BEHAVIORAL ECONOMICS AND THE BASIC INCOME GRANT: A CRITICAL EVALUATION

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This paper provides a critical discussion of the potential contributions of behavioral economics to the idea of a basic income grant. Behavioral economics shows that the consequences of a basic income may be significantly different than the ones predicted by the Standard Economic Model if more realistic assumptions of human behavior are taken into account. Four points from this literature will be discussed and linked to the Basic Income Grant idea: Prospect Theory, Motivation Crowding-Theory, Social Preferences, and Conspicuous Consumption. The paper argues that a basic income may be efficiency-enhancing under some conditions, but at the same time incentives related to positional concerns could increase wasteful expenditure after its implementation.

JEL Classification: D03, D11, D63, J22

Keywords: Basic Income, Behavioral Economics, Experimental Economics, Psychology.

1. INTRODUCTION

The field of behavioral economics can be broadly defined as a combination of economics and psychology that tries to capture human behavior in a more realistic but at the same time systematic manner. It makes extensive use of several different methodologies, such as laboratory and field experiments, surveys, theoretical models, brain scans, etc, and its findings have challenged the empirical validity of several assumptions of the Standard Economic Model.[1] It has also provided new grounds to the interpretation of several different policies targeted at improving efficiency in the economy. Several studies have been conducted to develop the understanding of topics such as decisions under risk and uncertainty (Kahneman and Tversky, 1979), consumer behavior (Thaler, 1999), intertemporal choice (Loewenstein and Prelec, 1992), the hidden costs of incentives (Frey, 1997) (Benabou and Tirole, 2003), and behavior in strategic interactions (Camerer, 2003). These contributions have shown to be useful to understand social and economic phenomena, and today the field is already part of the mainstream of the discipline.

Although several papers have addressed the idea of a Basic Income Grant (BIG) through the lens of microeconomic theory (Bowles, 1992) (Van der Linden, 1997, 2002) (Gamel at al., 2006), none of these studies have introduced insights from behavioral economics. To the author's knowledge, this article is the first attempt to bring together the potential consequences of the implementation of a BIG and the psychological insights that were incorporated into economics in recent years. The analysis reaches the conclusion that the microeconomic consequences of a basic income could be efficiency-enhancing, but at the same time incentives about positional concerns could be exacerbated, which could lead to wasteful and inefficient spending.

The structure of the paper is as follows: section 2 briefly describes the definition of basic income that will be used in this paper, as well as a brief description of the four points of behavioral economics that the author will address; section 3 discusses the first point, which is about how Prospect Theory changes the analysis about the perception that taxpayers would have of the segregation of the tax and the grant; section 4 analyzes the effects of a BIG on labor

[1] The traditional models in economics usually use the following assumptions of human behavior: 1. Unbounded Cognitive Capacity (absence of limits to rationality); 2. Unbounded Willpower (absence of self-control problems); and 3. Unbounded Selfishness (absence of social preferences) (Frey, 1997).

markets, particularly, how workers would move from one type of job to another based on their intrinsic motivation, and how their levels of effort would change after this movement; section 5 investigates the effects of income security on social preferences, and how cooperation in social settings is affected when income security is guaranteed; section 6 discusses the role of positional externalities on conspicuous consumption, and how a BIG would change the incentive to seek status consumption; section 7 concludes the paper.

2. BASIC INCOME AND BEHAVIORAL ECONOMICS: FOUR MAIN POINTS

Even though the central idea of providing an unconditional income does not differ from different studies on the topic, the definitions of a basic income grant used by authors may diverge to some extent. In order to avoid confusion, this paper will use the definition of a basic income grant provided by Van Parijs (2003):

> "A Basic Income is an income paid by a political community to all its members on an individual basis, without means test or work requirement." (2003, pg.4)

For the purposes of this paper, two additional assumptions will be considered: 1. only adults are recipients of the grant; and 2. the grant is financed through income taxation. These assumptions are made with the purpose of focusing on the more important aspects of the grant.

Due to the broad range that the field of behavioral economics has reached recently, many points of relatively minor importance could be made to analyze the full impact of the implementation of such grant on human behavior. The economic impact of these points would be largely insignificant, however. For this reason, the author will concentrate on what he thinks are the four most important topics in behavioral economics that can contribute to the basic income grant debate. The discussion will revolve around the following components: a) Prospect Theory – how reference-dependence and loss aversion dictates how a BIG is perceived by taxpayers; b) Motivation Crowding-Theory – how extrinsic incentives correlate with effort and intrinsic motivation, and how the dynamics of the labor market changes these variables under a BIG; c) Cooperation – how income security changes social preferences, how this movement alters cooperative outcomes when dealing with social dilemmas; and d) Conspicuous Consumption and

Positional Externalities – how a BIG affects the overall level of status-seeking behavior and the correlation of this effect with income inequality.

3. PROSPECT THEORY AND THE BIG

In decisions involving risk and uncertainty, the standard economic model usually assumes that decisions are based on final states, regardless of the changes in payoffs caused by the results of a person's decision. For example: a person with $100 who had $150 but lost $50 due to a bad outcome is assumed to perceive the final result the same way as if she had started with $50 and had won an extra $50. In both cases the person ended up with the same payoff ($100), so there is no reason to expect this person to prefer one over the other.

Kahneman and Tversky (1979), however, advanced through a sequence of experiments an alternative model of how people make decisions and judgments under risk and uncertainty. The results of these experiments suggested a better way of demonstrating a person's reaction when dealing with a sequence of payoffs. The Value Function derived from their results is shown below:

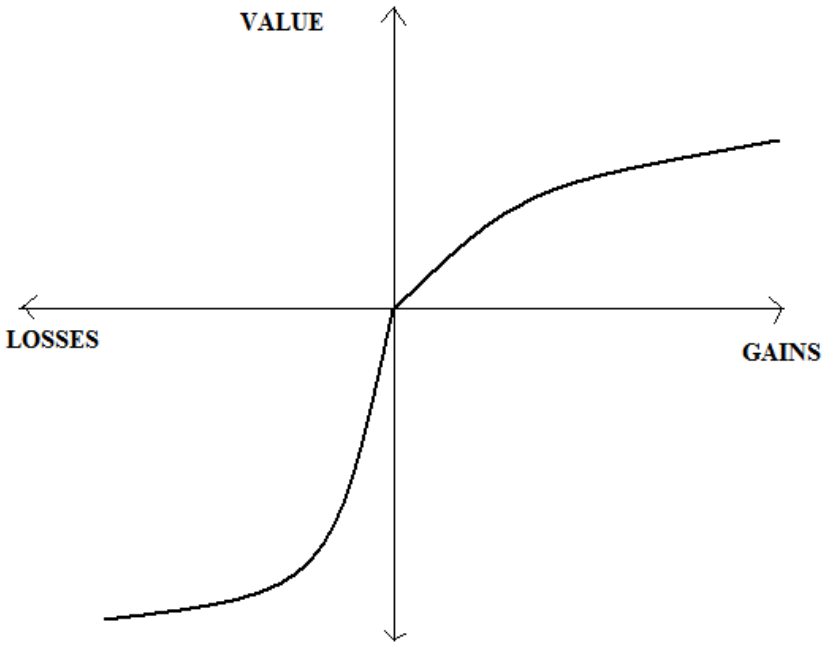

Figure 1: The Value Function in Prospect Theory.

The value function possesses three main properties:

1. People evaluate decisions over gain and losses with respect to some natural reference point, which is usually assumed to be the *status quo*, rather than assessing only the final state. This means that judgments about a sequence of outcomes are based on changes in wealth rather than absolute wealth. A gain of $50 followed by a loss of $30 is perceived as one gain and one loss, and not as a gain of $20;

2. The function is concave for gains and convex for losses. This implies that there is diminishing sensitivity as you move away from the reference point for both gains and losses (a movement from a gain of $100 to a gain of $200 has more impact than a movement from a gain of $1,000 to a gain of $1,100. Likewise, a movement from a loss of $100 to a loss of $200 has more impact than a movement from a loss of $1,000 to a loss of $1,100), which causes risk aversion for gains and risk-seeking behavior for losses;

3. Losses loom larger than gains (the loss function is steeper - a loss of $100 has a larger negative impact than the positive impact of a gain of $100). "The aggravation that one experiences in losing a sum of money appears to be greater than the pleasure associated with the same amount." (Kahneman and Tversky, 1979, p. 279).

These three properties combined help to explain several types of social phenomena that could not be explained by the standard model of expected utility.[2] The main idea is straightforward: people pay attention to all changes in outcomes and not only to the final state, and give more weight to negative changes than to positive ones. Humans are loss averse. These properties imply that it is better to segregate multiple gains (two gains of $50 are perceived as superior to a gain of $100), integrate multiple losses (a loss of $100 is perceived as superior to two losses of $50), segregate smaller gains with larger losses (a gain of $50 combined with a loss of $100 is perceived as superior to a loss of $50), and integrate smaller losses with larger gains (a gain of $50 is perceived as superior to a gain of $100 combined with a loss of $50).

The relationship between Prospect Theory and the BIG concerns the perception of the taxpayers: because both net payers and net benefiters receive the grant and pay the tax, the BIG automatically segregates the gain (the grant) and the loss (the tax) for these two groups of people. On the other hand, a Negative Income Tax (NIT) does exactly the opposite; net payers

[2] One example is the explanation of why does the same person buy insurance (risk averse behavior) and lottery tickets (risk seeking behavior) at the same time.

only pay the difference without receiving the grant, and net benefiters receive only the difference between the grant and the smaller tax, so the gain and the loss are integrated.

Prospect Theory assumes that taxpayers will have a different perception of these two systems, even though the final state is identical. Under a BIG, net payers (high income earners) face a sequence of outcomes that involves a smaller gain and a larger loss that will be segregated, since the person has to pay the required tax in full but she also receives the grant in full. Compared to the predictions of the Standard Economic Model and the integration of these payoffs under a NIT scheme, these net payers will perceive the segregation as superior to the other alternatives. This is easily demonstrated using the Value Function.

In Figure 2, b1 is the magnitude of the BIG, Vb1 is the value that the recipient of the grant attaches to it, t1 is the magnitude of the tax, Vt1 is the perceived negative value of having to pay the tax, nl is the magnitude of the net loss of this person (b1 – t1), Vnl is the value associated with this net loss if the tax and the grant had been integrated in one payoff, and Vbig is the actual value that this person will attach to the BIG when the gain and the loss are segregated (Vb1 – Vt1). As the graph shows, Vbig is larger than Vnl, so segregation is preferred to NIT by high income earners.

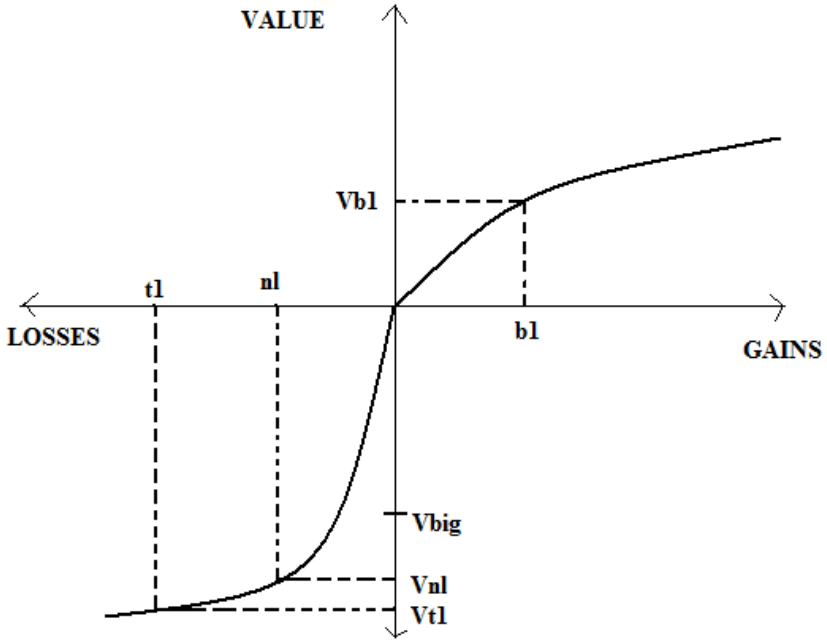

Figure 2: Segregating a smaller gain with a larger loss.

Net benefiters, on the other hand, pay less in taxes than the amount they receive from the BIG, and these payoffs are also segregated. Prospect Theory suggests that these people, contrary to what happens to net payers, will be more resistant to such a sequence, and would prefer to have these payoffs integrated into a smaller gain (they would receive only the difference). This prediction is confirmed in Figure 3. Again, b1 is the magnitude of the BIG, Vb1 is the value that the recipient of the grant attaches to it, t1 is the magnitude of the tax (which is smaller than the BIG in this case), Vt1 is the perceived negative value of having to pay the tax, ng is the magnitude of the net gain of this person (b1 – t1), Vng is the value associated with this net gain if the tax and the grant had been integrated, and Vbig is the actual value that this person attaches to the BIG when the gain and the loss are segregated (Vb1 – Vt1). As the graph shows, Vng is larger than Vbig, so integration is preferred in this situation.

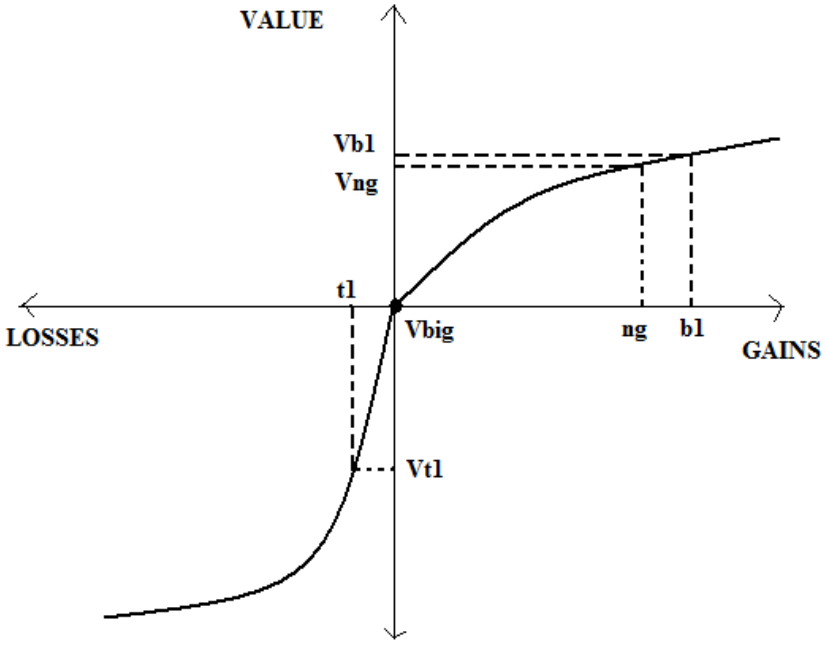

Figure 3: Segregating a smaller loss with a larger gain.

Because it is reasonable to assume that the support of the taxpayers concerning the BIG is important in order to finance it and maintain it, Prospect Theory enlightens the debate by arguing that the tax system should be dependent on whether a BIG is implemented, in which the gain and the loss are segregated, or a NIT is implemented, in which both outcomes are integrated. Specifically, if a BIG is to be implemented, a more progressive system of taxation would

probably be superior; the burden would fall more on high income earners, but they do not feel as averse to such net loss when the payoffs are segregated, and net benefiters (middle income earners), who do feel aversion towards such segregation, would pay a smaller amount and therefore would perceive this sequence as being less aversive. On the other hand, if a NIT is to be implemented, then a flatter tax system should be favored, because the tax burden would fall more on middle income earners, who actually do prefer the segregation of the payoffs, whereas high income earners, who do not like the segregation, would have to pay a smaller amount in taxes.[3]

In summary, Prospect Theory adds to the analysis by proposing that the tax system is not independent of the way the grant is paid to the population. The decision about whether to implement a BIG or a system closer to the NIT should be included in the analysis about which tax system to be implemented to finance it. If a BIG is implemented, the population would favor the change by a more progressive tax system. A flatter distribution of the tax burden would be faced with less resistance under the NIT scheme.

4. MOTIVATION CROWDING THEORY AND THE BIG

One of the main challenges of economic theory is to find what are the optimal incentives and institutions that increase productivity of workers without alienating them. Even though many different schemes can be investigated, the starting point is usually the same: implement an extrinsic incentive, be it in the form of monetary compensations for high effort or a fine for low effort, or use a non-pecuniary form of reward or punishment. The idea is simple because it is derived from the Law of Supply: if the marginal benefit of doing an activity increases and/or the marginal cost of doing it decreases, one will do more of that activity, and conversely. The corollary implies that, if one wants a person to do more of an activity or with a higher quality, one should consider paying her for working hard or punishing her if for providing a low level of effort. The intuition behind this idea is that people do not like to work, and therefore they need

[3] Naturally, the ideal situation would be to integrate the tax and the grant for net benefiters and to segregate them for net payers. But this would probably increase implementation costs significantly and could generate a sense of unfairness, since the rich and the poor would receive the nominal value of the grant in full, whereas the middle class would receive just a portion of it.

some sort of compensation for doing a specific activity, and that the more they are paid the harder they will work.

Cognitive Psychologists were the first researchers to challenge the idea that all tasks are similar in this aspect, and that they all generate similar degrees of disutility when performed[4] (Deci, 1975). They argued that activities performed by humans can be, in a relatively simplistic but useful manner, divided into two types: a) those with no intrinsic motivation; and b) those with high intrinsic motivation. Intrinsic motivation to perform an activity simply means that a person enjoys doing an activity for the sake of doing it, that is, she does not need any type of external compensation to perform a high level of effort. Although this distinction had not been explicitly used in economics at the time, there is nothing in it that contradicts the Law of Supply. An economist would argue that, if a person has high intrinsic motivation to perform a task, she will provide a high level of effort without compensation, but an even higher level of effort if she is compensated. If a person does not have any intrinsic motivation to perform a task, she will provide no effort or a low level of when there is no compensation, but she will increase this level of effort if an extrinsic incentive is implemented. The Law of Supply still applies.

But these experiments revealed another result, which contradicts the Law of Supply: for those tasks in which a person has a high intrinsic motivation to perform, the introduction of an extrinsic incentive (in the form of a monetary reward or a fine) undermines her intrinsic motivation, which may cause her to decrease the level of effort. This crowding-out effect occurs because, when the extrinsic incentive is absent, the reference point of the person performing the activity is "how much I enjoy doing it", whereas her reference point becomes the extrinsic incentive itself when it is introduced. She stops thinking about how much she likes doing it but instead about how much she is being paid. The person perceives this incentive as an instrument that undermines her self-determination (Frey, 1997) (Benabou and Tirole, 2003).

The motivation crowding theory literature has grown significantly since then, and several experiments conducted by economists in recent years have also shown this effect. Gneezy and Rustichini (2000a) conducted a field experiment to analyze the effects of introducing a daily fine in different day care centers in Israel for parents that arrived late to pick up their children. For another group of day care centers (the control group) the fine was never implemented. During the first four weeks they just observed the levels of late arrivals in both groups before introducing

[4] But they did not frame the idea using this terminology.

the fine. There was no statistically significant difference between the two groups with respect to the number of late parents. Then, on the fifth week, the researchers implemented a fine in one of the groups, and maintained the other group with no fine. From week 5 to week 16, the group with the fine observed an increase in the number of parent coming late, whereas there was no significant change in late arrivals in the other group. The fine was counterproductive, because it increased lateness instead of decreasing it. Before the fine, the number of parents coming late was smaller because parents felt, in a certain way, guilty for letting their children waiting for a long time. When the fine was introduced, the reference point changed: instead of thinking about the responsibilities of a parent, they were thinking whether the fine was small or large. Because the fine was indeed small, it was cheap to arrive late. The parents' intrinsic motivation to arrive early was undermined. Naturally, if the fine had been significantly higher, eventually the parents would have stopped coming late. But they would have done that because the marginal cost of getting late is large, and not because they had an intrinsic motivation to do so.

Motivation Crowding-Out also happens with rewards. Gneezy and Rustichini (2000b) report a set of experiments that show how small payoffs decrease performance of subjects in different activities compared to the performance of subjects who received no compensation to perform them. Performance only starts to increase again if the extrinsic incentive rises significantly, causing a situation that they describe as "Pay enough or don't pay at all."

Given this information, let us relate motivation crowding theory to what would happen in the labor market and in the workplace if a BIG is implemented. Consider two types of jobs: Job A ("bad job"), in which workers have no intrinsic motivation to perform; and Job B ("good job"), in which workers have a high intrinsic motivation to perform.[5] Although workers prefer Job B to Job A, many workers accept working at Job A because of the lack of income security faced by them. Since BIG provides income security, a natural consequence of its implementation is that the supply of labor will decrease for jobs in which people have no intrinsic motivation to perform, and it will increase for jobs in which people have a high intrinsic motivation to perform. This means that, with the BIG, people will move away from "bad" jobs to "good" jobs; they will

[5] It is possible, of course, that a worker may have a high intrinsic motivation to perform one type of job and another worker may have no intrinsic motivation to perform this same job. While this is true for specific tasks, it is much less controversial to group all jobs in two more general groups: a) those that provide freedom of choice to workers, independent and creative thinking, etc. (high intrinsic motivation); and b) those that require intensive repetition of tasks, it is very hierarchical, etc. (no intrinsic motivation).

go to jobs that they like more, instead of the ones that pay more. The changes in labor supply for these two types of jobs are represented in Figures 4 and 5.

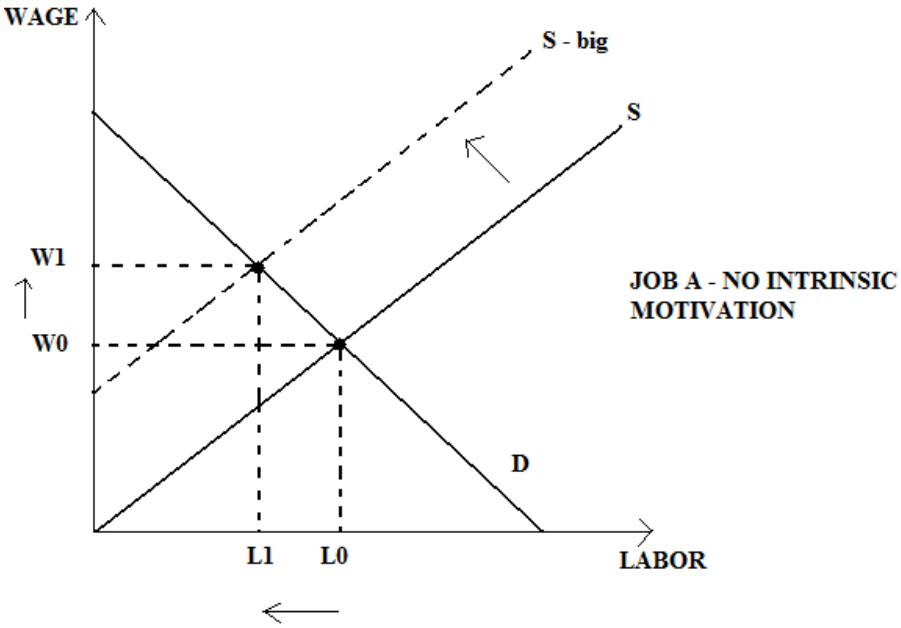

Figure 4: The decrease in the supply of labor for job A – no intrinsic motivation.

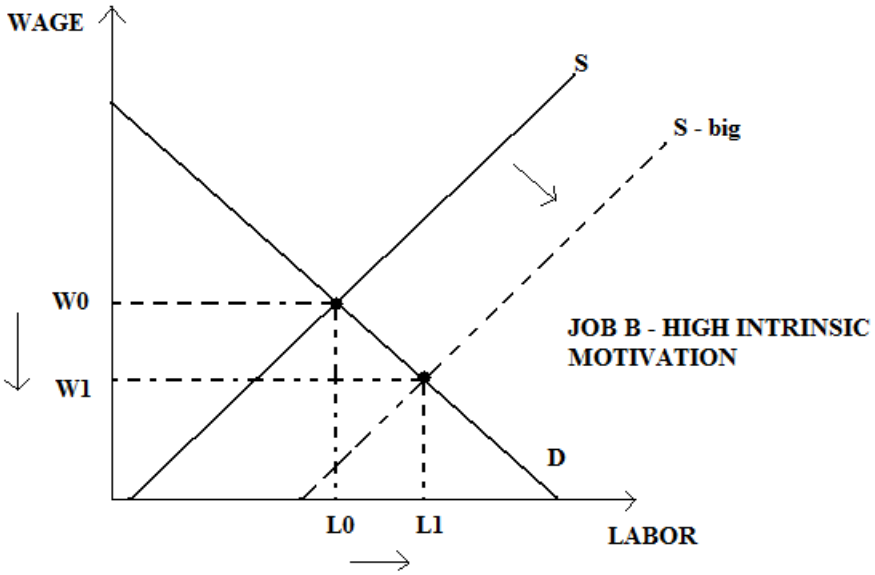

Figure 5: The increase in the supply of labor for job B – high intrinsic motivation.

These shifts in the supply curves will have the expected consequence on wages and employment: since there is less supply for jobs with no intrinsic motivation, the equilibrium wage for this job will increase and total employment will go down (Figure 4). And since there is more supply for jobs with high intrinsic motivation, wage levels in this group will go down and total employment will increase (Figure 5). This suggests that the first consequence of a BIG in the labor market is to cause an increase in the wage for those jobs that nobody wants to have, and a decrease in the wage level of those jobs that everybody wants to have.

Given these wage dynamics, what will happen to total effort? Figure 6 shows the relationship between the wage and the level of effort in Job A. Because workers have no intrinsic motivation to perform this activity, effort goes up only when they receive monetary compensation to do it, and the function is monotonically increasing. So, for "bad" jobs, a higher wage increases effort. And since a BIG raises the average wage of these jobs, workers who stay in this group will perform a higher level of effort.[6]

The relationship between the wage and effort at Job B is different. Workers at Job B have high intrinsic motivation, so they provide a positive level of effort even when there is no monetary compensation for it (the intercept in Figure 7 is positive). When the wage increases, the reference point of these workers changes as well; their intrinsic motivation is undermined, and since the wage is still at a low level, they actually decrease performance. As the wage continues to rise, it reaches a point in which the worker has no more intrinsic motivation to perform this task, but since the opportunity cost of leisure goes up, effort increases as well. So, for "good" jobs, the relationship between the wage and effort levels is not monotonic. Effort is high when there is no compensation or when compensation is very large (although here the worker does not have any intrinsic motivation left), but effort is low for small levels of monetary incentives. As a BIG reduces the wage level of these jobs, the effect that this change will have on the effort level of workers is ambiguous. It depends on the actual wage level and the change in supply after the BIG. Figure 7 shows a situation in which effort increases, but it is easy to see that it may also stay the same or decrease. The main point, however, is that the idea that workers may continue to become as productive as they were before the BIG was implemented is a

[6] In a more detailed and technical analysis, the labor demand curve would also shift when there is a change in the level of effort performed by the workers. But these changes would only intensify the magnitude of the wage and effort for Job A without changing the direction.

positive aspect of this grant. It suggests that the overall efficiency of the economy may increase (workers in both groups will be working harder) under some conditions.

From a normative standpoint, this change is also likely to be welcome. The dynamics that occurs in the labor market causes a higher fraction of the population to choose jobs that they enjoy the most, and for those who are still stuck at the "bad" jobs, they will receive higher compensation to do that, since the wage level goes up.[7] The frequently made argument that a BIG causes most people to stop working then loses some of its power, because the critics do not take into account that different jobs are perceived differently by workers. The incentives associated with no income security lead workers to give priority to monetary compensation, which naturally places a large fraction of them in jobs they do not want to be at. Instead of stop supplying labor, workers would move from jobs in which they have no intrinsic motivation to jobs with high intrinsic motivation.

If one includes motivation crowding theory and analyzes the likely consequences that a BIG would have in the labor market, the results show that a BIG would probably increase overall efficiency at the individual level, and it would generate changes that are also efficient at the aggregate level.

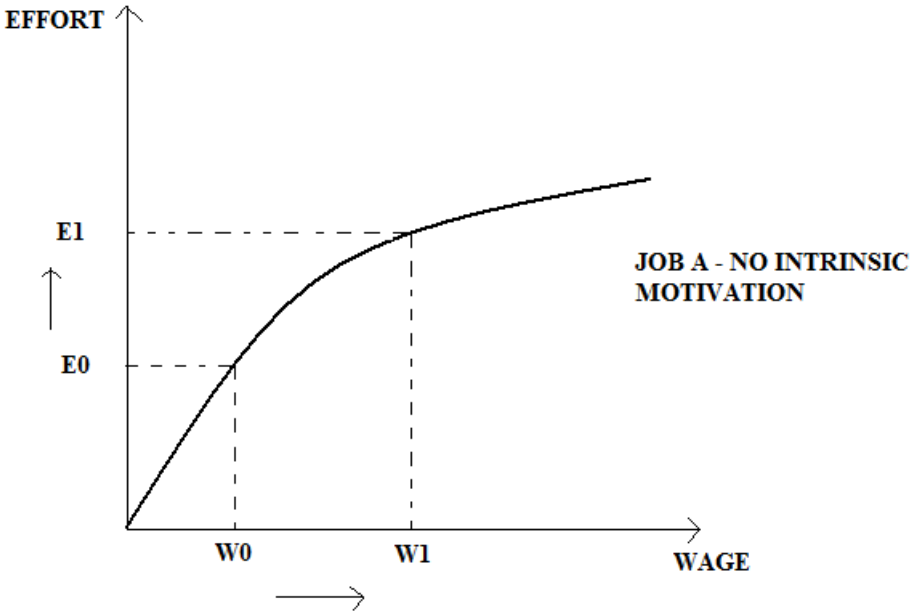

Figure 6: Effort function for job A – no intrinsic motivation.

[7] Another potentially beneficial consequence of this change is that the rate of mismatch between employers and employees will decrease. The BIG will provide the necessary security to workers so they can search for the jobs that they are best fit to perform and have high intrinsic motivation.

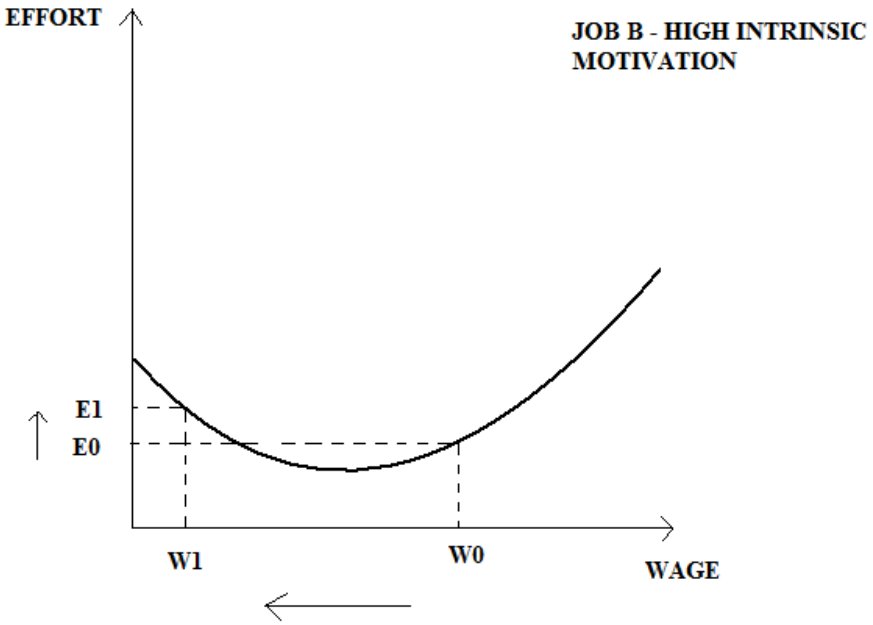

Figure 7: Effort function for job B – high intrinsic motivation

5. SOCIAL PREFERENCES, COOPERATION, AND THE BIG

Social interactions usually involve the cooperation of individuals in a specific group. A cooperation problem is usually defined as any interaction in which the Pareto Optimal outcome is achieved when everybody in the group contributes towards a specific goal, but each individual has an incentive to free ride on the cooperation of others, because the benefits to cooperation are divided equally among all members of the group, and cooperation is usually costly. Examples of cooperation problems are: team production, unions, social organizations, traffic jams, environmental degradation, the provision of public goods, etc.[8]

The prediction that everybody will free-ride in cooperation problems implies that the individuals deciding whether to cooperate or not are selfish, in the sense that they only care about their own payoffs. Although this has the standard assumption of most economic models, recent findings in behavioral economics have shown that humans possess social preferences. We have a tendency to behave non-selfishly in many important situations because we care about the outcomes and the intentions of others. Specifically, experimental evidence suggests that humans

[8] In economic theory, cooperation problems are usually modeled as a Prisoner's Dilemma.

act reciprocally: they are kind towards those who were kind to them, even if it is costly to do so, and are unkind towards those who were unkind to them, even if it is costly to do so. Feelings of reciprocity have been extensively documented and demonstrated in the behavioral and experimental economics literature in the past thirty years (Fehr and Fischbacher, 2002).

In cooperation problems, participants are usually willing to cooperate if others are cooperating, but will free-ride as soon as others begin to free-ride as well. The standard experiment to analyze social dilemmas in a laboratory setting is the Voluntary Contribution Mechanism (VCM) (also known as the Public Goods Game). In this game, a number of subjects is brought to the lab and divided into different groups, which usually vary from 3 to 10. Each subject is given an initial endowment of money. This endowment can either be kept, or some or all the money can be contributed to a public good. The amount contributed to the public good is then multiplied by some factor k, where $1 < k < n$, with n being the number of subjects in the group.[9] The total amount contributed, with its returns, is then divided equally among all members of the group (Thaler (1992) and Ledyard (1995)). Usually, this game is repeated for several rounds.

It is easy to see that the Nash Equilibrium (assuming self-regarding preferences) of this game is to contribute nothing to the public good, even though full contribution leads to a Pareto Superior outcome. However, the empirical evidence of the VCM shows a different pattern; in the one shot game, subjects contribute between 40% and 60% percent of the endowment, and the distribution of contributions is typically multimodal (the great majority contribute either zero, half, or everything). In multiple trials, two major conclusions emerge. First, on the initial trial, cooperation is observed at rates similar to those obtained in the one shot game (40% - 60%); second, within a few repetitions, contributions decline sharply, but they do not reach 0 (Thaler (1992), Ledyard (1995)). Although the free-rider problem becomes significant in the final rounds, the results show no compatibility with the model of self-regarding preferences, which predicts no contribution in all rounds. This result has been replicated many times, and the manipulation of some variables of the game (the value of k, communication, anonymity, etc.) may cause a significant change in the level of contributions (Ledyard (1995), Zelmer (2003)).[10]

[9] This is the necessary and sufficient condition to make the PG game a Social Dilemma.
[10] Ledyard (1995) provides an excellent survey of the main effects of structural, methodological, and demographic variables in the results of the VCM.

Some of these variables, such as communication, for example, were able to overcome the free-rider problem completely in the repeated game.

Pech (2009) conducted an extension of this game to investigate how cooperation and reciprocity are affected when a person in a position of power has income security or not. In this experiment, subjects were divided into groups of 3 to play a Public Goods Game. Then, a fourth person (the boss) was added to the group. The boss had the power to choose, in advance, the fraction of the total output produced by the individuals in this group that she wanted to receive. After observing this choice, the group selected the amount of their initial endowment (20 Experimental Units (EU)) that they wanted to contribute to a group project. Total output of the group was equal to twice the sum of contributions to the group project. Each worker received an equal portion of the total output transferred by the boss. Their final income in each period was equal to this amount plus the portion of the initial endowment not invested in the group project. There were two types of bosses: a boss whose final income was equal to the fraction of total output she chose to receive from the group; and a boss whose final income was equal to the fraction of total output she chose to receive from the group, plus a fixed endowment of EU 20 every period. Notice that the only difference between the bosses is that the second boss had income security; regardless of the level of cooperation of the group, she received 20 EUs every period. The first boss, however, depended only on the cooperation of the group.[11] In all treatments, the experiment was performed for 10 periods without the possibility of punishment and 10 periods with the opportunity of punishment in each period. The boss was the only one who could punish the players by reducing their income, after observing the contributions of each player. But punishment was costly for the boss: for each EU 1 spent by the boss to punish a player, the person being punished lost EU 3.

Figures 8 and 9 show the results of the experiment. UPBE is the treatment with the boss with income security, and UPBNE is the treatment with a boss without income security. The horizontal axis measures the degree of generosity of the bosses. A more generous boss is the one who decided to keep a smaller fraction of total output and transferred more to workers,

[11] The experiment was played for real money. The Experimental Units that the subjects earned during the experiment were exchanged for dollars at the end of the session, and this was announced before the session began. Each subject earned an average $20 for a 90-minute experiment.

increasing their MPCR.[12] The vertical axis measures the average contribution made by the players to the group project in Experimental Units (20 was the maximum). The white bars indicate the level of cooperation for each level of generosity of a boss with income security; the gray bars indicate the level of cooperation for each level of generosity of a boss without income security.

In both the "No Punishment" and "Punishment" conditions, the results were similar. When both bosses were not being generous, the players who had a boss with no income security cooperated more (the gray bars are higher than the white bars when the MPCR is low). But when both bosses were being very generous, the opposite happened. Players who had a boss with income security contributed more (the white bars are higher than the gray bars when the MPCR is high).

This effect implies that humans become more sensitive to acts of generosity when the person making the generous or ungenerous act has some income security. If a BIG is implemented, one should expect the society as a whole to become more sensitive to kind and unkind actions. Retaliation of ungenerous behavior will increase, but at the same time reciprocity of generous behavior will also increase. This means that a BIG would probably cause people to be nastier than they are now to unkind people, and kinder to kind people. Cooperation would decrease compared to the actual level if incentives are low, but would increase if incentives are high.

[12] The MPCR is the Marginal Per Capita Return of this game. Because total contributions are being multiplied by two and divided equally among the three players, for each dollar that a player contributes, this dollar will be multiplied by two, but it will be divided by three, so the player who contributed the dollar receives only 2/3 back. If the boss is extremely generous and decides to transfer everything to the players, the players will face an MPCR of 2/3, which is the maximum possible. If the boss decides to keep 100% to herself, the players will not receive any money back from their contributions, so the MPCR in this case is equal to zero.

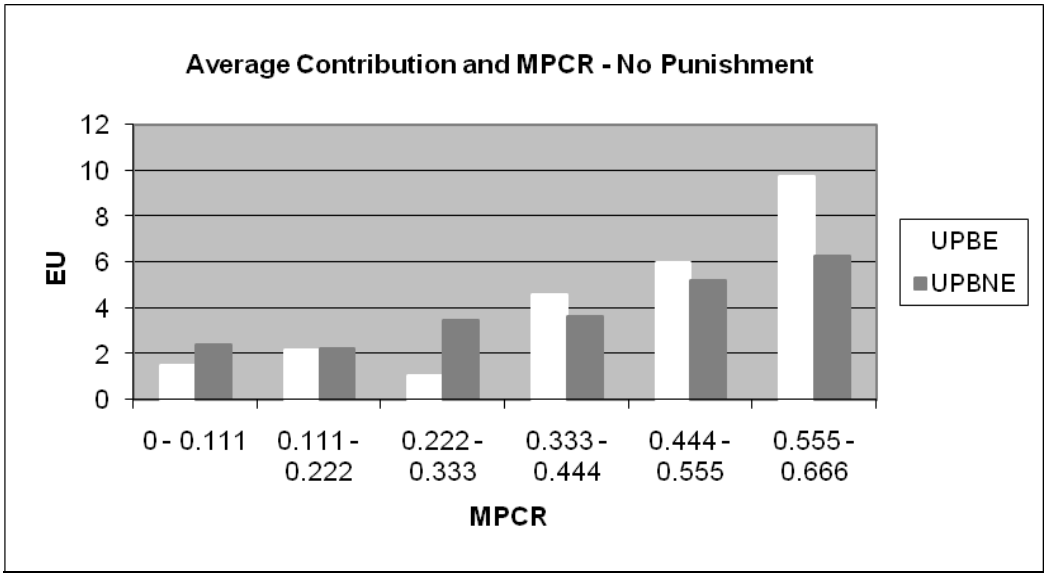

Figure 8: Cooperation in the No Punishment condition.

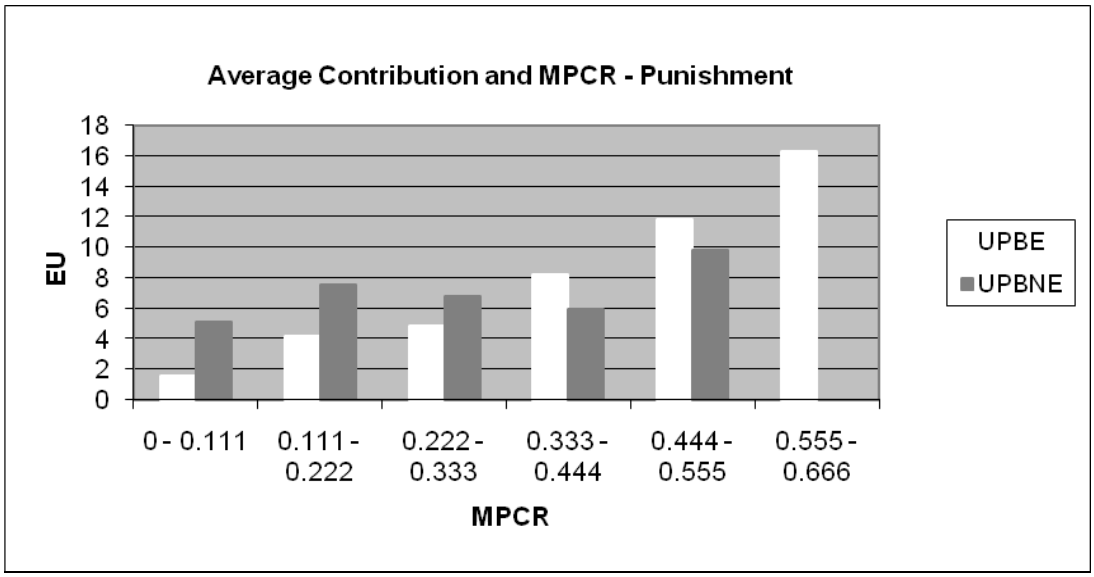

Figure 9: Cooperation in the Punishment condition.

6. CONSPICUOUS CONSUMPTION, POSITIONAL EXTERNALITIES, AND THE BIG

In situations of asymmetric information, in which one person knows more about her own characteristics and attributes than others, it is natural to expect the less informed party to use screening devices to gain this information, or the more informed party to signal these

characteristics if it is to her advantage to do so (if she has "good" characteristics, the signal is useful to distinguish her from those with "bad" attributes, and if she has "bad" characteristics, the signal may be useful to confuse the less informed party about her "type"). Empirical evidence shows that status-seeking behavior is a widespread phenomenon (Frank, 2005). Virtually everybody seeks status, be it in their professional, personal, or social life. Particularly in the social sphere, a person can signal her status by purchasing "visual" goods that are considered exclusive of those with high status.

But status is a good with a fixed supply. It is impossible for everybody to have high status, because it is determined according to your relative position and not your absolute condition. Imagine that you have the best automobile in your neighborhood. When one of your neighbors buys a more expensive car than yours, she imposes a negative externality on you (you are worse off because now you have only the second best car in the neighborhood), even though you still have the same car as before. In economics, these are called positional externalities, which are generated changes of one's rank within one's reference group.

Conspicuous consumption is one form of positional externality. Goods that signal status are called positional goods.[13] Emulating the rich is a behavior that will generate negative externalities on those that were passed by you in terms of relative consumption. But when they become worse off, they also have an incentive to spend money on positional goods, which will make others worse off, creating an expenditure cascade. Although I do not pay direct attention to what billionaires buy, billionaires put pressure on the millionaires, who will spend more on positional goods to look like billionaires. But when millionaires do that, the group right below them becomes worse off, and they will have an incentive to spend more on positional goods, which then will put pressure on the middle class, and so on and so forth, until it reaches the very poor.

This race to the top is wasteful. Even though the dominant strategy of an individual is to spend money on a positional good, regardless of what others are doing (if others are not buying, I have an incentive to buy because then I will have high status with certainty, and if others are buying, I have an incentive to buy to avoid being perceived as a low status person with

[13] Houses, automobiles, accessories, clothes, and most goods that can be sold at high prices fit the description of a positional good.

certainty), the result is inefficient from the point of view of the society.[14] The inefficiency is generated because in the end, when everybody buys the positional good, it is still not possible to tell who has high status and who has low status. The person only spent money on something that she thought would increase her status but did not, whereas she could have spent this money on non-positional goods, like education, healthcare, etc. When everybody purchases the positional good, their status in the end does not change much, and they could have used it to more productive activities.

What is the effect of a BIG on the total amount of wasteful expenditure related to conspicuous consumption? The question is valid, because it would be unfortunate to observe recipients of the grant spending it on positional goods instead of goods that have much more intrinsic value to them.

It is probably not very controversial to assume that the BIG will be largely spent by the population. The evidence of the "mailbox effect", which states that people's propensity to consume windfall income is very high compared to other sources, is overwhelming (Thaler, 1999). If the population will then consume, should we expect them to spend the grant more or less on positional goods? The answer to this question depends on the distribution of income and the incentives associated with this distribution. It is unambiguously assumed that the implementation of a BIG would reduce income inequality significantly. What is then the effect of a more egalitarian distribution of income on conspicuous consumption? The argument can go either way, and to this date there is no strong empirical evidence of this effect. A smaller degree of income inequality may reduce conspicuous consumption because there would be less pressure coming from the rich in the expenditure cascade, since the number of extremely rich people would probably decrease. But at the same time, a reduction in income inequality increases the marginal benefit of a dollar spent on conspicuous consumption. When income inequality is high, if I spend a significant amount on positional goods, my rank will not increase as much, because there are still a lot of people richer than me spending more. In a more egalitarian society, however, I have the opportunity to improve my relative position significantly if I spend a considerable amount of money on positional goods, since a larger fraction of the population is closer to me in the income ladder. This point should be taken into account before trying to

[14] Status-seeking behavior is another example of a cooperation problem, which can also be modeled as a Prisoner's Dilemma.

implement a BIG. It is still unclear whether wasteful expenditure will decrease or increase with a BIG, so more empirical and experimental studies should be conducted to investigate this question. Ultimately, the answer will depend on whether people pay more attention to the actual rank or to the distance from others in terms of status.

7. CONCLUSION

This paper has shown that behavioral economics has a lot to contribute to the BIG debate, and even though it points to a positive direction by stressing consequences of the BIG that would be efficiency-enhancing, it also highlights the possibility of a potentially major shortcoming of the idea. The points were:

Prospect Theory states that people are loss averse and that they assess a sequence of outcomes based on changes in wealth rather than absolute wealth. A Basic Income Grant would segregate the gain being received from the grant with the loss associated with the tax that middle-income and high-income earners would have to pay. A Negative Income Tax would integrate this gain and this loss, so high income earners would just have to pay the difference and middle-income earners would just receive the difference. High income earners would be more tolerant to a Basic Income Grant because it is better to segregate a smaller gain with a larger loss, whereas middle income earners would be more tolerant to a Negative Income Tax Scheme. This suggests that the grant scheme should be matched with tax system to be perceived in a more favorable manner by the population. A Basic Income Grant should be followed by a more progressive tax system and a Negative Income Tax by a flatter tax distribution.

Motivation Crowding-Theory states that the relationship between the magnitude of an extrinsic incentive and the level of effort being performed in a task is not monotonic for activities in which people have high intrinsic motivation. Specifically, people do provide a relatively high level of effort in these activities if there is no monetary compensation attached to it, but reduce performance when a small compensation is introduced, because their intrinsic motivation has been undermined. If the compensation continues to increase, effort will eventually increase, not because of intrinsic motivation, but because of the high opportunity cost of not working hard. When a Basic Income Grant is implemented, workers will move away from “bad” jobs (no intrinsic motivation) to “good” jobs (high intrinsic motivation), increasing the wage level in the

former and decreasing it in the latter. A higher wage in "bad" job means that workers will increase effort, and a lower wage in "good" jobs leads to an ambiguous result. Effort levels may increase, decrease, or stay the same. Therefore, a BIG has the potential to increase efficiency in the labor market if the effort levels increase in the "good" jobs, and at the same time it generates a dynamics that is welcome from a normative standpoint; a larger fraction of workers would seek their preferred jobs, and those workers who would get stuck at the "bad" jobs would receive a higher wage.

People have to constantly solve cooperation problems in the social interaction they participate in, and experimental evidence shows that feelings of reciprocity are important to maintain a cooperatively social norm. The section on social preferences described an experimental study that suggests that income security has the effect of causing people's feelings of reciprocity to become more sensitive to the generosity of others; income security leads us to retaliate more unkind behavior and to reciprocate more kind behavior. Whether this effect will increase overall cooperation in our society when a Basic Income Grant is implemented is not entirely clear, because it depends on whether decision makers will become more or less generous when they possess income security.

The paper then analyzed the likely consequences that a Basic Income Grant would bring to the degree of wasteful expenditure in positional goods. The reduction in income inequality reduces the pressure caused by the expenditure cascade, and therefore decreases the pressure to spend more on status goods. But at the same time, a lower level of inequality raises the marginal rank benefit that a person gets by spending a dollar on a positional good, since the distribution is less wide. Which effect would dominate with the implementation of a BIG is still unclear due to the lack of empirical and experimental evidence.

Following Noguera and De Wispelaere (2006), the author also pleas for the use of laboratory experiments to simulate a Basic Income Grant. Laboratory experiments have the advantage of providing a controlled environment, in which on variable can be manipulated while maintaining all others constant. There is still a lot to know about the idea, and it is time to seek alternative methodologies to better understand its consequences.

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