simultaneously within the confines of an economic model. Economic models can, at best, isolate the effects of a few of these factors. An experiment may enable us to solve part of the puzzle, because the limitations of an experiment are of a different nature than those of economic models, whether theoretical or empirical. The main difference is that models rely on assumptions, whereas an experiment allows one to directly observe changes in labour market behaviour.” The beauty of an experiment is that it allows researchers to put people in different possible worlds.

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 – one would be able to monitor what will happen 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 (forthcoming).

However, an experiment has some limitations with regard to making valid inferences which, at least on theoretical grounds, might be challenged and need further assessment. The most important limitations for Basic Income research, mainly resulting from financial barriers, relate to the difficulty of including variation in Basic Income design in order to analyse variation in behavioural outcomes, running the experiment over a sufficient amount of time and expanding the experimental (and control) groups in order to take institutional effects into account.

Hence, in order to make valid inferences an experiment should be complemented with other types of research. It is only by complementing experimental research with other empirical research that insight into the consequences of introducing a Basic Income might be gained. This can be achieved by making use of natural experiments, such as cases where people receive windfall gains.⁸ 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. Indeed, lotteries organise interesting games for Basic Income researchers. Some games – such as Win for Life, Lifetime Spectacular, Lifetime Riches, Weekly Bonus, Fun for Life, Lucky for Life, etc. - grant a periodically unconditional lifelong income to winners (cf. annuity games). In this way, they constitute a natural Basic Income experiment and can generate significant insights into the possible consequences of introducing a Basic Income. The strength of this type of natural experiment is

psychology). At this point there is no consensus in the social sciences on how to draw inferences from the measurement of attitude to behaviour. The problems for interpretation are worsened by the fact that one investigates a counterfactual phenomenon.

⁸ For more references on this type of research see (Imbens et al., 2001).

that it can include variation in Basic Income design, is possibly unlimited in time and can take into account different institutional settings. A major drawback is that the attribution of people to the experimental and control group is not ad random and selection bias might hamper generalization.

The aim of this paper is twofold. First of all, the paper discusses why, how, and to what extent, natural experiments such as lotteries can contribute to research which empirically explores possible social consequences of the introduction of a Basic Income. The second aim is to focus on the question of what, if anything, happens after the introduction of a Basic Income.

The paper is structured in three parts. The first part of the paper addresses the question of why natural experiments constitute an interesting research-strategy. Via a comparison with a genuine experiment a theoretical case is made to conduct lottery research, which has some distinctive strengths vis-à-vis an experiment.

The second part of the paper discusses an ongoing pilot-project which investigates the consequences of winning the Belgian lottery game Win for Life, which grants every winner an unconditional lifelong monthly allowance of 1.000 euro. It is assessed to what extent this game represents a good proxy for a Basic Income and what conclusions can be drawn from it.

In a third part, a proposal for the extension of lottery research is suggested. A genuine research-program based on this natural experiment should cover multiple countries and different types of Basic Income design. Such a research-program will allow for comparison across institutional settings and can contribute to the debate on the behavioural consequences of a Basic Income versus stakeholder grants. The ultimate aim of the research-project is to build a large panel dataset (including several experimental and control groups) which allows for this type of comparison.

1. WHY NATURAL EXPERIMENTS? STRENGTHENING THE CASE FOR LOTTERY RESEARCH

An investigation into the behavioural consequences of a Basic Income could be done via an experiment. Groot recently elaborated a proposal for a Basic Income experiment. This experiment “*would involve (4) a limited group of people in (3) a limited area who would, during (2) a limited time, receive (1) a basic income*”. However, several limitations affect the possibility to make valid inferences based on such an experiment. It is furthermore argued that lottery research has some distinctive strengths to address these limitations. This first part elaborates on these limitations and assesses in what way lottery research can complement a Basic Income experiment.⁹

The most important limitations of an experiment, and hence, challenges for another research-design relate to the following aspects:

- (1) *A Basic Income*: The experiment does not take into account differences in Basic Income design. However, different types of Basic Income design might result in different behavioural consequences. This implies that a challenge for additional research is to analyse different consequences of different designs.
- (2) *A limited time*: The experiment attaches limited importance to time. However, behavioural changes might spread out unevenly over time which might result in biased results when an experiment is conducted over a limited period of time. The challenge then becomes to design a genuine longitudinal research-project.
- (3) *A limited area*: The experiment is confined to a limited area (one country) and therefore neglects the importance of institutions. It might be argued that different institutional contexts might generate different outcomes. A third challenge then becomes to design a multi-institutional (multi-country) design.
- (4) *A limited group of people*: The experiment only considers the consequences of introducing a Basic Income for social assistance recipients, workers who would earn the same amount of money before and after the introduction of a Basic Income, and prospective entrepreneurs. Because these groups only form a subset of existing socio-economic groups a challenge for additional research is to analyse the effect of introducing a Basic Income for a more representative sample of the population.

⁹ It should be noted that the discussed limitations are not necessarily important, but that one should not assume they are unimportant.

Each of these topics will be elaborated upon.

1.1. A BASIC INCOME

A first limitation concerns the fact that an experiment typically would test the effect of only one Basic Income design. However, one could easily hypothesise that a divergent Basic Income design will differently influence labour market behaviour.¹⁰ In other words, variation in Basic Income design can generate variation in outcomes.

Two issues are important: the level of the awarded income and the frequency of payment. First of all, different amounts of Basic Income will have different behavioural consequences, including effects on labour supply. A high Basic Income will provide more incentives to reduce working time than a low Basic Income. Since no previous empirical research has been conducted on the consequences of granting varying unconditional benefits at equal time intervals, the different incentives this would bring along remains a highly theoretical undertaking. Existing research on winners of regular (non-annuity) lottery games, however, points to the inverse relationship between the amount won and the probability of changing working behaviour. Thus Kaplan (1985) found that there was a significant association between the amount a person won and his or her working behaviour. As the size of the winning increased, so too did the number of changes in working behaviour. “Nearly twice as many winners and spouses in the under- \$10.000 category kept working as winners of \$30.000 (Kaplan, 1985, p. 90).” In addition, Imbens, Rubin and Sacerdote (2001) found that unearned income, resulting from winning the lottery, reduces labour supply with larger effects for individuals between 55 and 65. Similarly, research into the labour market effects of inheritances suggests the existence of an inverse relationship between large inheritances and a person’s labour force participation (Holtz-Eakin, Joulfaian & Rosen, 1993).

¹⁰ There is possibly an additional issue at stake in this context. In an experiment one does not grant a Basic Income but an experimental grant. The extent to which an experimental grant equals a Basic Income in behavioural consequences is a question of ‘fungibility’. Fungibility is the premise according to which all instances of a given commodity that meet certain standards are considered interchangeable. Since money is assumed to be the ultimate objectifier (Zelizer, 1989), it is assumed that amounts of money are interchangeable. However, several streams of research have questioned this assumption and argue that depending on the source of money people behave differently (Thaler, 1992). Therefore, one needs to address the question to what extent an income received by participating in an experiment is a good proxy for a Basic Income. 500 euro granted as an experimental grant might not be interchangeable – in terms of behavioural consequences – with a 500 euro granted as a Basic Income. This effect might be reinforced by the fact that only a very small proportion of people receive an experimental income. This will set the group apart from the rest of society, which could possibly result in attaching a very special meaning to the received money. It is hard to assess the importance of this fact, but the possible bias should be taken into account in interpreting research results. A comparison between results of lottery research and experimental research might be very instructive in this context. A careful comparison of cases from the experimental group and the lottery group might generate insight into the behavioural effects of experimental and lottery grants.

In addition, a Basic Income design can vary according to frequency of payments. A Basic Income can be paid weekly, monthly, yearly or as a lump sum (in case it is most often called a ‘stakeholder grant’).¹¹ This choice is possibly 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; Zelizer, 1989). These different conditions might include different time frames. As a result, the design of a basic income in terms of frequency might not be neutral. Indeed a trade-off seems to be at stake. As Van Parijs (1995, p. 48) points out “The shorter the period, the better the real freedom (...) of later stages is protected against irresponsible conduct at earlier stages, but the more restrictions on the time scale of the commitments one is empowered to make”.

Lottery research can address design limitations because several interesting variants of games exist both in terms of frequency as well as in terms of amount of money. Some games award a one time lump sum payment while others offer a lifelong grant on periodical time intervals. Within these ‘lifetime games’ different variations exist. Some games – such as Lucky for Life - guarantee a weekly grant. Other games – such as Win for Life – pay a lifelong monthly income. Still other games – for instance Fun for Life - pay a yearly income. Besides these differences regarding frequency of payment, different modalities of most games exist in terms of level of payment. This makes it possible to compare different levels of payments. All this makes lottery research especially interesting to compare the consequences of a Basic Income with a stakeholder grant.¹²

1.2. A LIMITED TIME

A second limitation for valid inferences of an experimental design concerns the importance of time. Two issues are of importance in this context. First of all, the time frame in which people will change their behaviour is unknown. However, there is no theoretical reason to assume that behavioural changes will reflect any ‘general linear reality’ (cf. Abbott, 2001). Secondly, a limited time period might bias the answers on behavioural changes resulting from the experiment.

¹¹ Proposals regarding frequency of payment often coincide with different national traditions in organising social security benefit payments. Most proponents of a Basic Income in the UK propose a weekly payment, while in Belgium a monthly payment is proposed (Van Trier, 1995).

¹² It should be noted that experimental research as such can easily incorporate variation in Basic Income design. Different levels of grants could be given to different experimental groups. The same holds for granting the same amount at different frequencies. These different experimental groups could subsequently be compared with one control group. However, even though theoretically an experimental research design could take various differences in Basic Income design into account, this would in practise become very costly.

1.2.1. General Linear Reality

Introducing a Basic Income might be labelled an innovation. Research in several different areas has shown that the diffusion of an innovation - and behavioural adaptations to this innovation – is among other things a function of time. As a consequence, behavioural effects of introducing a Basic Income will be time-dependent. There is no reason to assume that introducing a Basic Income will have some kind of tornado-effect (short causes – short outcomes) where you can directly observe the behavioural consequences of introducing such a scheme. Introducing a Basic Income can be more akin to an ecological adaptation process where you have a short time-horizon on the side of the cause but a very long time horizon on the side of the outcomes (Pierson, 2003). More in general, the development of time-dependent modes of (statistical) analysis such as event-history analysis clearly emphasize the importance of time on behavioural adaptations (Tuma & Hannan, 1984, pp. 187-264). Therefore, time poses severe challenges for empirical research into the behavioural effects of introducing a Basic Income. It would necessitate a long period of observation which would dramatically increase the cost of an experiment. By contrast, lottery research, when designed longitudinally, could eventually generate insights into time-effects.¹³

1.2.2. Bias in Behaviour

A second issue concerns the possibilities of biased results due to a limit in the time-frame in which the experiment is conducted. 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 lose it. In other words, experiments might over- or underestimate behavioural consequences due to time constraints (Widerquist, forthcoming). As noted before, lottery research has an advantage in this respect because some annuity grants are unlimited in time

¹³ Closely related to the issue of time is the issue of social influence which determines behavioral change. Time and social influence will interact to 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 labour market behaviour 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 behavioural effects are not only a result of rational decisions, but also of social contagion which is time-dependent. This contagion mechanism might take a very long time to become effective. The latter can hardly be empirically assessed since it requires a high number which create a sufficiently dense network in which contagion can occur.

and in this way do not provide specific time-related incentives or disincentives to change labour-market behaviour.

1.3. A LIMITED AREA

Some Basic Income proponents argue for the introduction of a Basic Income in multiple countries at the same time. Hence, research into behavioural effects should take into account the differences between countries that might result in different behavioural changes. The social science literature on structural and cultural differences between countries is significant and points to the fact that differences between nations are pronounced.¹⁴ It is therefore difficult to generalize from one country to another.

In other words, the introduction of a Basic Income will not occur in a vacuum. It is hypothesised that the willingness and possibilities to change labour-market behaviour is a function of the societal context.¹⁵ First of all, institutions matter for preference formation and willingness to change preferences. Cultural institutions such as norms and expectations regarding work ethic might influence a change of working time for leisure time or care time in a given society.

Secondly, institutions matter in relation to the possibilities they provide for implementing preferences. Several authors link the institutional structure of labour markets (structure of decision making, institutions for collective bargaining, laws, etc.) to outcomes on the labour market such as participation on the labour market, unemployment rates, spread of labour market activity over a lifetime, etc. (Madsen, Madsen & Langhoff-Roos, 2003; Hall & Soskice, 2001; Wallerstein, 1999). Clearly, countries differ regarding institutional structure of labour markets. This may interact with the introduction of a Basic Income. For example, in a country in which part-time work is easy to obtain or is institutionalised, it is easier to change labour market behaviour in comparison to countries where labour markets are more rigid. These interactions could be very considerable since, in our understanding, Basic Income proponents do not propose a complete abolishment of the institutional fabric of the labour market. Although proposals for a Basic Income imply a deregulation of the labour market, they do not suggest a complete abolishment of the institutional fabric of the labour market. Many institutions will continue to play an important part.

One should therefore not assume that the behavioural effects of the introduction of a Basic Income in different institutional settings will be the same in every country. Moreover, research into the interaction

¹⁴ The importance of cultural differences is highlighted among others by (Inglehart, 1990; Inglehart, 1998). Structural differences are emphasized by authors such as (Esping-Andersen, 1990; Hall & Soskice, 2001; Kitschelt, Lange, Marks & Stephens, 1999; Madsen et al., 2003).

¹⁵ Context is defined as different institutional characteristics of the country in which a scheme is implemented. Institutions include laws, rules, norms, values co-ordinating organisations, etc. which provide incentives and disincentives to change behaviour (Ostrom, 1990).

between a Basic Income and different institutional settings might generate insights in which labour markets or economic development policies best complement Basic Income schemes.

As a result, research should take institutional variation into account when designing a research-project. Experiments which are confined to one country cannot consider institutional and cultural effects. Experiments can be conducted in several countries. However, this will dramatically increase the cost of conducting such experiments. Lottery research, on the other hand, can take into account institutional and cultural variation since similar games are played in different countries.

1.4. A LIMITED GROUP OF PEOPLE

Different socio-economic groups will react differently to the introduction of a Basic Income. Therefore, it is important to empirically address this issue. The proposed experiment is limited in this regard. Due to financial constraints one has to focus mainly on those groups whose income before and after the introduction of a Basic Income would be quite similar. These groups are, first, the social assistance recipients because they already receive a substantial income without performing work. Second, also those workers can be included in the experiment whose incomes are around the break-even level. At the break-even point the net income one receives under the current conditional income scheme and the Basic Income scheme is exactly the same because the unconditionally granted income is entirely offset by the higher level of taxes that have to be paid to finance the Basic Income (cf. *infra*). The income of a third group, the prospective entrepreneurs, is different before and after the introduction of a Basic Income, but this group would be included because of their theoretical importance (Groot, *forthcoming*).

Because the three mentioned groups only form a small and biased sample of the general population it is interesting to supplement an experiment with lottery research whose sample includes many different kind of socio-economic groups.

An additional problem with regard to experiments concerns the Hawthorne-effect, this is the fact that people – possibly under media influence - will adopt their behaviour in favour 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. Regarding this Hawthorne-effect lottery research is preferable to experimental research. Even though in lottery research a similar Hawthorne-effect might occur, it should be noted that in case of lotteries the money is independently provided by state lotteries and not by the experimenters. This puts the research-population in a more independent (non-reciprocity) relationship to researchers which will generate less pro-active behaviour by the experimental group. Lottery winners have fewer incentives to be grateful to the researchers and behave in a socially desirable way.

2. WHAT, IF ANYTHING, HAPPENS AFTER THE INTRODUCTION OF A FULL BASIC INCOME?

The theoretical case in favour of lottery research led to the start up of a pilot project with lottery winners of Win for Life (hereafter W4L). Winners of W4L receive an unconditional monthly grant of 1.000 euro for the rest of their lives.

The pilot project has three aims. First of all, the project wants to explore the *practical* possibilities and constraints of lottery research. Secondly, the project aims to gather information on the impact of winning W4L on the life of the winners. In other words, the project wants to start with an exploration of a possible answer to the question of ‘What, if anything, will happen after the introduction of a Basic Income?’ Finally, the pilot project aims to create a starting point for future research which will be able to discount some of the challenges discussed above. More specifically, as emphasised in the first part, time plays a crucial role in behavioural changes. The third aim of the project therefore is to build a panel which can be followed through time and will allow for longitudinal research into behavioural consequences of winning W4L.

Even though the similarity between W4L and a Basic Income is striking - both are granted unconditionally, as a monthly instalment until death – the comparability is not straightforward. Therefore, before the pilot-project is presented a further defence of W4L as a valid case for Basic Income researchers is made.

2.1. WHAT CAN WE LEARN FROM W4L-RESEARCH?

The proposal for a Basic Income is not to give everyone a winning lottery ticket. Hence, the question to what extent W4L is a valid case for investigating a possible Basic Income situation needs to be addressed. In order to compare a Basic Income and a W4L situation special attention has to be paid to the difference in tax regime between both situations and the fact that a W4L grant is not adjusted to inflation while a Basic Income is. Furthermore, a distinction has to be made between singles and couples.

2.1.1. Tax regimes and inflation

A first difference between a Basic Income and a W4L situation concerns a difference in tax-regime which will influence the net incomes of singles and couples under a Basic Income and W4L situation. Figures 1, 2 and 3 present the relation between the gross and net income situation of both Basic Income recipients

and W4L winners.¹⁶ Figure 1 represents a full Basic Income regime financed with a flat tax (hereafter UBI). Figure 2 represents the case of a *single* W4L winner under the conventional guaranteed minimum income scheme (hereafter GMI/W4L). Figure 3 represents the conventional guaranteed minimum income scheme for one of the two partners in a *couple* which equally divide the winning W4L grant between each other (hereafter GMI/W4L). On the X-axes gross income is presented, on the Y-axes net income. The 45° dotted line represents a situation where no taxes are paid. In this case gross and net income are the same. Note that in Figure 1 two dotted lines are presented. The left line represents the situation where every one receives a Basic Income but no taxes are paid. G represents the subsistence minimum for a single person. The Basic Income is set at the level of this subsistence minimum, irrespective of the household situation, as in most proposals for a full Basic Income. G is set at 580 euro since this is the level of Belgian social assistance for a single (situation 1/1/2004).¹⁷ The line indicated by W4L depicts the W4L grant of 1000 euro.

The difference between the income line (before W4L) and the dotted line points to the amount of taxes that have to be paid. Comparing Figure 1 to Figures 2 and 3, it becomes clear that the amount of taxes that have to be paid under UBI is higher than those paid under GMI/W4L (compare °UBI with °W4L). This seems to be a valid assumption mainly because more people (for instance students and housewives) will receive an income under UBI while they do not have an income under GMI.¹⁸ Combine this higher tax rate with the fact that a W4L grant is not taxed¹⁹, and a first clear difference between UBI and GMI/W4L becomes clear. The consequence is that the net income of a single person winning W4L is clearly higher than the net income this person would have under UBI (compare Figures 1 and 2). The same partially holds for couples, but the difference is less pronounced. For those earning nothing, the situation under W4L and UBI will be the same because $W4L < G$ and hence the net income will be raised to the level of G (under the assumptions made in note 17). However, from a certain gross income level onwards, the net income under GMI/W4L will be higher than under UBI (compare Figures 1 and 3).

¹⁶ Figure 1 is a modified copy of the Basic Income regime as presented by (Van Parijs, 2004, p. 32). Figures 2 and 3 are based on (Van Parijs, 2004, p. 29) but adjusted to the W4L situation. Note that the figures make strong simplifying assumptions. Most important, it is assumed that there is only one flat tax rate, in contrast to the existing progressive tax rate. Furthermore, Figures 2 and 3 assume that social assistance is the only existing transfer income. Finally, Figure 3 presupposes that the situation of one partner in a two person household is the same regarding taxes and transfers (the level of G) as the situation of a single (apart from W4L). Some of these assumptions are discussed in (Van Parijs, 1996). Of course, different Basic Income regimes are possible but the 'Basic Income combined with flat tax' seems to be the most common proposed. For a discussion of different Basic Income designs and possible differences in tax regime see (Van Parijs, 2004).

¹⁷ This amount is comparable with the proposal of the Belgian political party VIVANT which proposes a Basic Income of 540 euro a month for every adult between 18 and 65 (VIVANT, 2004). For a discussion of VIVANT see (Vandenborgh, 2000).

¹⁸ Another reason could be the following: because the effective marginal tax rate of those earning less than G is obviously much higher (100 percent!) under GMI than under UBI, the loss of this tax revenue has to be compensated for. See (Van Parijs, 2004, p. 29) for a further clarification.

¹⁹ Belgian lottery winners do not have to pay any taxes on the amount won in the lottery. For a discussion, see (Vernat, 2003).

Figure 1. UBI

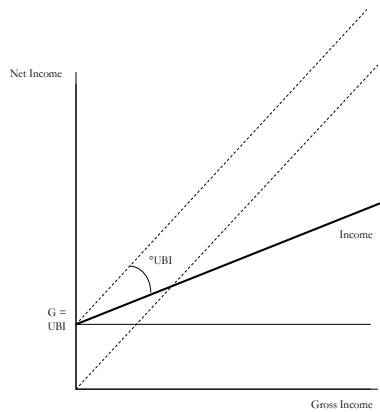


Figure 2. GMI/W4L (single situation)²⁰

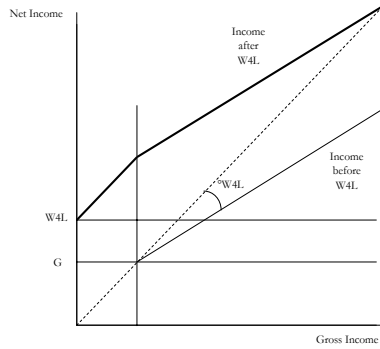
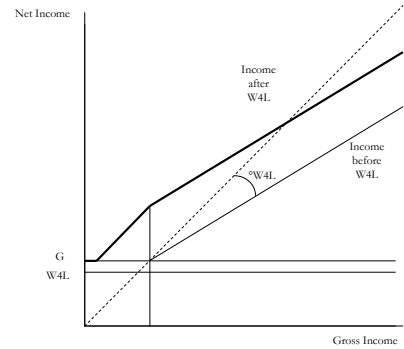


Figure 3. GMI/W4L (one partner in a couple situation)



A second difference concerns the fact that W4L is not price related, while a Basic Income, under every serious proposal, would have to be adjusted for inflation. Assuming a yearly inflation of 2%²¹ (as in Figures 4 and 5) this would mean that while someone who has won W4L in 2000 will still receive 1000 euro in 2030, the real value of the grant will have been diminished to 545 euro. The real value of a Basic Income will at that time still be 580 euro. As becomes clear from Figure 4 for singles this mean that the W4L grant will for a very large part of their lives be higher than the Basic Income but at some point the two grants will have the same value (in this example this will be in 2028), and after that point the Basic Income grant will be higher than the W4L grant. For one partner in a couple situation this means that the difference between a W4L grant and the Basic Income (with UBI > W4L, see Figure 5) will become larger as time passes.

Figure 4. Evolution W4L versus Basic Income grant (single situation)

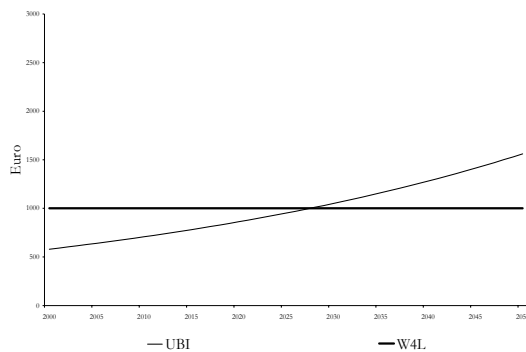
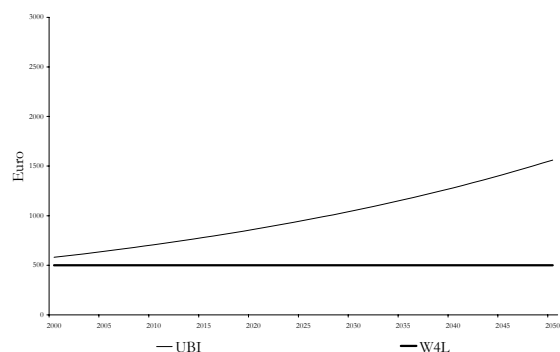


Figure 5. Evolution W4L versus Basic Income grant (one partner in a couple situation)



²⁰ It is assumed that no income tax has to be paid until someone earns a gross income of G. Hence, the angle representing the tax rate of W4L winners with a gross income from work below G equals 45%.

²¹ 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%.

As will become clear in the next section Figures 4 and 5 are important. However, notice that not only the level of the grant but also the tax regime will be different under GMI/W4L and UBI (cf. supra). Recall that the tax rate necessary to finance a full Basic Income will be higher than the current tax rate. Thus in comparing a Basic Income 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 versus Basic Income recipients will depend on the level of the tax increase and the gross income one earns (see Figures 1 to 3). Assume however that the tax rate under the existing regime is 50 percent and that this has to be raised to 60 percent to finance the Basic Income. In that case Figure 6 compares the net income situation of someone with a gross income of 2500 euro over time. From this figure it becomes clear that the real difference between UBI and GMI/W4L will be bigger than one would expect on the basis of figure 4. The same holds for couples (compare Figures 5 and 7).

Figure 6. Evolution net income under UBI versus GMI/W4L (single situation)

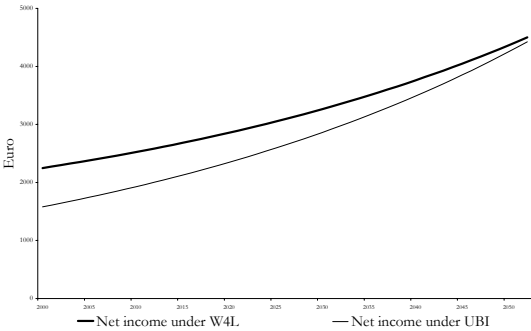
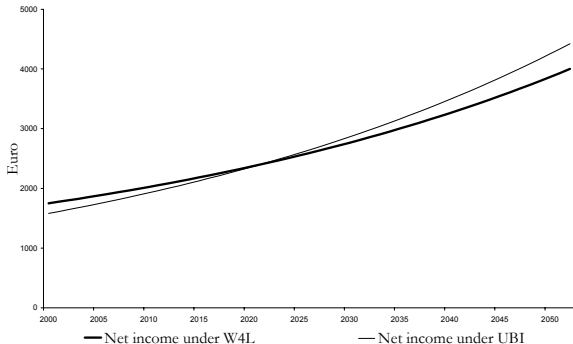


Figure 7. Evolution net income under UBI versus GMI/W4L (one partner in a couple situation)



In order to illustrate the figures and hypothesise how W4L compares to UBI regarding possible behavioural consequences, 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. 2.1.3.)

2.1.2. 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 labour 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. We consider the three options 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 580 euro 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 580 euro. What seems to be clear then is that if Carla does not decide to open her boutique under GMI/W4L, she will most probably not do so under UBI.

Furthermore, if Carla is planning to start her boutique, we should be able to observe this in a relatively short time period. Remember that the W4L grant is not inflation related. As a consequence, people will still receive a 1.000 euro in 30 years time. The real value of W4L however has by that time decreased significantly (see Figure 4). Hence, it is best to start a business in a relatively short time period after winning W4L because the grant guarantees the highest standard of living close to the winning date. As time goes by opportunity costs start to change. In the future, the possible opportunity cost of starting up a boutique will be higher because the real value of W4L decreases over time.

The above example makes clear that W4L is an extreme but not absurd case. It is extreme because the granted amount clearly exceeds a full Basic Income (1000 euro as compared to 580 euro). As a result, people's incentives to change their behaviour are bigger under GMI/W4L than under UBI. Therefore, if people do not change their behaviour under GMI/W4L they will most probably 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 lose 250 euro a month during the first few years. Hence, in this case W4L research can inform us on two issues. First of all, if people do not start up a business under GMI/W4L they will most probably 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 2 and 4). However, the information that they will start-up a business indicates whether people are willing to start-up a business given sufficient – not absurd - financial incentives to do so. In other words, it can inform us on the presence of preferences of starting-up a business. Under UBI not everybody who switches from a job to self-employment due to W4L will make the same switch. This will depend on the individual elasticity to do so. However, some of them will.

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 a full Basic Income by a significant amount. If one does not stop working under GMI/W4L one will most probably 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. By contrast, a similar observation as in the case of self-employment holds for quitting work. If people stop working after winning W4L we are not able to conclude that they will do so under UBI because of the differences in amount. However, it gives us an indication of the presences to stop working.²²

Finally, suppose that Carla is not such an enterprising person nor the 'lazy' type we supposed she was in the previous paragraph. 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? Carla, rationally as she is, starts to make calculations. 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. 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 she will most probably not do so under UBI. The possible observation of reduced working time under W4L might indicate a preference to do so, given sufficient financial incentives.

To conclude, if people with a high annual additional tax-free W4L income do not withdraw from the labour market, reduce working time by a significant amount or start up a business, the probability is (very) low that this will happen under UBI. Some of the pragmatic criticism against the introduction of Basic Income resolves around this specific issue since some opponents argue that the introduction of a Basic Income will provide significant disincentives to work and hence create labour market problems. Investigating these claims via an extreme but not absurd case is a valid research strategy which could verify or falsify this claim.²³

What if Carla does not have a job when she buys her winning W4L ticket? Proponents of a Basic Income point out that a Basic Income abolishes the 'unemployment trap'. They argue that under a Guaranteed Minimum Income (GMI) unemployed people are not encouraged to return to work due to the low

²² 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 labour market. Hence, there might be different behavioural changes as time proceeds (see 2.2.).

²³ In the above examples it is assumed that Carla earns more than G (see Figures 1 and 2). As becomes clear from looking at the Figures, the situation is different in case Carla earns less than G before winning W4L. However, since this is very exceptional and we do not have these cases in our dataset we will not go into the matter any further.

marginal difference in disposable income between accepting a job and staying unemployed. A Basic Income in contrast is given unconditional and would therefore abolish the unemployment trap, because going to work will always result in a significantly higher disposable income. What can W4L research suggest with regard to the unemployment situation? Are people really trapped or do they just not want to work?

In order to explore this issue a distinction has to be made between unemployed people who receive a social assistance benefit (someone who earns less than G in Figure 2) and those who receive an unemployment benefit (not represented in Figure 2).

Suppose Carla receives a social assistance benefit. In this case her social assistance income, which is means-tested, will be replaced by an unconditional W4L grant, which is substantially higher. If she decides to start working under these conditions she most probably will do so under UBI because she is obviously willing to work, but was prevented to work because of the unemployment trap. This willingness to work signal is strengthened by the fact that a substitution of a guaranteed minimum income by a W4L grant constitutes a significant increase in disposable income which might provide a disincentive to work and enjoy the 'better' life. Hence, going to work clearly signals a preference to work.

This is even more so the case when she receives an unemployment benefit. In this case she can combine her unemployment benefit with a W4L grant which combined generates a significant disposable income. If she decides to start working, at least part-time, in this case she will most probably do so under UBI.

2.1.3. Carla and John

Imagine Carla is married to John. Carla has met John at university and both have the same job. Now Carla 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. Now they have several options of which the three most important are discussed: they can start-up their own business, they can quit working or they can both reduce working time.

With regard to starting up a business and quitting work the couple example most probably constitutes a baseline scenario for UBI since it is slightly below or just at the subsistence level (compare Figures 1 and 3) and the gap with the subsistence level increasingly widens (see Figures 5 and 7). Under GMI/W4L they have an unconditional income of 1.000 euro (not price related) while under UBI in Belgian standards this will be 1.160 euro (price related). With regard to the two mentioned options different conclusions might be drawn from the research-findings. In a nutshell, the following observations of GMI/W4L might generate insights into what might happen under UBI. If Carla and John decide to stop working and start up their

boutique under GMI/W4L they will most probably do so under UBI. The same holds for quitting and surfing. If they decide to quit working after one of the two has won W4L, they will probably do so when they would receive a Basic Income.

Finally, what about reducing working time? In this case GMI/W4L still seems to be a case which would provide couples with more net income than under UBI. In a way, it is also an extreme case, but less to than the Carla case. This is illustrated in the following brief example. Both Carla and John work at university. Together they earn a gross income of 5.000 euro. Both have to pay 50% taxes and hence together they receive a net income from work of 2.500 euro. After W4L they now have a 3.500 euro a month, or 1.750 euro each. What if they both decide to work four days a week? Together they will earn a net income of 3.000 euro (2.000 from work and 1.000 W4L). What would they have left under UBI? Working five days a week, and again assuming a 60% tax rate, they would have a net income from work of 2.000 euro. Add to this a Basic Income of 580 euro each and together they will have an income of 3.160 euro. If they both decide to work four days a week, they would still have their Basic Income of 1.160 euro, and a net income from work of 1.600 euro. Together this is 2.760 euro. In this option, in contrast to the two other options, UBI provides less net income than GMI/W4L. Hence, GMI/W4L does not provide a perfect match for UBI. In addition, it should be noted that the case becomes more extreme as the earned income of the couple increases. However, it should also be noted that since W4L is not inflation related this difference might disappear over the years.²⁴

2.2. DESIGN OF THE PILOT PROJECT

Having analyzed how GMI/W4L compares with UBI, the next section focuses on the empirical results. Before that, however, in this section the design of the pilot project is discussed.

Since anonymity is secured by the Belgian National Lottery it was not possible to contact the Lottery winners directly to ask them for co-operation.²⁵ This introduced an extra hurdle not to co-operate since people can stay anonymous.

Given this difficulty, it was decided to conduct the research via a two-step approach. In a first step all winners receive a short mail questionnaire which aimed to identify some major socio-economic effects of winning W4L and asked them to co-operate with an extended face-to-face interview. In a second step, all winners who are willing to co-operate further with the research-project are contacted for a more

²⁴ The Carla and Carla and John cases should be considered 'ideal' cases. In reality it is of course possible that one partner of a household (for instance the winner) feels free to use the greatest part of grant but not all of it. In this case neither the Carla nor the Carla and John case applies. These cases will therefore be in between the Carla and Carla and John case.

²⁵ It should be noted that this problem is only confined to a number of countries. In other countries the names of lottery winners are publicly known.

elaborated structured interview on the effect of winning W4L. This interview aims to gain a fuller picture of changes in life patterns and to bind the respondents to the research team in order to set up a more longitudinal design.²⁶

The design of the mail questionnaire had to discount two limitations, namely the questionnaire should not be too long and should contain questions on the effects of winning not only for the winner but also for the partner.

Although the relationship between the length of a questionnaire and a response rate is also influenced by factors such as the respondents' interest in the research topic and the presence of incentives (such as money) there exists an inverse relationship between the length of the questionnaire and the response rate (Bogen, 2004; Smith, Olah, Hansen & Cumbo, 2003). The longer a questionnaire the less the response. A rule of thumb is that a questionnaire should not be longer than 20 minutes. After the 20-minute threshold response rates begin to decline. It is a specific objective of the pilot project to generate a maximum response in order to start with the construction of a panel research population which can be followed through time.

Since households can bargain on the use of time and money it was decided for most part to investigate both the winner of the lottery as well as the spouse. Existing lottery research mainly focuses on the winner. This, however, might bias assessments since decisions are often made on the level of the household. For example, it is possible that the winner of W4L does not reduce working-time but that his partner does.

The interaction between a limit on the length of the survey and the desirability to extend the survey to the winner's spouse clearly limited the number of questions included in the mail questionnaire. Considering these limitations it was decided to draft a mail questionnaire which could be filled in less than 15 minutes and which contained information for the household on several topics. The questionnaire was structured using mostly closed answer categories.²⁷ At the end a general open question invited respondents to share any information they considered relevant in the context of the research-project.

The topics discussed in the questionnaire were:

- Labour market position of winner and partner, before and after W4L. This includes questions on type of job, number of working days per week, average number of hours worked. In case of a job change or possible job change in the future, the respondents are asked for their motives.
- Entrepreneurship of winner and partner, before and after W4L.

²⁶ This paper only addresses the results of the survey. The qualitative interviews are not discussed.

²⁷ The questionnaires are available on request in Dutch or French

- Active participation in associations of winner and partner, before and after W4L.
- Volunteering of winner and partner, before and after W4L. This includes questions on the type of volunteering and the hours per week or month spent on voluntary work. In case of a change in voluntary behaviour, the respondents are asked for their motives.
- Background topics as age, education and lottery behaviour.

The questionnaires were sent to 189 W4L winners. Of these, 82 responded, 19 surveys returned due to changes in the address of the winners. As a result, 48% of the winners who received the questionnaire participated with the survey. In general this constitutes a high response-rate for mail surveys.

2.3. RESULTS

In this section the results of the survey are presented, in light of the comparisons developed before (cf. 2.2.). The cases will be presented in a descriptive way, making use of several tables to summarize the results. Afterwards, using Qualitative Comparative Analyses (QCA), a sub-sample will more formally be analyzed in order to formulate some hypotheses. First, the representativeness of the sample is discussed.

2.3.1. Representativeness of the sample

A crucial question for any research which aims to make inferences concerns representativeness. To what degree is the W4L sample representative for the wider Belgian population? It should be noted that given the small sample (only 82 cases) it is impossible to claim representativeness for the total Belgian population. However, one can assess if there are obvious misrepresentations which enable researchers to put the results into context.

In order to assess the representativeness of the sample a comparison between the respondents (cases) and the general population (population) could be made on four meaningful background characteristics: age, sex, household type and education (see Tables 1 to 4).²⁸ First, in relation to age (cf. Table 1) it can be observed that the 25-49 year old are overrepresented in comparison to the general population, while the younger and older categories are underrepresented. Second, regarding sex both the research-sample and population of the winners corresponds with the general population (cf. Table 2). Thirdly, in relation to education (cf. Table 3) it can be observed that people with a higher education outside university are more represented among the cases, while people holding no degree or only a primary education degree are underrepresented. Finally, couples with two or more children are clearly over represented in the W4L

²⁸ On the crucial variables, such as inclination to change labour-market behaviour, start-up a business, volunteering, etc. no assessment can be made since no indicators are available for the population.

sample (see Table 4). Singles and couples with no children are underrepresented. This might indicate that people with a family play the lottery to overcome financial difficulties.²⁹

As a result, some categories are slightly over represented while others are underrepresented. It should however be stressed that W4L winners do not constitute a closed homogenous group on age, education and household type. All categories are represented under the W4L-winners. Since many people play the lottery this could be expected. In this way the group is not very distinct from the general population and constitutes an interesting sample to explore the consequences of introducing a Basic Income.

However, this seemingly ‘representative’ sample could be the result of a double bias. First the initial W4L-sample (winners) can be biased vis-à-vis the total population. Secondly, the response might be biased vis-à-vis the winners. The latter is referred to as non-response bias which means that only people who changed or intend to change their working behaviour participated in the survey because of the research topic. The double bias occurs when the sample (winners) is unrepresentative of the total population (bias 1) but due to the answering behaviour of the respondents (bias 2) the final set of cases becomes seemingly representative again.

These two biases might be significantly related to changes in labour market behaviour (the outcome to be analyzed) and hence it is important to detect a possible double bias. In order to assess the double bias a comparison was made on two variables for which data of the winners is available: age and sex (see Tables 1 and 2) On the basis of this comparison there is no indication that a double bias occurred.³⁰

²⁹ In the sample and population statistics different definitions are used in order to determine whether one is single or part of a couple. The population data are gathered by the Belgian National Institute of Statistics (NIS) who defines a single as someone who is not married. A couple is defined as two partners who are married. In the sample, however, marital status is not questioned. Therefore, someone is considered as part of a couple if that person is in a steady partner relationship and someone is defined single if he/she is not part of such a relationship. Considerations of marital status are in this definition of no importance. This difference in definition might explain why the singles with children seem to be underrepresented in our sample as compared to the population data of the NIS.

³⁰ A non-response analysis could not be conducted because the researchers were not able to gather additional information by phone since the survey was anonymous.

Table 1. Comparison of cases, winners and total population on age.

Age	Cases		Winners		Population	
	#	%	#	%	#	%
18-24	6	7.5	13	7.1	628.741*	8.0
25-49	45	56.9	102	53.9	3.761.322	48.1
+50	28	35.4	74	39.1	3.429.057	43.8
Total	79	100	189	100	7.819.120	100

* 20-24 years. Source: (Nationaal Instituut voor de Statistiek (NIS), 2001)

Table 2. Comparison of cases, winners and total population on sex.

Sex	Cases		Winners		Population	
	#	%	#	%	#	%
Man	36	47	93	47	4.082.724	48.4
Women	40	53	105	53	4.351.575	51.6
Total	76	100	198	100	8.434.299	100

Source: (Nationaal Instituut voor de Statistiek (NIS), 2001)

Table 3. Comparison of cases, winners and total population on educational level.

Educational Level	Cases						Population	
	Singles		Couples				#	%
	#	%	Winner		Partner			
#	%	#	%	#	%	#	%	
Lower	3	17.6	10	16.6	7	11.8	2.215.363	26.2
Secondary	9	52.9	34	56.6	35	59.3	4.484.204	53.1
Higher	4	23.5	14	23.3	15	25.4	1.173.622	13.9
University	1	5.8	2	3.3	2	3.3	561.000	6.6
Total	17	100	60	100	59	100	8.434.299	100

Source: (Nationaal Instituut voor de Statistiek (NIS), 2001)

Table 4. Comparison of cases, winners and total population on household type.

Type of Household	Cases		Population	
	#	%	#	%
Singles	15	18.7	1.412.786	34.1
Singles + 1 or more children	3	3.7	533.849	12.8
Couples	12	15.0	967.670	23.3
Couples + 1 child	13	16.2	497.361	12.0
Couples + 2 children	21	26.2	488.291	11.7
Couples + 3 or more children	16	20.0	238.442	5.7
Total	80	100	4.138.399	100

Source: (Nationaal Instituut voor de Statistiek (NIS), 2001)

2.3.2. Changes in working behaviour: a qualitative descriptive analysis

This section describes the changes in working behaviour (stop or start working, reallocate working time and change in entrepreneurship) occurring after winning W4L. To systematise the description of the changes, first, Table 5 summarizes the changing behaviour. Secondly, the occurrence or absence of changes is described in relation to the background characteristics occupation, hours worked, sex, number of children, year of winning, secrecy regarding the winning of W4L and civic engagement (cf. Tables 6 and 7). The variable occupation is reclassified from the original data using the International Standard Classification of Occupations (see Appendix).

A distinction is made between singles and couples because both clearly constitute separate units of analysis (cf. 3.2.). In addition, changes of winners and partners within a couple are distinguished because in some couples there might be a difference in the legitimacy of spending the W4L grant between winner and partner. Furthermore, in the tables a distinction is made between effectively changed behaviour and the intention to change behaviour. The latter is represented by numbers between brackets.

This section is structured as follows. First, working behavioural changes will be limited to stop or start working or the reallocation of working time. After that, changes regarding starting up a business are looked at.

From Tables 5 and 6 it becomes clear that most *singles* work both before and after W4L and that most job reclassifications are represented. The Carla case made clear that GMI/W4L constitutes an extreme situation. Therefore, the probability is very low that those singles would change working behaviour under UBI. Only one single changed his working behaviour after W4L. This person was a 48 year old blue collar worker who quit working after winning W4L. However, as discussed before, this does not mean that this person would have quit working under UBI.³¹

Table 5. Changes in working behaviour after W4L, singles and couples (winner and partner).

Working before W4L	No change or change in working behaviour (quit/start working, reallocate working time)					
	Singles		Couples			
	No Change	Change	Winner		Partner	
No Change			Change	No Change	Change	
Yes	12(10)	1(3)	38(40)	7(9)	41(39)	4(6)
No	2	1	19	2	13(12)	1(2)

³¹ Three singles were not working before W4L. These were all student at the time of winning. Because they do not constitute interesting cases for Basic Income research, they will not be discussed any further.

Apart from those changing their working behaviour, Tables 5 and 6 also present those who have the intention to change working behaviour. Two persons intend to do so. Both are female service workers who point out that they want to work less in the future.

As with the singles, most *winners* (i. e. those winning W4L and having a steady partner relationship) did not change their working behaviour. Only 7 out of the 45 cases who were working before W4L and 2 out of 21 who were not working changed their behaviour (cf. Table 5). This is of great importance for Basic Income research

Table 6 makes clear that those working before W4L did so in very diverse sectors. Also those seven cases changing their working behaviour were working in diverse occupations. Furthermore, the changes are diverse: five quit working (three went on (early) retirement, one quit working because of illness, one took career interruption), two winners decided to work less. Of these two, one decided work 27 in stead of 38 hours a week, the other 24 hours in stead of 32.

Those not working before W4L were mainly pensioner or unemployed/pensioner (those unemployed aged between 55 and 65, in the current Belgian context it is debatable whether these are unemployed or on pension) (cf. Table 7). More interesting for Basic Income research are the four winners who were unemployed before W4L. Of these, one started working after W4L. The three remaining winners that stayed unemployed after W4L were all women with non adult children, two of whom explicitly relate their staying at home to having time to raise children. Going back to the Carla and John case, it can be stated that it is very likely that the person now working, but previously unemployed would also have started working under UBI. In contrast, regarding the three cases unemployed before and after W4L, it is possible but far from certain whether these would have remained unemployed under UBI.

Two sales workers have the intention to work less in the future. At this moment, both work more than 40 hours a week (cf. Table 7).

Table 5 also summarizes working behaviour of the *partners*. Only 4 out of 45 working before W4L change their working behaviour. Of these, one went on pension. Regarding the other three, one truck driver, working 75 hours a week before W4L, works 60 hours after W4L. The other two changed their working behaviour to take care of their children. Fourteen partners were not working before W4L. Again the great majority are pensioner, unemployed/pensioner or student and hence not very interesting to Basic Income research. One is unemployed both before and after W4L. Two partners, working at this moment, have the intention to work less in the future.

These few cases notwithstanding, again the main conclusion is that most cases do not change their working behaviour. The interpretation is identical to the one given in the winner's situation.

Table 6. Changes in working behaviour after W4L by background characteristics, cases working before W4L, singles and couples (winners and partners).

	Single		Couple			
	No Change	Change	Winner		Partner	
	No Change	Change	No Change	Change	No Change	Change
Occupation (reclassified)						
Teacher	0	0	2	0	3	1
Social worker	1	0	1	2	5(4)	0(1)
Civil servant	2	0	5	1	3	0
Clerical and related worker	3	0	10	0	11	0
Sales worker	0	0	4(2)	0(2)	3	1
Service worker	2(0)	0(2)	6	4	3(2)	1(2)
Blue collar worker	4	1	4	0	10	1
Self-employed	1	0	3	1	2	0
Hours worked						
< 40	7(6)	1(2)	24	7	29(27)	2(4)
≥ 40	1	0	11(9)	1(3)	10	1
Sex						
Woman	7(5)	0(2)	14	6	14(13)	2(3)
Man	5	1	19(17)	2(4)	24	2
Year of winning						
1999-2000	7(6)	1(2)	9(8)	5(6)	13(12)	1(2)
2001-2002	5(4)	0(1)	12	2	11(10)	3(4)
2003-2004	3	0	12	0	13	0
Number of children						
No children	8	0	3	1	6	0
1	1	0	9(8)	1(2)	11	0
2	1	0	15(14)	2(3)	12(11)	2(3)
≥ 3	1(0)	1(2)	8	4	12(11)	2(3)
Level of education						
Lower education	1	0	4(3)	0(1)	2	0
Secondary education	8(6)	0(2)	20(19)	4(5)	23	3
Higher education	3	0	13	3	14(12)	1(3)
Secrecy						
No one	1	0	9	4	20	1
Close relatives or friends	8(6)	0(2)	15	1	17(16)	1(2)
No secrecy	3	0	11(9)	3(5)	2(1)	1(2)
Civic engagement						
No	11	1	22	5	26(24)	2(4)
≥ 1	2	0	14(12)	3(5)	14	2

Table 7. Changes in working behaviour by background characteristics, cases not working before W4L, singles and couples (winners and partners).

	Single		Couple			
	No change	Change	Winner		Partner	
	No change	Change	No change	Change	No change	Change
Occupation (reclassified)						
Student	2	1	0	1	1(0)	1(2)
Unemployed	0	0	3	1	1	0
Unemployed / pensioner	0	0	5	0	3	0
Pensioner	0	0	9	0	9	0
Sex						
Woman	0	1	11	0	9(8)	1(2)
Man	2	0	5	1	4	0
Year of winning						
1999-2000	0	0	4	1	3	1
2001-2002	2	1	6	0	5	0
2003-2004	0	0	6	0	5(4)	0(1)
Number of children						
No children	1	0	4	0	2(1)	1(2)
1	0	0	2	1	5	0
2	0	0	4	0	3	0
≥ 3	1	0	7	0	4	0
Level of education						
Lower education	0	0	7	0	3	0
Secondary education	1	0	8	1	7	0
Higher education	1	1	2	0	3(2)	1(2)
Secrecy						
No one	0	0	5	0	6	0
No secrecy	2	1	4	1	2(1)	1(2)
Civic engagement						
No	1	1	11	1	9(8)	0(1)
≥ 1	0	0	7	0	4	0

So far changes in working behaviour regarding entrepreneurship were not presented. This is done in Tables 8 and 9, indicating whether the respondents (singles and couples) had started an enterprise before they won W4L and whether they have started a new enterprise after W4L.³² First, the singles are discussed, then the couples.

³² Regarding this item winners and partners were not questioned separately.

Table 8. Entrepreneurship, before and after W4L, singles.

		After	
		No	Yes
Before	No	15(14)	0(1)
	Yes	1	0

As becomes clear from Table 8, no actual changes in entrepreneurship occur in the single's sample. One single, however, reports to have the intention to start his own consultant business. Considering the fact that GMI/W4L gives extreme incentives, a conclusion seems to be that for these singles no mayor changes in entrepreneurship would follow the introduction of a Basic Income.

Table 9. Entrepreneurship, before and after W4L, couples.

		After	
		No	Yes
Before	No	47(45)	1(3)
	Yes	13	0

Of the sixty couples in the sample, 13 couples (or either winner or partner) have their own business, while 47 were not entrepreneurs at the time of winning W4L or before. Of these 47 one has started his own business, i. e. an insurance agency. Two more couples have the intention to be self-employed in the future. One couple in their early thirties thinks about taking over their parents business or starting a shop of children's clothes. One 25 year old salesman of mobile phones has the intention to become an estate agent. Again the conclusion that no mayor changes in entrepreneurship (at least within our sample) would occur under UBI seems warranted.

It could be objected that the extra monthly income could be invested in a business of a friend or relative and that therefore introducing a Basic Income 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 our sample. No one (either single or couple) has ever invested in the business of a friend or relative.

2.3.3. Qualitative Comparative Analysis

2.3.3.1. Methodology

In the previous part a descriptive analysis of all the cases was presented. In this part, a further exploration of the data is done using Qualitative Comparative Analyse (Hereafter QCA) which was developed by Charles C. Ragin for the analysis of a medium-sized number of cases (Ragin, 1987; Ragin, 1994; Ragin, 2000; Ragin, 2003). QCA is a research technique which enables researchers to systematically compare differences and similarities of configurations of variables between a set of cases and enables researchers to inductively explore data and develop explanatory models. In this paper, QCA is mainly used as a tool to summarize and explore data (De Meur & Rihoux, 2002; Rihoux, 2004).

QCA is a case-oriented approach. This implies that each individual case is considered a complex entity which needs to be comprehended as such. Different parts of each case are understood in relation to one another and in terms of the total picture that they form together. The organizing idea in such research is that the parts of a case do constitute a coherent whole and hence cases are regarded as configurations of variables (Ragin, 1987; Ragin, 2000). The essence of case analysis is to understand the configuration of variables and how that configuration is linked to a certain outcome. As such, this approach resembles more qualitative-oriented case research than quantitative-oriented variable research and hence can easily complement a qualitative description of cases. In other words, instead of analyzing relationships between variables (standard quantitative variable-oriented approach) QCA compares cases by comparing configurations of explanatory conditions with the presence or absence of an outcome. In this way it is truly comparative, in the sense that it explores similarities and differences across cases by comparing configurations. The goal is to unravel the different conditions connected to different outcomes. In this way it is a comparative exploration and examination of empirical diversity. As a result, QCA allows for *multiple conjunctural causation* (Ragin, 1987; Ragin, 2000; Rihoux, 2004). This means that the technique allows for the possibility that there may be several combinations that generate the same general outcome, can address complex and seemingly contradictory patterns of causation - a condition can be important in both its presence and absence – and that it eliminates irrelevant causes.

In order to explore and summarize data using QCA several basic analytic steps are required. In brief, the following seven steps can be identified (Becker, 1998, pp. 187-188; Ragin, 1994, p. 118).

1. Decide what outcome needs to be investigated and list the variables which might contribute to an explanation of the outcome.
2. Define the research population and select the cases for analysis (comparability requirement).
3. Define each variable and outcome as a categorical variable.

4. Construct a data matrix which is a table whose rows and columns provide cells for all the combinations of those variables.
5. Reformat the data matrix as a truth table that lists all possible logical combinations of the presence or absence of these attributes
6. Simplify the truth table. The simplification strategy follows the logic of an experiment. Only one condition at a time is allowed to vary (the “experimental” condition). If varying this condition has no discernible impact on the outcome, it can be eliminated as a factor. The rule of combining rows of the truth table as a way of simplifying them can be stated formally: If two rows of a truth table differ on only one causal condition yet result in the same outcome, then the causal condition that distinguishes the two rows can be considered irrelevant and can be removed to create a more concise combination of causal conditions.
7. Interpret the resulting equations

2.3.3.2 Model

The application of QCA to the W4L dataset aims at answering two main questions:

- (1) Which conditions contribute to a change in labour market behaviour?
- (2) Which conditions influence the decision not to change labour market behaviour?

Since the available information on the cases is limited it was decided to inductively explore answers to both questions. As a result, the information available in the questionnaire was transformed into several variables. For the transformation of the variables a dichotomous crisp set approach was chosen because of the explorative nature of the exercise. In a crisp set approach all variables are transformed in dichotomous variables (absence or presence of the variable). This implies a loss of information and nuance. An advantage of this approach is that it allows for the creation of ‘sharp’ typologies. In other words, it creates a black/white picture of reality which allows for the formulation of clear hypotheses.³³

The exploration of the data was done by using 10 variables on which information was available through the questionnaires. The variables are presented below. For ease of presentation the variables are in italic to make a clear distinction with lowercase and uppercase letters which both have a special meaning in QCA. QCA uses lowercase notations of variables to indicate the absence of a variable and uppercase notations to indicate the presence of a variable.

The outcome to be explained is change in labour-market behaviour

³³ It should be noted that a QCA analysis can also be conducted with multi-value scales and fuzzy-sets. For more information see (Conqvist, 2003; Ragin, 2000; Ragin & Giesel, 2002).

Change: Presence or absence of effective or intention to change labour market behaviour due to W4L.³⁴

The outcome will be explained by testing several models consisting out of all or some of the following nine explanatory conditions.

Kids: Presence or absence of one or more children

Kids2: Presence or absence of two or more children

Kids3: Presence or absence of three or more children

Civic: Presence or absence of active membership (on average more than 2 hours a week) of one or more associations

Hoursres: Winner works more (presence) or less (absence) than 40 hours a week

Hourspart: Partner of the winner works more (presence) or less (absence) than 40 hours a week

Edures: Presence or absence of a university or higher education degree for the winner

Edupart: Presence or absence of a university or higher education degree for the partner of the winner

Ageres: Winner is older (presence) or younger (absence) than 50

Agepart: Partner of winner is older (presence) or younger (absence) than 50

Couples: Both the winner and the partner works (presence) or either the winner or the partner works, but not both (absence).

The analysis was performed on a subset of cases because not all cases were suitable for the analysis. Three types of cases were not selected for further analysis. The first type are the single persons since they constitute a distinct unit of analysis in this research-project (see 3.2.1.). No separate analysis of the singles was conducted due to an insufficient number of observations. The second type of cases which were not included in the analysis consists out of students and pensioners since they were not (yet) active on the labour market. Finally, cases with significant item non-response on several variables were deleted because they could not be meaningfully analysed. In the end the subset of cases suitable for analysis contained 40 cases.

2.3.3.3. *Analysis: Problems and a Partial Solution - Two-step approach*

Analysing 40 cases with a model of 10 possible variables in QCA generates two problems. First there is the *problem of uniqueness*. If one uses all possible 10 variables, chances are considerable that each case is unique. Each case is described as a distinct configuration of 10 variables. This results in the fact that there is no summarisation of data and one does not generate any typologies. In other words, one ends up with 40 descriptions of cases and few possibilities to generate hypotheses.

³⁴ It is important to emphasise that in the QCA-analysis the dependent variable – change on the labour market – does not only include people who have effectively changed their behaviour, but also those who indicated that they had the intention to change their behaviour in the future. In this way, the *Change* variable is distinctively different from the change variable in the descriptive part which only included effective changes in labour-market behaviour.

A second problem related to a QCA-analysis is the *problem of contradictions*. This problem mainly occurs when one uses only a few of the 10 variables. It should be noted that QCA was mainly developed to comparatively analyze macro social entities and processes such as state-formation, revolutions, etc. for which much historical data is available and which allows for a constant dialogue between theory and data. It is only recently that QCA has been applied to individual level data (Britt, Risinger, Miller, Mans, Krivchenia & Evans, 2000). The application to individual level data generates problems for explaining *each* case. In case of individual level data the chances that similar configurations produce different outcomes increases dramatically. Individual contingent, idiosyncratic or non-modeled factors might influence the outcome. As a result, a QCA-analysis on individual level data can generate what is called contradictory results, i.e. the same configuration generates different outcomes. In addition, QCA was developed to generate explanatory models via a constant dialogue of theory and data. This implies a regular return to data and the gathering of additional data. If a return to the field to acquire new data is not possible it can be difficult to resolve contradictions in the analysis. In the pilot-project it was not possible to return to the field and hence an analysis could only be done on the basis of data available in questionnaires.

Moreover, there seems to exist a trade-off between the two problems. The smaller the models, the more contradictions, the more extensive the models, the less possibility to summarise data and create typologies. The two problems and the trade-off are illustrated by Table 10. The more extensive the model is (# variables) the more configurations and the less contradictions occur. A limited model, with a few variables, generates less configurations but more contradictions.

How to solve these two interrelated problems? In relation to the problem of uniqueness the only solution is to develop limited explanatory models which implies that the number of variables of an explanatory model should significantly be lower than the number of cases. Concerning the problem of uniqueness there are several ways to deal with contradictions. First, a new more homogenous and comparable research population can be constructed by including new cases or removing cases. Secondly, new variables could be included in the explanatory model. Thirdly, existing variables could be recoded. Since, it was not possible to return to the research population to gather additional information none of these three options were available to resolve contradictions. A final way to deal with contradictions is to include only those configurations which contain at least two cases since it is often the case that contradictions are generated because only one contradictory case occurs. These contradictions are disregarded when one specifies that at least two or more cases should be covered by a given configuration. The drawback of this decision is that it decreases the number of cases in an analysis and hence excludes possible relevant configurations. This is especially problematic when one works with (biased) samples and the aim is to explore data and generate hypotheses. Concerning the latter it is best to exclude as few cases as possible and hence proceed with an analysis of all possible cases.

As a result, the problem of contradictions is not easily overcome. In order to deal with these two interrelated problems a two-step approach was used for analysing an explanatory model. In a first step, (a) model(s) which best fits the data was identified. In a second step a further analysis of the selected model was performed.

The first step is time consuming and implies analysing the results of all possible and meaningful models. Table 10 lists a sample of tested models and presents the number of configurations which occur in the data on the basis of the model and the number of contradictions. If both numbers tend to go to 40 it means that either little reduction in data has occurred (each case is unique) or that the model (almost) only generates contradictory results. Both are an indication that the model does not fit the data and provides little explanatory insight. For example, the first row presents an elaborate model with almost no contradictions (5%) but also very little simplification (34 configurations). Here one encounters the uniqueness problem. Each case is a unique combination of the presence and absence of each of the 10 variables. By contrast, the last row generates considerable simplification of the data but has a very high percentage of contradictions which means that the same explanatory model is inductively identified for both cases where labour-market change occurred and cases where this change did not occur.

The selection of the best fit model was based on balancing the number of contradictions and the number of configurations. The aim is to find a model with jointly the least configurations (reduction of data – creation of typologies) *and* the least contradictions. In other words, one does not select the model with the least configurations or the least number of contradictions, but the model which scores best on the two criteria combined. The model which best fits these two combined criteria is model 14 which was further analysed. As one can see in Table 10 this model consisting out of 6 variables generates 20 configurations and 8 contradictions. Model 14 is able to discriminate several types of cases in relation to making changes on the labour-market or not (problem of contradictions) and is able to capture some configurations which explain several cases at once (not each case is unique).

More formally, the model is selected on the basis of the following formula:

$$\text{Best Fit Model (BFM)} = (\#\text{Contradictions} + \#\text{Configurations})/2$$

Table 10. Possible Models to Explain Working Behaviour

	Models	Variables	Configurations	Contra Dictions	BFM
	CHANGE =	#	#	#	
1	<i>Eduresp + Edupart + Civic + Kids + Hourresp + Hourspart + Couplesft + Ageres + Agepar</i>	10	34	2	18
2	<i>Eduresp + Edupart + Civic + Kids2 + Hourresp + Hourspart + Couplesft + Ageres + Agepar</i>	10	36	2	19
3	<i>Eduresp + Edupart + Civic + Kids3 + Hourresp + Hourspart + Couplesft + Ageres + Agepar</i>	10	35	0	17,5
4	<i>Kids + Eduresp + Edupart + Hourresp + Hourspart + Couplesft + Ageres + Agepar</i>	9	30	6	18
5	<i>Kids + Eduresp + Edupart + Civic + Hourresp + Hourspart + Ageres + Agepar</i>	9	34	2	18
6	<i>Eduresp + Edupart + Civic + Kids2 + Hourresp + Hourspart + Ageres + Agepar</i>	9	36	2	19
7	<i>Eduresp + Edupart + Civic + Kids3 + Hourresp + Hourspart + Ageres + Agepar</i>	9	35	0	17,5
8	<i>Kids + Civic + Hourresp + Hourspart + Couplesft + Ageres + Agepar</i>	8	23	12	17,5
9	<i>Kids + Eduresp + Edupart + Civic + Hourresp + Hourspart + Couplesft</i>	8	32	4	18
10	<i>Kids + Eduresp + Edupart + Hourresp + Hourspart + Ageres + Agepar</i>	8	33	4	18,5
11	<i>Eduresp + Edupart + Civic + Hourresp + Hourspart + Couplesft</i>	7	30	5	17,5
12	<i>Kids + Eduresp + Edupart + Hourresp + Hourspart + Couplesft</i>	7	26	14	20
13	<i>Kids + Eduresp + Edupart + Civic + Couplesft</i>	6	17	26	21,5
14	<i>Kids + Civic + Hourresp + Hourspart + Couplesft</i>	6	20	8	14
15	<i>Kids2 + Civic + Hourresp + Hourspart + Couplesft</i>	6	21	15	18
16	<i>Civic + Hourresp + Hourspart + Couplesft</i>	6	16	25	20,5
17	<i>Eduresp + Edupart + Civic + Couplesft</i>	5	15	27	21
18	<i>Kids + Eduresp + Edupart + Couplesft</i>	5	14	27	20,5
19	<i>Kids + Couplesft + Ageres + Agepar</i>	5	13	28	20,5
20	<i>Kids + Civic + Ageres + Agepar</i>	5	12	32	22
21	<i>Kids + Civic + Hourresp + Hourspart</i>	5	22	13	17,5
22	<i>Eduresp + Edupart + Civic + Couplesft</i>	5	15	27	21
23	<i>Hourresp + Hourspart + Couplesft</i>	4	11	31	21

The model with the lowest score is the best fit model for further exploring the data. This model states that changes and no changes in labour market behaviour is a function of the combined presence and absence of the following 5 variables: *Kids + Civic + Hourresp + Hourspart + Couplesft*.

In a second step the best fit model was used to conduct a QCA-analysis showing a description of the cases as a configuration of the presence and/or absence of each of the variables of the model. All the configurations which exist in the data are presented in Table 11.

Table 11. Overview of all configurations of the Best Fit Model

		# of cases	
		Change	No Change
1	KIDS civic hourresp hourspart COUPLES	0	10
2	KIDS civic HOURRESP hourspart COUPLES	4	1
3	KIDS CIVIC hourresp hourspart COUPLES	3	0
4	KIDS civic hourresp HOURSPART COUPLES	2	1
5	Kids CIVIC hourresp hourspart COUPLES	0	2
6	KIDS CIVIC hourresp HOURSPART COUPLES	0	2
7	KIDS civic HOURRESP HOURSPART COUPLES	0	2
8	Kids civic hourresp hourspart COUPLES	1	0
9	KIDS civic HOURSPART couples	1	0
10	Kids CIVIC Hourresp	1	0
11	KIDS CIVIC hourspart couples	1	0
12	Kids CIVIC HOURRESP hourspart COUPLES	1	0
13	Kids civic hourresp hourspart COUPLES	0	1
14	KIDS CIVIC HOURRESP couples	0	1
15	KIDS civic hourspart couples	0	1
16	KIDS civic Hourresp	0	1
17	KIDS civic hourresp HOURSPART couples	0	1
18	Kids CIVIC hourresp HOURSPART COUPLES	0	1
19	KIDS CIVIC HOURSPART couples	0	1
20	KIDS CIVIC HOURRESP HOURSPART COUPLES	0	1
Total		14	26

Table 11 lists all the configurations which exist for the best-fit model. Uppercase notations indicate the presence of a variable, while lowercase notations indicate the absence of a variable. Most cases (67,5%)

are covered by the 7 first rows. The most important configurations in relation to change are row 2 and 3. The configuration of row 2 states that couples who are inclined to change can be described by the following characteristics: they both work, one of the partners is working more than average and they have kids. The configuration of row 3 indicates that couples who combine a busy personal life (kids and civic engagement) with the fact that the two partners are working are also more inclined to change. In other words, two paths lead to a change in labour-market behaviour. In contrast, the configuration which captures most non changes is row 1. This configuration indicates that couples with children where both partners work but none of the partners works more than average are less inclined to change. In addition, it should be noted that in several of these no change cases one of the partners is not working full-time but has a part-time job which makes a better combination between working life and family life possible. From row 8 onwards all cases are captured by a unique configuration of explanatory conditions

More in general, on the basis of these configurations one could develop the hypothesis that couples where the two partners work, one of the partners works more than average and which either have kids or are actively involved in civic activities are more inclined to change their labour-market behaviour. The contradictory cases to this hypothesis (mainly rows 5 and 6) can be explained by the fact that in these cases the couples are older than 50, which might indicate that the children are adults and hence require less attention. This suggests that balancing working-time and family time influences labour-market behaviour and that the provision of an exogenous non-earned income might in certain cases and under certain conditions change labour market behaviour. Obviously more data is required to assess this hypothesis.

3. DISCUSSION AND FUTURE RESEARCH

This study had two aims. First, to explore the advantages and drawbacks of empirical research into the working behavioural consequences of introducing a Basic Income. Secondly, to investigate the possibilities and outcomes of a research-strategy which uses an annuity game – the Belgian Win for Life (W4L) – as a natural experiment. These two goals were addressed in two distinct parts.

In the first part it was argued that a strong case can be made for the use of empirical research into the consequences of introducing a Basic Income. An argument was made to use natural experiments such as annuity games to this end because some of the limitations related to a Basic Income experiment can in this way be overcome. Thus, natural experiments allow researchers to build in relevant variation in different types of Basic Income design and institutional context and to design longitudinal research which captures different types of social dynamics in relation to introducing an exogenous unearned income.

Since, however, introducing a Basic Income is not the same as granting everyone a winning lottery ticket, the second part assessed to what degree W4L constitutes a good case for analysing the labour market related behavioural consequences of introducing a Basic Income. In a nutshell, the argument was made that W4L constitutes an extreme, but not absurd case.

In relation to singles it was argued that if people with a monthly additional tax-free W4L income do not withdraw from the labour market, reduce working time by a significant amount or start up their own business, the probability is (very) low that this will happen under a Basic Income regime (UBI). If, in contrast, they do change their working behaviour it is not possible to conclude that they will do so under UBI, even though it indicates a preference to do so. For couples the conclusions concerning stop working and starting up a business are similar than under the singles case. Interpreting a possible reduction in working time is more difficult however since the difference between receiving a Basic Income and W4L is less pronounced and dependent on the tax regime.

Taking into consideration these comparisons between UBI and the conventional guaranteed minimum income scheme adjusted for W4L recipients (GMI/W4L), a pilot project was set up to investigate Belgian W4L winners. The results were analyzed in two ways. First, by describing the cases making use of standard tables. Secondly, by investigating a subgroup of W4L winners more analytically making use of Qualitative Comparative Analysis (QCA).

Regarding changes in entrepreneurship, the descriptive analysis gave very little evidence that exogenous unearned income would stimulate entrepreneurship. Only one person started up a business after winning W4L and only 3 indicated that they have the intention to do so. Given the strong financial incentives under GMI/W4L it is hypothesised that the introduction of a Basic Income will have little effect on

entrepreneurship. Of course these are very tentative conclusions. As became clear from the first part of the paper, while empirical research has certain strengths, a natural experiment can never capture the entire complexity of behavioural changes that a the introduction of a Basic Income would entail. Furthermore, only a very small minority of changes in our sample could constitute a substantial number when looked at on population level or could have profound macro consequences.

In relation to stop working or diminishing working time, only a very small proportion of people effectively changed their labour-market behaviour after winning W4L. There is therefore no indication for an immanent emergence of a ‘lazy society’ after introducing a Basic Income. The idea that people would retreat from the labour-market and would live off a Basic Income is not supported by the evidence. Only a handful of respondents changed their labour market behaviour. Even if one would include the people who indicated that they have the intention to change their behaviour in the future a majority of people would stay working under the same conditions they are working now (in our sample 85 out of 103). Furthermore, it has to be stressed that the ‘intention cases’ support the argument that people want to work less, not that they will stop working.

Whether these people will effectively change working behaviour in the future is still an unresolved question. In addition, as argued before, it is very well possible that even those cases that have made actual changes will not change their behaviour under a Basic Income. The comparative analysis of GMI/W4L and UBI made clear that one should not conclude that people who (might) change their labour market behaviour under W4L would also do this under a UBI. However, one can explore which factors influence labour market behaviour changes under conditions of an exogenous non-earned income. This exploration was done using QCA.

The QCA-analysis focused on couples winning W4L. It showed that couples with both partners in a full-time demanding job (work more than average) and with (up-growing) children are more inclined to change labour-market behaviour. Hence, a Basic Income might result in a different balance between working and family life for couples with a heavy time burden. Consequently, there is some evidence that supports the idea that a Basic Income will influence how people balance family and working life.

This conclusion may have important implications for the design of an experiment. If changes in labour-market behaviour occur they are likely to occur in ‘normal – standard’ households, i.e. working families with children. This implies that an experiment should include these types of households if it aims to make inferences about what might happen after the introduction of a Basic Income.

Furthermore, since having children plays a part in labour market decisions and in balancing family life and working life, the question of how a Basic Income will influence demographics becomes important. The

pilot-project generated some anecdotic evidence that W4L provides an incentive to expand the family.³⁵ More evidence was found regarding the reduction of uncertainty about the future after winning W4L. Without asking any specific questions about it, many people indicate that W4L provides much more security which enables them to expand their choices and decisions. In other words, from an empirical point of view an argument can be made that introducing a Basic Income allows people to better plan their future life due to uncertainty reduction. How this would affect demographics is still an open question but a more systematic investigation of uncertainty reduction and its ramifications should be explored.

These are, of course, very tentative conclusions which require further investigation. Two major limitations of the pilot-project, the limited number of cases and the limited information on each of the cases need to be overcome to generate more robust results and future research should overcome both limitations. In addition, four important caveats of the pilot-project have to be stressed.

First, the pilot-project only provides a partial assessment of changes in labour-market behaviour. For example, a return to the labour-market from unemployment after winning W4L was only assessed in a very limited way due to very small amount of cases. It can very well be argued that winning W4L abolishes the unemployment trap (cf. *infra*) and would make people more inclined to return to the labour market. By contrast an argument can be made that W4L plus an unemployment benefit provides a huge incentive to stay unemployed if people really do not want to work. The movement out of unemployment could not be assessed in the pilot-project. Hence, which hypothesis can be supported is still an unresolved question.

Secondly, the pilot-project observed the situation only at one moment in time. It is crucial to get an insight into the dynamics of introducing an unearned exogenous income and how effects play out over time. Several people indicated that they have the intention to change labour-market behaviour, but they have not yet done so. However, there is of course an important difference between what people say and what they effectively will do. A longitudinal research design is necessary to gain insight into the dynamics of changes.

Thirdly, labour-market behaviour is in the present study narrowly defined as paid work and changes in labour-market position only refer to changes in relation to paid work. This is a much too restricted definition of work in the context of the Basic Income debate which explicitly aims to reward unpaid forms of work. In future research, a thorough conceptualisation of the concept of work, including volunteering and family work, should be done and included in the analysis of changes in working behaviour.

³⁵ One respondent indicated they planned a second child after winning W4L because they can now afford it.

Finally, there is an important issue of representativeness and selection-bias. These were discussed before. Several selection biases can occur on which no definitive assessments can be made at this point. More research is needed to generate more robust results.

It is our intention to overcome these limitations and caveats by expanding and improving annuity games research. This will imply, among other things, an improvement in data-gathering techniques. Mail surveys are limited data collection tools due to (item) non-response and low reliability of data. In order to better capture changes it is advisable to construct longitudinal datasets based on face to face interviews. Apart from the better reliability, these interviews would have two more advantages. First of all, they should enable researchers to deepen the investigation into labour market consequences by tracking employment records and creating more elaborate working profiles in terms of several characteristics which might be relevant such as earnings, autonomy of decision in occupation, job fulfillment, etc. Secondly, face-to-face interviews should allow researchers to fully explore other relevant intended and unintended social consequences of an exogenous unearned income such as effects on family planning and other demographic factors.

In addition, a major challenge for future research is to expand W4L-research into other countries to allow for institutional variation and to assess the behavioural impacts of different designs of a Basic Income. Especially interesting in this respect is a comparison with the United States where many similar annuity games exist in different forms for some years. Thus, it could be illuminating to compare Belgian W4L with the W4L game organized in the state of Arizona, granting each winner a lifelong 1000 dollars a month, or with the Weekly Bonus game, organized in the state of Delaware, in which 250 dollars a week are granted. Similarly, it would be interesting to compare the Belgian W4L winners with the Belgian Fun for Life winners, who receive 25000 euro a year.

Furthermore, natural experiments such as lotteries can be used to analyze the behavioural effects of another big idea which is closely related to a Basic Income, namely the idea of stakeholder grants. 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).’

The potential of research into social consequences of introducing a stakeholder grant is significant since the potential research population is huge. A research-design could include all people who won approximately 80.000 euro/dollars on the ages of 18 to 25. Since almost every country has lottery games which grant a one-time sum of approx. 80.000 euro, the possible research population is very significant. This is interesting for two reasons. First, the initial research population will be big which will reduce possible selection biases and problems of representativeness. Although a further assessment of how representative lottery players are for the wider population should be conducted, it should also be stressed

that the lottery populations are probably not as skewed as one would expect on the basis of common sense notions. The pilot-project showed that many different types of people play the lottery. Secondly, since many countries can be compared, the effect of institutional variation can be further assessed and conceptualized.

In a latter stage lottery based research on the behavioural consequences of un-earned exogenous income paid either as a lump sum (stakeholder grant) or as a weekly, monthly or yearly endowment (Basic Income) could be compared. This comparison could contribute to recent debates on the possible different advantages and disadvantages of Basic Income versus stakeholder grants. It is clear that this may constitute a future research agenda for Basic Income and stakeholder grant researchers.

APPENDIX. RECLASSIFICATION OF OCCUPATIONS

In the questionnaire all respondents were asked for their occupation before W4L. Because of the great diversity of jobs however, it was necessary to aggregate these to a higher level of abstraction. This was done using the International Standard Classification of Occupations (ISCO68), developed by the International Labour Organization (ILO). In a first instance, the jobs were classified on the most detailed level. Thus, depending on the information given by the respondent, a code is allocated between 1 or 5 digits. The categories student, unemployed, unemployed/pensioner (unemployed and between 50 and 60 years old) and pensioner were added. Next, the attributed classifications were reclassified. This classification was mainly based on the ISCO68 codes, lowering the level of detail. As can be seen by comparing the 'ISCO code'-column with the 'job classification reclassified'-column, some adjustments were necessary for the purpose of this study.

Table 12. Reclassification of occupations (before winning W4L).

Job classification	ISCO code	Job classification reclassified
Sport co-ordinator	1.3	Teacher
Teacher	1.3	
Teacher	1.3	
Teacher Secondary Education	1.32.00	
Language Teacher Secondary Education	1.32.15	
Instructor company	1.39	
Nurse hospital	0.71.10	Social workers
Social worker	1.93	
Social worker	1.93	
Social worker	1.93	
Social worker	1.93	
White collar employee social sector	1.93	
Caretaker old people's home	1.93	
Therapist in a centre of psychological health	1.93.40	
Social worker delinquency	1.93.40	
Judge	1.22.10	Civil Servant
Civil servant	3.00	
Civil Servant European Commission	3.00	
Civil servant	3.00	
Civil servant	3.00	
Translator in government administration	3.00	
Civil servant	3.00	
Civil servant	3.00	
Civil servant	3.00	

Civil servant	3.00	
Civil servant	3.00	
Computer programmer	0.84.20	Clerical and related
Book editor governmental organization	1.59.20	workers
Self-employed librarian	1.91.20	
Budgeting and accounting manager telecom sector	2.19.50	
White collar employee bank and insurances	3.31	
White collar employee bank and insurances	3.31	
White collar employee bank and insurances	3.31	
Accountant in a company	3.31.10	
Book keeping clerk	3.39	
Book keeping clerk	3.39	
Book keeping clerk	3.39	
White collar employee metal processing company	3.9	
Railway clerk	3.99.60	
White collar employee private company	3.	
White collar employee private company	3.	
White collar employee private company	3.	
White collar employee private company	3.	
White collar employee private company	3.	
White collar employee pharmaceutical company	3.	
White collar employee private company	3.	
Private guard	5.82.40	
Private guard	5.82.40	
Private guard	5.82.40	
White collar employee fish company	7.7	
Salesman in a company	4.31	Sales workers
Representative catering industry	4.32.00	
Worker in a supermarket	4.51	
Shop-assistant dress shop	4.51.25	
Salesman Cheese shop	4.51.25	
Salesperson retail trade	4.51.25	
Salesperson mobile phones	4.51.25	
Street vendor food	4.52	
Postman	3.70.30	Service worker
Postman	3.70.30	
Cook	5.31.00	
Cook hospital	5.31.30	
Snack-bar manager	5.32	
Waitress	5.32.10	
Building care taker	5.51.00	

Janitor	5.51.25	
Janitor	5.51.25	
Janitor	5.51.25	
Janitor hospital	5.51.25	
Fire fighter	5.81.10	
Policeman	5.82.20	
Soldier	5.83.40	
Soldier	5.83.40	
Travel attendant	5.111	
<hr/>		
Drilling, machine operator	7.11.30	Blue collar worker
Blue collar worker sawmill	7.32	manufacturing
Blue collar worker sawmill	7.32	
Petroleum refinement worker	7.45	
Blue collar worker in a meat company	7.7	
Blue collar worker textile company	7.9	
Blue collar worker metal processing	7.2	
Blue collar worker private company	7-8-9	
Blue collar worker private company	7-8-9	
Automobile mechanic	8.43.20	
Automobile mechanic	8.43.20	
Automobile mechanic	8.43.20	
Blue collar worker electronic assembly company	8.5	
Plumber and pipe fitter	8.71	
Tile setter private company	9.51.50	
Warehouse man	9.71.45	
Warehouse man	9.71.45	
Lorry and van driver	9.85.55	
Lorry and van driver	9.85.55	
Lorry and van driver	9.85.55	
Construction worker	9.95.00	
<hr/>		
Self-employed		Self-employed
Self-employed hairdresser	5.70.25	
Self-employed hairdresser	5.70.25	
Bicycle repairer	8.41.90	
Self-employed in machine construction	8.4	
Self-employed in machine construction	8.4	
Free lance express service T.V. production	9.85.00	
<hr/>		
Student		Student
Student		
Student		
Student		

Student

Unemployed

Unemployed

Unemployed

Unemployed

Unemployed

Unemployed

Unemployed/Pensioner

Unemployed/Pensioner

Unemployed/ Pensioner

Unemployed/ Pensioner

Unemployed/Pensioner

Unemployed/Pensioner

Unemployed/Pensioner

Unemployed/Pensioner

Unemployed/Pensioner

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