



Basic Income and Minimum Income: a Portuguese Case

Analysis of Past Basic income Experiences and Consequences of a Potential Introduction in Portugal

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Abstract

English Version

The idea of Basic Income has gained ground around schoolers and public authorities. Several experiments have been conducted over the last decades with interesting results being observed. At the same time Minimum Income Schemes across, the most similar type of policy in place, seem incapable of achieving their proposed goals. This work selects four Basic Income experiments and compares their results with the results of the Portuguese Minimum Income Scheme. It shows that the Portuguese current Scheme does not fully accomplish its proposed goals of reducing poverty while promoting inclusion. Moreover, it is demonstrated that Basic Income Experiments delivered motivating results both in terms of shrinking poverty and stimulating labor. This work argues that the current Portuguese Minimum Income Scheme needs a remodeling and that the idea of Basic Income should be considered as an alternative policy.

Portuguese Version

A discussão à volta da implementação de um Rendimento Básico Universal tem ganho adeptos junto de investigadores e entidades públicas. Várias experiências foram levadas a cabo nas últimas décadas, produzindo resultados interessantes. Simultaneamente, as políticas de Rendimento Mínimo em vigor – o tipo de política que mais se assemelha a um Rendimento Básico Universal – têm sido incapazes de cumprir os pressupostos em que foram fundados. Este trabalho seleccionou quatro experiências com Rendimento Básico Universal e comparou os seus resultados com os resultados produzidos pelo esquema de Rendimento Mínimo Português. É demonstrado que o esquema Português não é capaz de cumprir os objectivos a que se propõe quer a nível da redução de pobreza, quer na ajuda à inserção social e profissional. É ainda evidenciado que as experiências de Rendimento Básico Universal foram capazes de mitigar os índices de pobreza enquanto promoviam o emprego e a inclusão. Este trabalho considera que o esquema de Rendimento Mínimo Português necessita de ser reconfigurado e que a ideia de um Rendimento Básico Universal devia ser considerada como uma possível política alternativa.

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1. Introduction

Data shows that the world has never been wealthier (World Bank, 2017) and the last decades presented an outstanding decrease in extreme poverty. This reduction was particularly remarkable in nations that enjoyed explosive growth such as those in the regions of East and South Asia. However, as of 2011 around 14% of the world population was still severely poor. In addition, the recent financial crisis and the economic deceleration that followed caused some setbacks on this matter. For example, in the period between 2007 and 2014, out of the 35 members of OECD, 21 saw an increase in the share of population below their poverty threshold (OECD, 2017). In line with this recent trend, we observe a rise in market inequality income in both developing and developed nations (ibid). The consequences of inequality and poverty on matters like social mobility, growth, crime, or education have been more or less unanimous among literature (Berg et al, 2014; Corak, 2013; Fajnzylber et al, 2002). It is undisputed that a society which struggles to grow, has low social mobility, increasing levels of crime, and in which education is not efficient is one where freedom and individual justice are endangered. Justice is a fundamental matter in every society. It is as John Rawls stated “the first virtue of social institutions” (Rawls 1971, 3). Although potentially skeptical about a Basic Income (Noguera et al, 2013), Rawls’ Liberal-Egalitarianism is a trend followed by most supporters of Basic Income (BI) and the moral substance of the idea. This idea gained momentum with all of the above leading to a growing discussion about the concept and its potential. We have seen experiences being conducted at smaller scales throughout the world with interesting results. The closest idea that current welfare policy uses at large scale is Minimum Income (MI). This policy was first developed over 50 years ago and it is now used in most developed regions and some under-developed nation with the goal of alleviating poverty and promoting employment. However, we will see that its success in doing so can be questioned. For this reason and given the similarities between a Minimum Income and a Basic Income in terms of essence and goals I believe that developing a work that allows us to revisit some of the most thorough BI experiments ever conducted in connection with an analysis about the current Portuguese MI scheme can be valuable. It will allow us not only to understand better the effectiveness of the Minimum Income policy in Portugal, but also to comprehend the potentialities of a BI in the country in a time where several cities and authorities around the world are developing and implementing pilots of the scheme. Given that the goals that were on the base of implementing Minimum Income Schemes are related

with the subjects of Poverty and Labor Inclusion, I will perform my analysis by covering these two topics and the potential effects of the two measures on both.

A couple of limitations need to be considered. I will use the BI definition in Van Parijs (1995) – a universal and unconditional, no-means tested benefit which is big enough to cover a individual's basic needs - but since only a limited number of BI experiments were ever conducted, the width of choice is reduced and some of the BI assumptions that my definition uses will need to be withdrawn. Also, the BI experiments selected for the purpose of this work were not exactly intended to answer the questions I aim to respond here. Thus at some moments conclusions will need to be taken carefully and data will have to be examined in an indirect way.

I do not expect to provide full and straight answers, but what I intend and hope to do over this work is to contribute to the debate on Basic Income and help to raise questions regarding the status quo of current welfare policy.

2. Literature Review

2.1 - A Brief History of Basic Income

In this first chapter I will briefly go through the history of Basic Income. My aim is to point out the most important contributions to the matter over the last 500 years, but also to show that the issues that are at the center of discussion today have been under argument since the first theory on BI was developed.

To track back the first ideas on a BI we have to travel to the Renaissance. In the 16th Century Thomas More and Johannes Ludovicus Vives, on discussing justice and equality, would draw the very first ideas about the subject. It was in order to address crime and poverty that the concept was first developed.¹ The authors saw BI as a potential response for such issues, and Vives, the “father” of BI drew the first proposal. His plan would be financed by the local government and be mainly targeted to the poor with the condition that the entitled person would be willing to work². A new approach is observed in the 18th century when Thomas Paine, brings the concept of universality to the table. Paine’s vision was that land is common property of all men, and that for this reason, those who own land were in debt to the rest of the community. Hence, a BI should be universal and funded through a so called “ground rent”³ that these owners owed to the community (King & Marangos, 2006).

Bertrand Russell, in accordance to Paine’s vision, designed in the 20th century his own plan on a BI. Such plan would be divided in two: a small income, secured to all whether or not they work, and a bigger transfer that should be awarded to those who engage in activities who are to be considered, useful by the community⁴.

This universality continues in the 20th century with Nobel Laureate James Meade. In his work on the subject, which lasted his entire career, being lastly presented in *Agathotopia*⁵, Meade

¹ More was openly against death penalty, claiming that “Instead of inflicting these horrible punishments, it would be far more to the point to provide everyone with some means of livelihood” Source: Adams, R & Logan, G (eds) 2002, *Utopia*, Cambridge University Press, Cambridge.

² Source: Tobriner, A (ed) 1999, *On the Assistance to the Poor*, Reinassance Society of America, Canada.

³ In a pamphlet written in 1797 called *Agrarian Justice*, Thomas Paine describes ground rent as a tax that should be paid by land owners once by generation. Paine proposes a 10% tax on direct inheritances, and a higher rate for indirect inheritances.

⁴ Source: Russell, B 1996, “Work and Pay”, in *Proposed Rods to Freedom*, Project Gutenberg Etext, viewed 23 September 2016

⁵ The word comes from the merge of the words *Agathos*, which means good, and *Utopia*. It would describe a place that would be good enough to live in, opposing to Thomas More’s *Utopia*, where the author describes a perfect but unreachable model of society

proposes a “social dividend”, which should be unconditional and equal to every citizen. According to the Nobel Prize winner, the dividend would be the right tool to alleviate poverty and to create a more just and efficient economy.

In the second half of the century Milton Friedman proposed the idea of a Negative Income Tax (NIT) as a new policy on social welfare⁶. Since I will describe some NIT experiments later on seems sensible to explain briefly how does a NIT work. The State defines a certain threshold and households whose income falls below that threshold are awarded a subsidy. The size of the subsidy would depend on the established tax. If for example the threshold was defined at 5000\$ and the household or family had a total income of 4000\$, then for a tax of 20%, the subsidy would be 200\$. This is the result of applying the 20% tax to the gap between the earned income and the border defined by the government (Moffitt, 2003). Friedman’s idea brought attention to the subject of BI in the US and in 1968, James Tobin, Joseph Pechman and Paul Samuelson were amongst a group of 1200 economists who signed a document calling for the Congress to introduce a system of income guarantees. The proposal would ultimately be rejected by the Senate but opened room for the first experiments around the world, and launched the discussion in Europe.

As I stated in the introduction of this chapter, what the history of BI tells us is that today’s questions regarding the proposal are the ones that were raised by most authors in the past. From More’s concern on Labor supply effects, to Paine’s method of funding it. Russell’s vision on freedom or Friedman’s approach on welfare systems are all items under discussion today. Such subjects are the Nemesis of a BI, and henceforth the topics that I intend to discuss in this work.

2.2 - Basic Income vs Minimum Income

In this section I will review what the literature says about the theoretical effects of Basic Income and Minimum Income over the subjects under analysis in this work: Poverty and the Labor Market. In order to better understand the two policies and their potential consequences let me briefly describe their proposals and its differences. A Basic Income, as I stated before, is in the definition I am using here a no means-tested universal cash benefit. It is awarded to

⁶ The Negative Income Tax (NIT) idea was first ever proposed in his book *Capitalism and Freedom*, but was constantly developed throughout Friedman’s career. The Nobel Laureate saw NIT as a solution to eliminate the welfare trap and develop an incentive to work for those under state assistance. Moreover the policy would also allow for a reduction in Bureaucracy and Administrative Costs raised by all the multiple programmes that were and still are today in place to assist the poor.

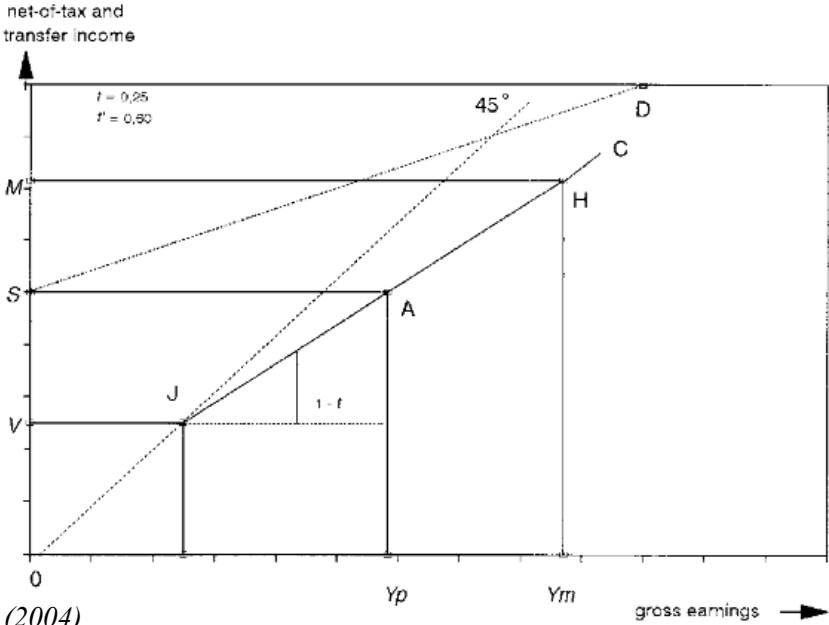
every citizen regardless of income or work situation and its amount is similar to all citizens (Van Parijs,1995). On the other hand a Minimum Income is a benefit awarded to those households who fall in the poorest deciles of society as a measure of providing a safety net below no one should fall. The subsidy covers a gap between the individual’s income and a certain amount that the State considers as a fair amount under which no citizen should live on. The measure is usually linked to an inclusion goal and beneficiaries are often obligated to either perform work or pursue some type of training.

2.2.1 - Basic Income vs Minimum Income: Poverty – A Fair and Equal Society

Current poverty rates are one of the main arguments of BI supporters. They believe that through Basic Income we are able to reduce more effectively the incidence and severity of poverty. By being unconditional, BI breaks the link between work and income and could ultimately intervene amongst those who fall in the poverty trap that current welfare creates.

To comprehend this argument better let us compare the two schemes regarding earned and unearned income. Fig. 1 shows us the differences between conditional and unconditional benefits in the presence of a minimum wage. Given that Portugal, the nation under analysis, falls in this category – a conditional transfer in the presence of a minimum wage – the example seems relevant.

Figure 1 - Conditional vs Unconditional Welfare System



Source: Groot (2004)

On the horizontal axis we have gross labor earnings and on the vertical axis we see net of tax and transfer income. The line \overline{SD} represents the unconditional benefit – Basic Income - summed to the minimum wage with a single tax rate equal to $t = 60\%$. It is important to note that there is a difference between the withdrawal rate and the rate applied to earnings. The first represents the percentage of every extra dollar earned captured by the scheme. The second is just the usual tax rate on earnings. The line \overline{SAHC} represents the conditional benefit. The point S represents the social minimum amount, meaning the value that the State defines as the one that no beneficiary should fall below. In the BI case we have a flat tax rate $t = 60\%$ while on the other, the rate is $t = 25\%$, taking into account the potential costs of each policy⁷. With a conditional system those who are unemployed get earnings equal to the line \overline{OS} . For a withdrawal rate of 100%, like in the Portuguese case, meaning every extra euro earned above the level S is captured, those who are employed under the conditional system, stay in the line \overline{SA} , the poverty trap line, until their revenue is bigger than Yp ⁸. The poverty trap means that if a person is under the conditional assistance it does not compensate to perform any work that does not raise the earnings above that level. In the graph we see that the benefit is only a little below the amount defined as Minimum wage, M . This is usually the case in countries that support the two policies (Frazer&Marlier, 2016). Given that most people who face this poverty trap are under qualified, meaning low skilled, and are unable to find a job that pays a salary much higher than the ruled minimum wage, there is usually no escape from the trap⁹. With a BI programme, the poverty trap disappears given that as line \overline{SD} shows, every extra euro earned is not absorbed, although to be sustainable the flat tax rate considered should be raised (in this case $t'=60\%$). Since every citizen would receive the benefit, the system would generate net earners and payers, depending on the amount of earned income. In the end of the day, given that the flat tax rate would suffer a substantial increase it is straightforward that most households would be net-payers and thus would be worse off. However, when we compare the two we see that if the social minimum amount is kept as the same level, no one would fall below this level with BI. Moreover, since the line \overline{SA}

⁷ It is worth mentioning however that although costs could increase with a basic income delivered to everyone the bureaucratic costs would be highly reduced given that the programme would be no means-tested. Moreover there would be no possibility of giving the benefit to someone who should not be entitled to it

⁸ It is relevant to notice that in the Portuguese case the line SA, depends on the type of household or family. Given that when calculating the minimum amount a household or family should receive, the State takes into account the family's composition, each family will have a different threshold. Hence the line \overline{SA} will vary across the population

⁹ In Portugal for example, the percentage of Minimum Income beneficiaries' who have secondary or higher education are only 9% against 29% of the entire population (Social Security, 2016; Statistics Portugal, 2016)

disappears, everyone that was on the poverty trap before and decides to engage in paid work is awarded with a net income above the level permitted with Minimum Income.

The transition to a BI in the terms here proposed is not Pareto efficient and would raise discussion over the issues of justice and reciprocity. However, it is clear that BI presents a better model to tackle poverty amongst the lowest deciles of society. By eliminating the poverty trap that current Welfare promotes, BI is able to allow all of the households who were under this trap to increase their net earnings through paid work and at the same time avoid for any of them to fall below the social minimum that was already fixed.

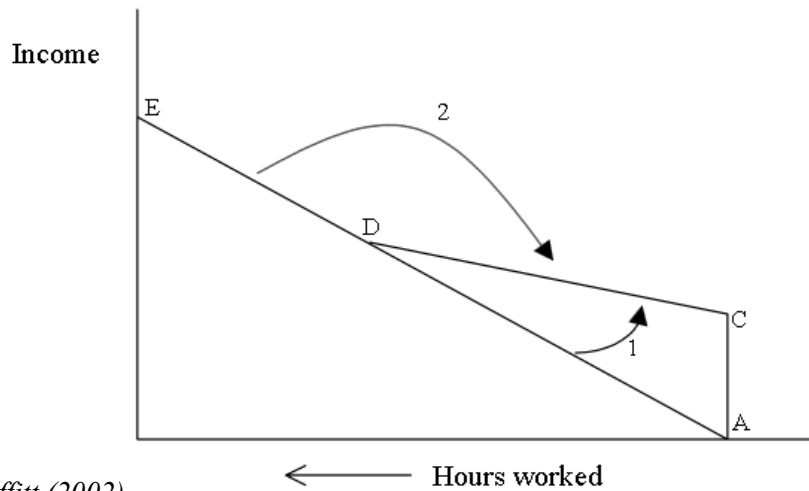
2.2.2 - Basic Income vs Minimum Income: The Labor Market

We have seen in the previous chapter how by eliminating the poverty trap, BI could create an incentive for the unemployed under assistance to perform paid work. However, given that the scheme would no longer be conditional or means-tested – like in the case of a Minimum Income - and that the amount delivered would be enough to cover the beneficiary's basic needs, an impact on the labor market should be expected. Critics of the scheme often claim that the incentive to work would be strongly reduced, thus a decrease in the number of hours worked would be observed, and that this would result in a complete remodeling of the labor market (Anderson & Block, 1993). In this chapter I will analyze these concerns. To make the analysis more harmonious I will adapt the model used in Moffitt (2002).

The model goes as following: the individual chooses Leisure(L) and Consumption (C) with a budget constraint equal to $PC = N + W(T - L)$. P being the price, N the unearned income, W is the wage rate and T is the total time available. If we consider Hours of work, H , as $H = T - L$, then the individual will choose his utility over the function $U(H, Y)$, maximized to $N + WH = Y$. Adding now a benefit $B = G - t(WH + N)$ we have a new budget constraint equal to $W(1 - t)H + G - tN = Y$. G is equal to the amount given to those with zero income – in fig.1 this would be the equivalent to S - and t is the marginal tax rate. Minimum Income and Basic Income will differ on the size of G and the marginal tax rate t used. Over the next sections I will analyze what are the different results of changing these variables.

I would like to start my analysis with the implementation of a Minimum Income from scratch. Fig.2 shows the results of this implementation

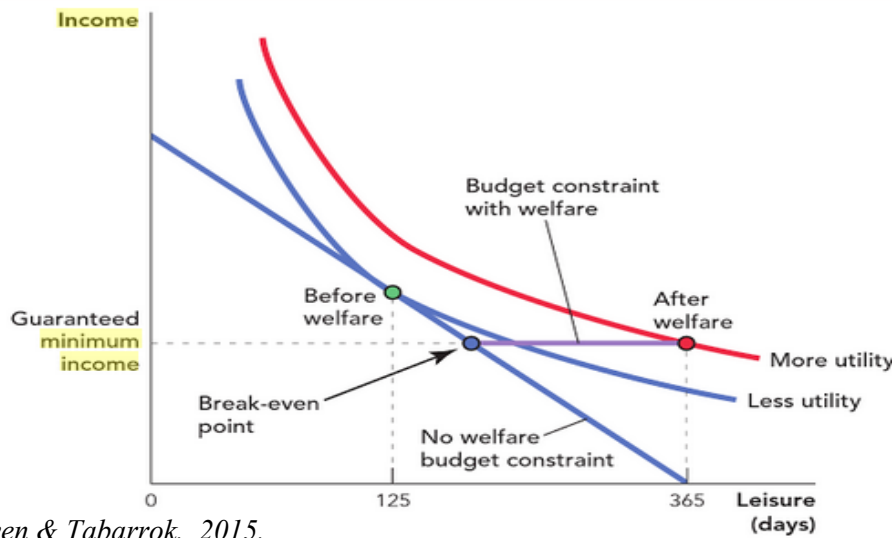
Figure 2- Introduction of Minimum Income



Source: Moffitt (2002)

CD represents the budget constraint $W(1-t)H + G - tN = Y$. The line CD intersects AC at the point defined in the model as G . AE is the constraint for an economy with no welfare policy in place. The arrows 1 and 2 show what the consequences of introducing the measure to both people earning an amount below and above the level are. If they earn an amount that is located below D , in the line AD , that means that they are better off by being under welfare assistance even if they reduce the numbers of hours worked. For people above the level D they would still reduce the number of hours worked even though they would face a reduction in their income. In this example the marginal tax rate is equal to the slope of CD , meaning $-W(1-t)$. However, it is usually the case where $t = 1$. Fig. 3 shows that the results are similar for that case. In this figure we have an example of the transition from a regime with no Minimum Income Scheme in place to a regime where a Minimum Income is delivered with a marginal tax rate, $t=1$.

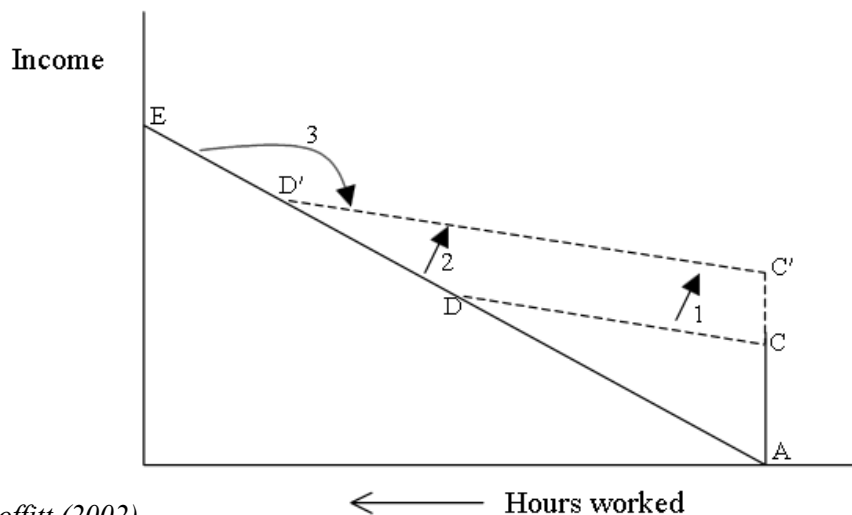
Figure 3 – Introduction of Minimum income – $t=1$



Source: Cowen & Tabarrok, 2015,

Until the worker is able to go above the break-even point he has no incentive to enroll in labor activities. As I stated above, introducing a BI presents a different structure, not only because the benefit becomes universal but also because the amount distributed to each individual is substantially higher and the marginal tax rate on the transfer is zero (although as we saw the flat tax rate actually increases to make up for the cost). Let us understand now how a change in G , the value of the benefit, affects the dynamics.

Figure 4 – Effects of Increasing G

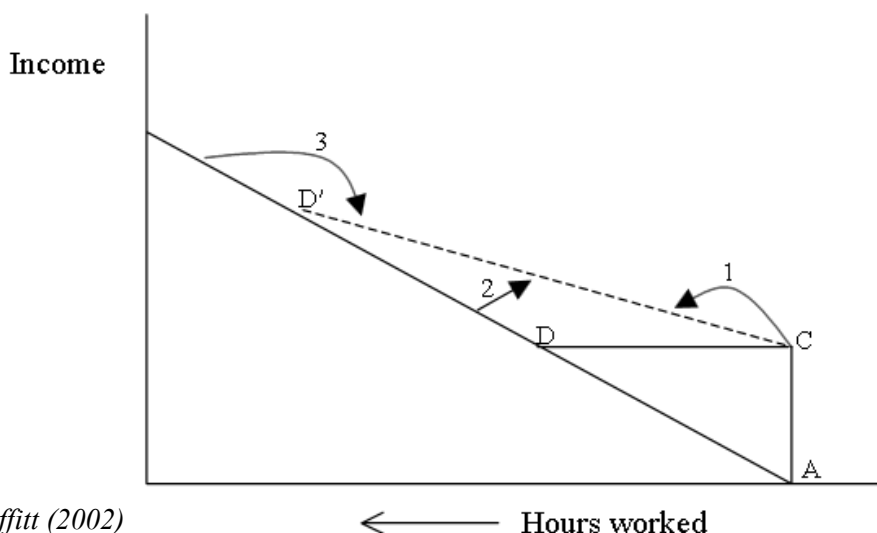


Source: Moffitt (2002)

In the scenario described by Fig.4 we are still dealing with a marginal tax rate $t < 1$. The consequences of increasing the amount distributed by the programme are similar to those we saw with the introduction of Minimum Income. Regardless of the amount earned by the

individual we will witness a reduction in the numbers of hours worked. In the case of arrow 3 this is the sole result of an income effect. In the other two cases the income and the substitution effect run in the same direction resulting in a decrease of labor supply that still brings a higher income than before. Finally let us see the dynamics that a change in t produce with the help of Fig.5.

Figure 5 - Effects of reducing t



Source: Moffitt (2002)

In this example we see a marginal tax rate equal to 1. If we reduce this rate we observe what we should expect based on the previous section analysis. Those who were in the region CD will now increase their labor supply given that the the reduction on the extra earnings they obtain through paid work are not fully retained anymore. This is the reasoning behind other alternatives proposed to replace Minimum Income schemes or other welfare policies such as the Negative Income Tax or the Earned Income Tax Credit¹⁰. However, those who were just slightly above this region will tend reduce their work effort. For those who were comfortably above the mentioned level a reduction in the number of hours worked will be translated into a decrease in earnings. For the former we are in the presence of an income effect working solely. For the latter we are once again having a substitution and an income effect running together in the same direction.

Let us now center our attention at the effects observed for those with an income that falls in or close to the line AD . As we saw one should expect a negative substitution effect as a result of

¹⁰ The Negative Income Tax was already explained in detail. The Earned Income Tax Credit as the name suggests is a tax credit. This credit is a share of the worker's earned income. The share grows as the individual's income rises until a certain point where it stagnates and then starts to phase out. The credit rate and the maximum value is calculated based on the individual's family composition (Scholz, 1996).

increasing G or decreasing t . This is true for both working and non-working beneficiaries. The income effect runs in the case of increasing G , in the same direction of the substitution effect. On the other hand for a decrease in t we observe that those who were at point C end up increasing the number of hours worked or at least not reduce them since there is no incentive in doing it. When introducing a BI in a welfare system that currently offers a Minimum Income with the usual marginal rate of 100% this is exactly what one should expect even though the marginal rate in this case will be $t = 0$ and not $0 < t < 1$. Table 1 summarizes the potential income and substitution effects that could arise depending on the beneficiaries' situation and income.

Table 1 - Income and Substitution Effects

Occupation	Earned Income	
	Above G	Below G
Employed	Income Effect + Substitution Effect None Total effect Labor supply Reduction	Income Effect + Substitution Effect - Total effect Indeterminate
Unemployed	Non applicable	Income Effect * Substitution Effect - Total effect Indeterminate

Notes: + Positive effect ; - Negative effect ; * Depends if leisure is perceived as normal or inferior good

Source: Author

Labor Market effects are hard to measure. Several variables need to be taken into account and models often contain unreasonable assumptions. Nevertheless this chapter had the goal to explain the main topics that are at the center of attention when debating the impact of BI on Labor Market. The size of the benefit as well as the individual's preferences need to be taken into account when analyzing the potential labor supply results of introducing a BI.

3. Basic Income Experiments

This chapter will be dedicated to visit four Basic Income Experiments that were conducted over the last half century: the US NIT experiments in the 60's/70's; the Alaska Permanent Fund; the Mhadya Pradesh experiment in India; the Namibia BIG experiment.

As stated in the introduction, the lack of BI examples leads us to widen the choice in terms of the programme characteristics. Apart from Alaska, the US experiments were based on a Negative Income Tax and the trials in Africa and India deal with a completely different background from the one we have in Portugal. However I believe that each example provides valuable data to our work and that each programme will offer comparable figures that will allow for several suggestions to the Portuguese case. Furthermore I decided to present 2 experiments from both developed and under developed countries so that not only potential comparisons can be made to the Portuguese case but also to understand how different are the results for the two types of realities.

To be coherent with my work I shall analyze these experiments not case by case but by looking at their results jointly at the areas under analysis in this work: Poverty and Labor market.

3.1 – Introduction

Before starting examining the results of the selected experiments let me briefly characterize them in time, space and design.

US experiments:

The US experiments were conducted in 4 different regions of the United States over the 60's and 70's. They were based on the idea of a Negative Income Tax (NIT) first proposed and developed by Milton Friedman¹¹. A NIT is relatively different from a BI in the sense that it is not unconditional or universal. However analyzing these particular trials can be important for this work for the results they can deliver on fundamental matters such as labor supply response. The amount of the benefit varied from 50% to 150% of the poverty line threshold amount. A full summary of the experiment conditions can be seen with Table 2. All of the trials contained both an experimental group and a control group.

¹¹ To see more on this check chapter 2.1

Table 2- US NIT Experiments

MAIN FEATURES OF THE FOUR NIT EXPERIMENTS									
Experiment	Site(s)	Length of Treatments	Number of Families Enrolled	Type of Families Enrolled	Racial Composition of Sample	Maximum Income for Eligibility ^a	NIT Plans Tested ^a		
							Guarantee Level	Tax Rate ^a	Grant Breakeven Level ^b
New Jersey (1968-1972)	Trenton, NJ (12%) Patterson-Passaic, NJ (36%) Jersey City, NJ (29%) Scranton, PA (23%)	3 years	1,357	Dual-headed	Black (37%) White (32%) Hispanic (31%)	1.5	.5	.3, .5	1.7, 1.0
							.75	.3, .5, .7	2.5, 1.5, 1.1
							1.00	.5, .7	2.0, 1.4
							1.25	.5	2.5
							(.81)	(.5)	(1.7)
Rural (1969-1973)	Rural Iowa (38%) Rural NC (62%)	3 years	809	Dual-headed, prime age (73%) Single-headed, prime age (13%) Dual or single head over 59 (14%)	Black (35%) White (65%)	1.5	.5	.5	1.0
							.75	.3, .5, .7	2.5, 1.5, 1.1
							1.00	.5	
							(.75)	(.5)	(1.6)
Gary (1971-1974)	Gary, IN	3 years	1,780	Dual-headed (41%) Single-headed (54%)	Black	2.4 ^a	.75	.4, .6	1.9, 1.3
							1.00	.4, .6	2.5, 1.7
							(.88)	(.5)	(1.9)
Seattle-Denver (1971-1982)	Seattle, WA (43%) Denver, CO (57%)	3 years (71%) 5 years (25%) 20 years (4%)	4,800	Dual-headed (61%) Single-headed (39%)	Black (43%) White (39%) Chicano (18%)	3.25	.95	.5, .7, .7-.025Y	1.9, 1.4, 1.8, 1.5
							1.20	.5, .7, .7-.025Y	2.4, 1.7, 3.0, 2.0
							1.40	.5, .7, .8-.025Y	2.8, 2.0, 2.6
							(1.16)	(.5)	(2.1)

Source: Robins (1985)

Madhya Pradesh, India

In the region of Madhya Pradesh 6000 people from 9 different villages were granted with an average payment of \$USD 24 per month. The amount was the equivalent to a quarter of the income of the median-income family, which was roughly equivalent to the poverty line. The transfer occurred for a period from 12 to 17 months between June 2011 and November 2012. It was developed in a partnership between UNICEF and a local women’s association named the Self Employed Women’s Association (SEWA). 12 other villages were treated as a control group.

Alaska Permanent Fund:

The Alaska Permanent Fund was established in 1976 based on oil revenues. The fund pays a yearly dividend to every citizen based on a 5 year average performance. This dividend comes really close to our definition of UBI in the sense that it is no means-tested, universal and individual. It is the only BI experiment that was not time lined. The dividend amounts on average to US\$2000, a sum that represents roughly 6% of the average personal income.

BIG Namibia:

The BI trial in Namibia was conducted from January 2008 to December 2009, with all Otjivero-Omitara (area in Namibia) residents, who were under 60, being given N\$100 per month, an amount only N\$18 below the average per capita income of N\$118. This experiment was developed by the Namibian BIG (Basic Income Grant) Coalition, a group formed by several Namibian NGO's.

3.2 –Poverty

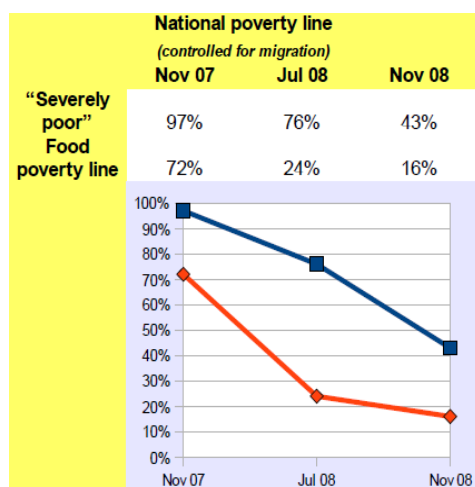
As we saw earlier in this work, current poverty rates on both developed and under-developed countries are one of the main arguments of BI claimers. From the four experiments we are here analyzing, only the ones that were conducted in Namibia and India had amongst their primary goals to fight poverty. Nevertheless in all of the trials here presented, we can draw conclusions on the subject either by a direct analysis on poverty indicators or by examining the behavior of other variables that can relate to the topic.

In Namibia almost the entire population was poor¹². Before the project started 97% of people were severely poor and 72% were below the food poverty line (Graph 1) .The first immediate consequence was a drop in those numbers. Just after a year, those with food deprivation were now 16% and those facing severe poverty were 43%¹³. This was accompanied by reductions on child malnutrition – 42% to 10% - (Making the Difference – The BIG in Namibia, 2009, p.53). Moreover income rose. Not only income provided by BIG, but that from wages and self-employment (Graph 2). The latter expanded from N\$118 to N\$154, a 30% increase. As for Self-employment there was an increase in income from this source of 301% (Table 3). All of these results can be seen below.

¹² The poverty line in Namibia was at the time set at N\$316 per month. The Namibian GDP per capita at PPP was \$7850 in 2008, roughly 1/7 of the US GDP per capita at PPP.

¹³ These numbers were controlled for migration, given that several people moved to the area, even though they would not receive the benefit

Graph 1 - BIG Namibia Poverty Indicators



Graph 2- BIG Namibia - Income

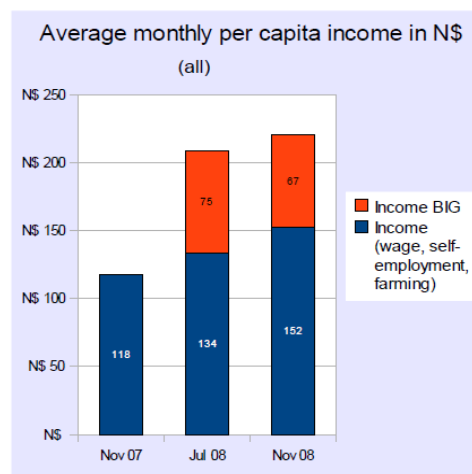


Table 3 - BIG Income Sources

Mean household income by source excluding BIG (panel)	Nov 07	Nov 08	Increase / Decrease in %
Wages	N\$ 581	N\$ 692	19%
Self-employment	N\$ 170	N\$ 681	301%
Farming	N\$ 42	N\$ 57	36%
Remittances	N\$ 103	N\$ 82	-21%
Government grants	N\$ 199	N\$ 285	44%

Source: Making the Difference – The BIG in Namibia (2009)

The reports from Madhya Pradesh do not examine the usual poverty indicators. Hence we will analyze other important poverty measures and compare them between experiment and control groups bearing in mind that the benefit was roughly a quarter of the income generated by a median-income family. A first indicator is children’s weight. As we can see through Table 4 and Table 5 at the beginning of the trial, BI villages had 60.8% of children underweight against 52.1% in control villages. At the end the number with the BI population dropped to 41.1% and decreased to 41.8% amongst the control children.

Table 4 - Mhadya Pradesh - Treatment Group

	April 2011			September 2012		
	Male	Female	Total	Male	Female	Total
Percentage below -3SD (severely underweight)	16.1	18.3	17.1	10	4.8	7.6
Percentage below -2SD (moderately underweight)	44.8	42.3	43.7	36.3	30.5	33.7
Normal	39.1	39.4	39.2	53.7	64.7	58.7
Number of children with data available	87	71	158	201	167	368

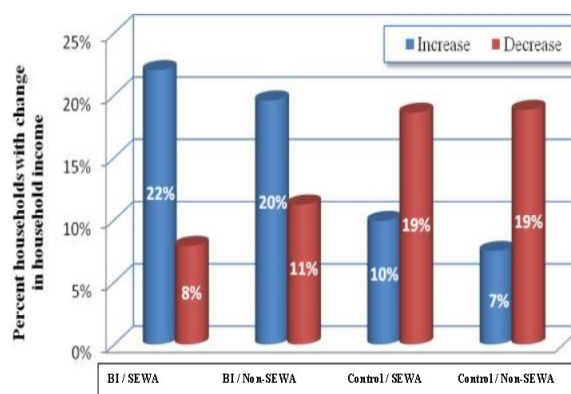
Table 5 - Mhadya Pradesh - Control Group

	April 2011			September 2012		
	Male	Female	Total	Male	Female	Total
Percentage below -3SD (severely underweight)	14.4	14.6	14.5	8.9	8.9	8.9
Percentage below -2SD (moderately underweight)	37.8	37.4	37.6	34.4	31.4	32.9
Normal	47.8	48.0	47.9	56.7	59.7	58.2
Number of children with data available	111	123	234	259	236	495

Source: Piloting Basic Income Transfers in Mhadya Pradesh, India(2014)

Let us now look at how earned income changed for both groups. 21% of those receiving BI claimed they increased their earned income against 10% who say their income decreased (Graph 3). On the other hand for the control group, 19% saw their earned income decreasing and only 9% enjoyed a rise in their revenue.

Graph 3 - Mhadya Pradesh Changes in Income



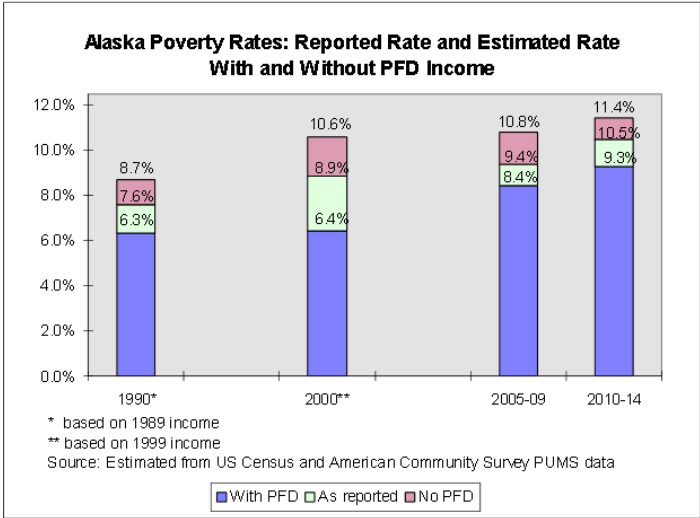
Source: Piloting Basic Income Transfers in Mhadya Pradesh, India(2014)

Note: There is here a distinction from SEWA and Non-SEWA depending if the association was active in that village

In the North-American experiments the background and focus was different. Given this let us look at some of the indicators on this topic. In Alaska the dividend did reduce poverty, but

after an initial drop in the first years – In 1979 the poverty rate in Alaska was 10.8%¹⁴ (Danzinger&Ross, 1987) - rates have been increasing over the last 25 years. Graph 4 shows that poverty rates decrease by an average of 2% due to the dividend but those rates have rose in all Alaskan areas. The problem is more complex in the rural areas, where most native Alaskans live and where jobs are scarce and the economy is highly based on agriculture. It needs to be taken into account that Alaska is not the only state where poverty has risen. Right before the dividend started being distributed the US average poverty rate was 11.6%, a number very close to the Alaskan one. Today the US rate is 14.8% against a share of 11.4% of Alaskans being poor. Furthermore in 1979 Alaska was the 26th state with the lowest poverty rate and today it is the 8th state dealing with the smallest incidence of poverty (US Census Bureau, 2017).

Graph 4 - Alaska Poverty Rates



Source: Berman & Reamey (2016)

Regarding the NIT experiments, results on poverty are harder to infer from and need special caution on examining them. There is no direct data evaluating the evolution of poverty rates in the areas covered by the benefit. Nevertheless the final reports on these experiments when existent, do evaluate the changes that such a programme could produce taking into account the potential dissolution of other State assistance schemes. Poverty rates vary according to the type of help provided and the family under assistance as Table 6 shows. For example, single female headed families would always be worse off. This has to be seen in context. These tests were conducted about 40 years ago and the labor market composition was significantly

¹⁴ In the United States the poverty line is defined by the US Census Bureau at a threshold that corresponds to three times the cost of a minimum food diet.

different from now with female participation rates exploding ever since. In 1970 female participation rate was 43.3% and in 2014 it was 57%¹⁵. With female participation in the labor market still low, dependence on State help was high for this type of family. On the other hand results for more traditional families at the time - husband-wife families – were expected to be virtuous. Poverty rates would decrease in one of the benefit types and the poverty gap would substantially diminish in both of the scheme forms.

Table 6 - NIT – Predicted Poverty Effects for all Experiments

	Husband-wife families	Single female-headed families	All families
Before program:			
Percentage below poverty.....	4.4	29.3	7.2
Poverty gap (billions).....	\$4.01	\$1.95	\$5.96
After program:			
Percentage below poverty:			
75/50.....	3.7	36.9	7.4
75/70.....	5.0	41.8	9.1
Poverty gap (billions):			
75/50.....	\$1.95	\$2.03	\$3.98
75/70.....	\$2.29	\$2.24	\$4.52
Percentage change in the poverty gap:			
75/50.....	-51.3	4.2	-33.2
75/70.....	-43.0	14.9	-24.2

Source: Source: *Final Report of the Seattle-Denver Income Maintenance Experiment – Volume – 1 (1983)*

Results on poverty are shown to be fairly positive. For under-developed regions we see that people whose situation involved being deprived from the most essential resources, used the benefit to access those resources rather than exhausting the money in a less “ethical” way. Moreover and perhaps more important we see that beneficiares used the contribution in such a productive way, that they were able to increase their own earned income. This shows that a BI has the potential not only to temporarily reduce poverty through the income boost provided but eliminate it due to the incentive of consuming the benefit in a productive way. In the United States results were slightly different. The dividend does indeed reduce poverty rates in Alaska in a still considerable way. As for the NIT experiments results were less exciting. Nevertheless we need to take into account the timing of the experience as well as its characteristics in terms of people covered and conditions offered.

¹⁵ Source: Status of Women in the States, viewed 9 February 2017, <<https://statusofwomendata.org/earnings-and-the-gender-wage-gap/womens-labor-force-participation/>>

3.3 – Labor Market

To discuss the sustainability of a BI one needs to discuss its impact on the Labor Market. Defenders claim it is a way to provide fair and decent access to the most neglected ones, opponents fear that such a measure could create harmful new dynamics by eliminating the incentive to work and reducing labor supply. The experiments under analysis here provide important data on several aspects of the Labor Market. The NIT experiments were mainly developed to test the response of low-income families in respect to labor participation. Hence extended data is available to evaluate how these bottom decile households behave in the presence of such an incentive. The schemes developed in the underdeveloped regions had the aim of alleviating severe cases of starvation but also provide valuable information on how those who are more in need react in terms of consumption, labor supply responses and education. Thus several conclusions can be taken regarding the subject of labor market in those experiments.

In India, as we can see with Table 7 the number of hours worked in both the primary and the secondary activity¹⁶ met no alteration. Results are similar for control and treatment populations. The number of days spent at work per month saw a small change with a bigger focus on the main activity and a little decrease in the secondary activity.

Table 7 - Mhadya Pradesh - Changes in Labor

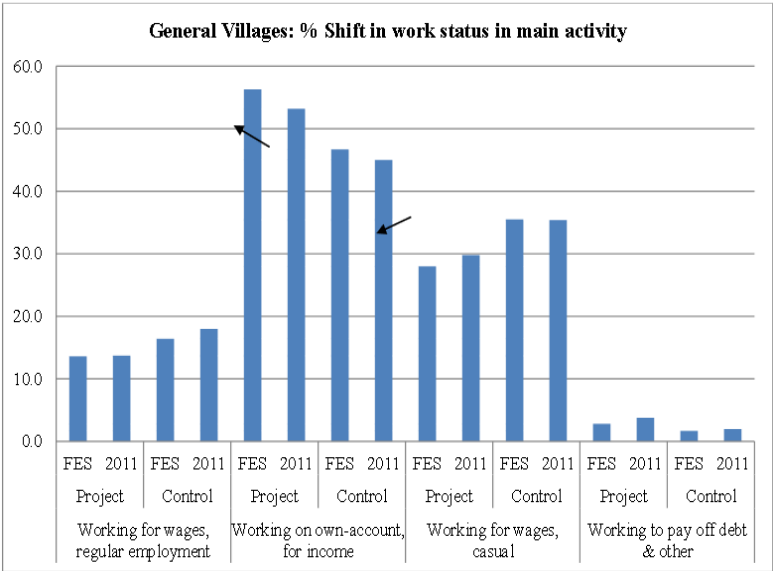
Average Hours Worked	Basic Income Villages		Control Villages	
	Primary	Secondary	Primary	Secondary
2012	7.7	3.6	7.7	3.5
2011	7.7	3.5	7.7	3.6
Average Days Worked	Primary	Secondary	Primary	Secondary
2012	21.5	21.1	20.5	21.7
2011	21.3	22.7	20.1	22.1

Source: Piloting Basic Income Transfers in Mhadya Pradesh, India(2014)

¹⁶ The report on Madhya Pradesh defines two types of activities based on the time spent: the main one which is the one that the household devotes more time to, usually paid work for others; a secondary activity that takes less time and that can include paid and unpaid work such as housing activities or farming.

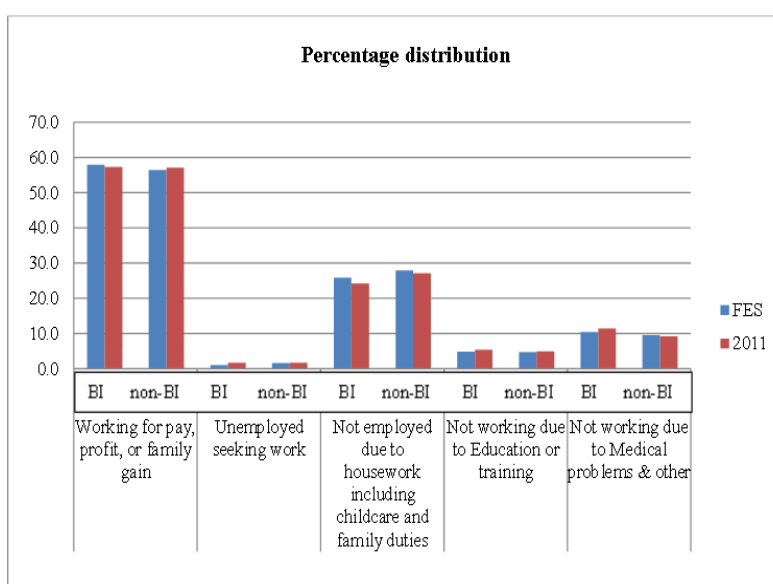
Looking now more deeply at what those main activities are. Graph 5 shows that the biggest shift that occurred in both groups was in the share of those working on own account. This happened mainly due to a reduction in terms of casual work for wages in the case of the experimental group and the decrease in the share of people in the control group who worked for wages as regular employment. Finally we shall see how did the labor market evolved in more generic terms regarding the household status before and after the benefit with the help of Graph 6. Although somewhat small, differences between groups confirm what one should expect. For those receiving the benefit, there was an increase in the group of people working for pay, which leads me to believe that they took advantage of the situation and created an opportunity to increase their gains. This led to more people in this group that were not employed due to housework or family care, possibly making use of the extra profit. Finally two important numbers arise from this figure. First, the share of people who were not working because they were attending some training or education decreased. Second, those unemployed and seeking for work were now less, which can mean that this benefit lead to a disincentive to pursue a work activity.

Graph 5 - Mhadya Pradesh - Shift in work activity



Source: Piloting Basic Income Transfers in Mhadya Pradesh, India(2014)

Graph 6 - Mhadya Pradesh- Employment

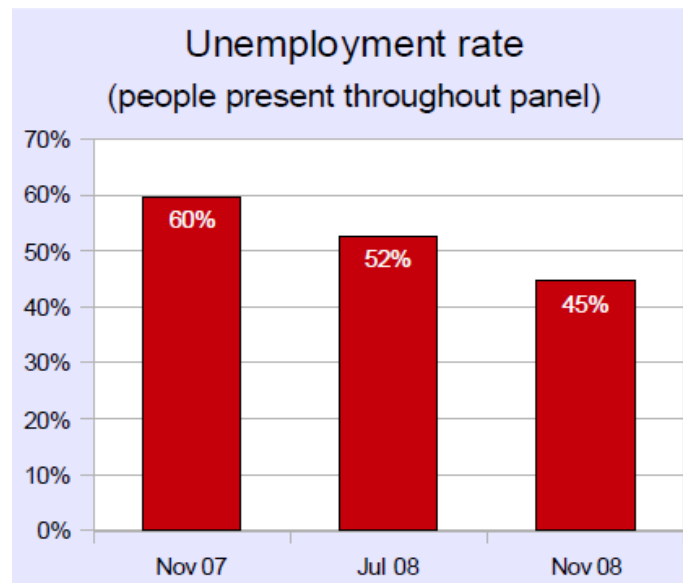


Source: *Piloting Basic Income Transfers in Mhadya Pradesh, India(2014)*

Data in Namibia regarding this topic is less extensive. However there are still two interest indicators to analyze. Graph 7 shows the evolution of unemployment rates in the region during the programme. We see that unemployment rate dropped from 60% to 45%, with employment rising from 44% to 55%. Although no concrete data exists on whether the benefit brought a reduction in the number of hours worked, ultimately we know that the incentive got more people into the labor market. Given that as we saw earlier the personal income excluding the benefit increased it is fair to assume that even if the number of hours worked did indeed decrease, productivity gains were observed. Thus no real disincentive was created with the scheme. What the report on this experiment can also tell us is how the source of household income changed with the programme. As we saw before with Table 3 there was a blast in terms of revenue from self-employment. Moreover we see that although in a shy way, all items enjoyed an increase with the exception of remittances, clearly a sign that less support was needed from family members of other regions¹⁷. This increase in self-employment, as reports state, was due to the small enterprises that emerged in areas like clothing manufacturing or retailing. Their appearance was only possible as a result of the demand boost and start-up capital that was provided by a Basic Income.

¹⁷ It is worth mentioning that inflation was around 9%, meaning that even taking inflation into account there was a clear boost in the economy due to the benefit

Graph 7 - BIG Namibia- Unemployment



Source: *Making the Difference – The BIG in Namibia* (2009)

In Alaska the labor supply response to the dividend was almost insignificant. When asked if there was a reduction in the amount of time spent working for pay, only 1% of the people answered affirmatively (Erickson et al., 1984). Obvious caution is needed when examining these numbers given that people might have worked less for other reason than the dividend or they might not want to admit a decrease in labor¹⁸. However it is fair to assume that even if we are facing a number above 1%, a small number should still be expected. Nevertheless we have to look at the size of the dividend and its relevance on the household income. In the years reported the dividend was a \$USD 1000 in 1982 and \$USD 386 in 1983 (ibid). At the time the dividend represented in one case around 7% and in the other 2% of the total personal income (Berman & Reamey, 2016). Although 7% is already a significant value, when we look at what BI proponents suggest as a fair amount to be distributed, no definite conclusions can be taken from these numbers. Furthermore in the Alaskan case there is no data reporting how lower-income families (those whose benefit represents a higher share of income) respond differently in terms of labor from wealthier households.

Despite being based on a different concept NIT experiments are able to shed some light on the behavior of lower income families in response to cash incentives. A first generic look can be taken at the average response of the 4 NIT experiments (Table 8, 9 and 10). Apart from husbands, all groups show a significant decrease in labor supply due to the incentive.

¹⁸ This type of behaviour is known as social desirability bias. People will tend to respond in a way that will be seen as favorable by other. To see more: Foulsham & Kaminska (2013)

Moreover employment rates in these groups also present large reductions, meaning that people tend not only to work less but some even leave the labor market.

Table 8 - NIT- Husbands Labor Response

AVERAGE LABOR SUPPLY RESPONSE OF HUSBANDS (Estimated standard errors in parentheses)			
	Annual Hours of Work	Employment Rate	
Total sample			
New Jersey ^{ab}	-34.2	-.01	
Rural ^{abc}	-56	-.003	
Gary	-35.4 (65.1)	-.01 (.03)	
Seattle-Denver	-128.6*** (30.1)	-.04*** (.01)	
3-year only	-112.8*** (33.1)	-.04*** (.01)	
Blacks			
New Jersey	+36.5	+.01	
Rural ^c	-152.0**	-.01	
Gary	-35.4 (65.1)	-.01 (.03)	
Seattle-Denver	-95.5* (50.9)	-.04* (.02)	
3-year only	-60.5 (56.5)	-.03 (.02)	
Whites			
New Jersey	-99.1	-.02	
Rural ^c	+80	-.001	
Seattle-Denver	-85.1* (43.6)	-.01 (.02)	
3-year only	-65.2 (48.0)	-.01 (.02)	
Hispanic-Chicano			
New Jersey (Hispanic)	-10.4	-.02	
Seattle-Denver (Chicano)	-296.1*** (67.7)	-.11*** (.03)	
3-year only	-308.2*** (72.3)	-.12*** (.03)	

Table 9 - NIT- Wives Labor Response

AVERAGE LABOR SUPPLY RESPONSE OF WIVES (Estimated standard errors in parentheses)			
	Annual Hours of Work	Employment Rate	
Total sample			
New Jersey ^a	-55.7	-.04	
Rural ^{abc}	-178	-.16	
Gary	-57.6 (62.7)	-.03 (.04)	
Seattle-Denver	-145.1*** (31.4)	-.08*** (.02)	
3-year only	-141.2*** (34.5)	-.08*** (.02)	
Blacks			
New Jersey	-5.2	-.003	
Rural ^b	-268.0**	-.18**	
Gary	-57.6 (62.7)	-.03 (.04)	
Seattle-Denver	-176.2*** (53.2)	-.09*** (.03)	
3-year only	-165.6*** (59.1)	-.10*** (.03)	
Whites			
New Jersey	-73.0	-.06	
Rural ^b	+88	-.03	
Seattle-Denver	-111.8** (45.6)	-.05** (.02)	
3-year only	-111.8** (50.3)	-.05** (.03)	
Hispanic-Chicano			
New Jersey (Hispanic)	-99.1	-.05	
Seattle-Denver (Chicano)	-170.7** (70.8)	-.11*** (.04)	
3-year only	-168.7** (75.7)	-.11*** (.04)	

Table 10 - NIT- Single Female Heads Labor Response

AVERAGE LABOR SUPPLY RESPONSE OF SINGLE FEMALE HEADS (Estimated standard errors in parentheses)				
	Annual Hours of Work	Employment Rate		
Total sample				
Gary	-37.1 (68.3)	-.04 (.03)		
Seattle-Denver	-154.9*** (36.6)	-.08*** (.02)		
3-year only	-163.3*** (39.4)	-.08*** (.02)		
Blacks				
Gary	-37.1 (68.3)	-.04 (.03)		
Seattle-Denver	-205.9*** (51.5)	-.10*** (.02)		
3-year only	-232.3*** (54.9)	-.11*** (.03)		
Whites				
Seattle-Denver	-59.5 (60.5)	-.03 (.03)		
3-year only	-53.4 (65.4)	-.04 (.03)		
Chicanos				
Seattle-Denver	-207.1** (88.1)	-.10** (.04)		
3-year only	-189.1** (95.0)	-.09* (.05)		

Source: *Final Report of the Seattle-Denver Income Maintenance Experiment – Volume 1 (1983)*

These first numbers are noteworthy but given the heterogeneity of conditions in the 4 experiments let us have a deeper look on each of them individually. By looking at Table 2 we see that the New Jersey and the rural experiment were those whose criteria for eligibility were more tight (maximum income of 1.5 times the poverty line for a family of four). On the contrary, Gary and Seattle-Denver were more generous on this criteria allowing for households with income as high as 2.4 and 3.5 times the poverty line of four respectively to

participate. Moreover the Seattle-Denver experiment was also the most generous in terms of the amount distributed with the lowest guarantee being 95% of the poverty level, a number close to the highest amounts delivered in the other regions. Results tend to confirm theory. Seattle-Denver shows for all of the groups the highest reduction in hours worked and employment rates. The NIT experiments also tell us how different households tend to have different responses. Both wives and single female heads show significant reductions in labor supply and employment enrollment, with numbers as high as 16% for the latter. As we did for poverty we need to address this having the status quo at the time for women and career in mind. This can help explain the difference in the response of man and woman. This assumption is corroborated by the numbers in the rural area, where reductions are substantially higher, as one should expect from more conservative regions as rural Iowa or rural North Carolina where tradition would label men as the money makers and women as housewives. After analyzing more thoroughly the labour supply response in terms of hours worked, let us see in more detail how NIT affects employment based on an estimated model. Table 11 summarizes the results.

Table 11 - NIT Employment Response

[Estimated standard errors in parentheses]

	Husbands	Wives	Single female heads
Log rate of entering employment.....	³ -.370 (.047)	³ -.340 (.047)	³ -.521 (.064)
Log rate of leaving employment.....	³ .145 (.045)	.079 (.050)	³ .153 (.064)
Predicted Effects			
Probability of working:			
After 1 year.....	³ -.054 (.007)	³ -.056 (.009)	³ -.086 (.011)
Steady state.....	³ -.063 (.008)	³ -.079 (.013)	³ -.126 (.016)
Duration of nonemployment (percentage).....	³ 42.3 (7.7)	³ 49.0 (5.7)	³ 66.6 (11.0)
Duration of employment (percentage).....	³ -15.8 (4.8)	² -12.6 (5.7)	³ -20.9 (7.1)
Number of entries into nonemployment within 1 year (percentage).....	² 14.0 (5.9)	¹ -6.4 (3.4)	- 2.1 (5.5)
Number of entries into employment within 1 year (percentage).....	² -7.2 (3.1)	³ -23.3 (3.6)	³ -26.7 (3.6)

¹ Significant at the 10-percent level.
² Significant at the 5-percent level.
³ Significant at the 1-percent level.

Source: Source: *Final Report of the Seattle-Denver Income Maintenance Experiment – Volume – 1 (1983)*

Percentage of people entering employment decreases more than 30% on all categories. The same happens with the share of households who get unemployed, a number never below 7.9%. However when we look on a one year horizon results are slightly different. The number of entries into employment is still negatively affected - although the size of the impact is smaller- but the number of entries into non-employment is actually reduced by NIT for women. Context can once again help to explain this. Given the low female participation rate

in the labor market and the importance of the man figure as head of the house it is expectable that women who are involved in paid work do it not only for the income but for a personal preference for a professional career. Hence such a benefit does not provide a disincentive high enough to quit their job. Finally the benefit also affects the length of both employment and unemployment. The first tends to be reduced by 15% on average and the latter increases by at least 42.3%.

The above analysis is important in two ways: first it tell us how real experiments show somewhat more successful results than those predicted by theoretical models. Second they allows us to make the bridge to the portuguese reality and understand what can and cannot be compared. We have seen that in the under-developed regions the incentive brought motivating results in terms of economic conditions. People were able to avoid deep scarceness and transform the incentive into something that allows them to become self-sustainable. Moreover labor supply responses tend to show no disincentive in terms of hours at work or participation in the labor market. Although we witness cases of severe deprivation in Portugal, the country's reality is still very different. In Namibia and India we are dealing with a very primitive economy based mostly on the primary and secondary sectors. The challenges that people receiving the benefit in these regions face are somehow different and perhaps less demanding than those faced by potential beneficiaries in Portugal, specially in terms of inclusion. One would expect that in an economy that is eager for qualified workforce and where technology and expertise are driving forces it is harder for people to become valuable for society. Nevertheless the type of temptations and potential disincentives that such a stimulus can bring to the population covered are fairly similar and one should not disregard the evidence brought by these experiments on these issues. As for developed regions, conclusions are a little different. In Alaska we saw that the dividend is indeed capable of recuding the incidence of poverty. However and mainly due to the small amount distributed, the measure has not been capable to avoid poverty rates to grow over the last decades, following the trend in the entire country. NIT experiments confirm what is perhaps the biggest concern regarding BI –labor supply response. This response seems to be highly sensitive to the generosity of the programme. We saw that the most generous schemes presented the most upsetting results regarding labor supply reduction. The results are also displeasing in terms of employment with reductions both in the probability of being employed and the time spent on a job and an increase in the chances of being unemployed and the time spent without a job. Since we will be dealing with people whose economic and social

situation is very related to those treated by the NIT, the analysis of both current and potential benefit's size and generosity and its repercussions are of the essence in this work.

With these results in mind I will now move on to the next stage where I shall compare them with the results of the current Minimum Income Scheme in Portugal

4. Minimum Income Scheme vs Basic Income – A Portuguese Case

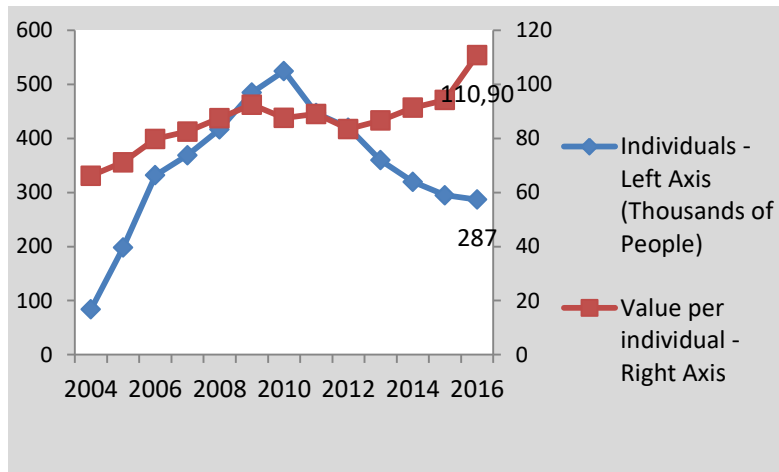
What I intend to do over this chapter is to look at the current state of the Portuguese Minimum Income Scheme and compare it with what we learnt so far about BI. As I stated earlier the focus of the analysis shall be on the Portuguese economy. Hence, when appropriate, several indicators will be examined in order to give useful context. In order to have a deeper grasp of the Portuguese scheme I am going to start with a small introduction explaining the main goals of the policy as well as its characteristics and origins. After this I will provide the usual analysis by topic starting with a look on poverty and then moving on to the subject of labor market.

4.1 Introduction –

The Portuguese GMI is a non-contributory benefit paid by the Social Security System. It was first introduced in 1996 under the name of *Rendimento Mínimo Garantido* with the aim of ensuring households at risk the resources to satisfy basic needs and social and professional inclusion. The benefit is delivered according to the gap between the household income and a certain threshold defined by the state and is intended to close this gap. Changing the name to *Rendimento Social de Inserção* (RSI) in 2003 – in line with the new focus of these type of schemes regarding inclusion - the programme's objective is not only to provide a minimum level of dignity to its beneficiaries but also to promote social integration through a job, vocational training or community service.

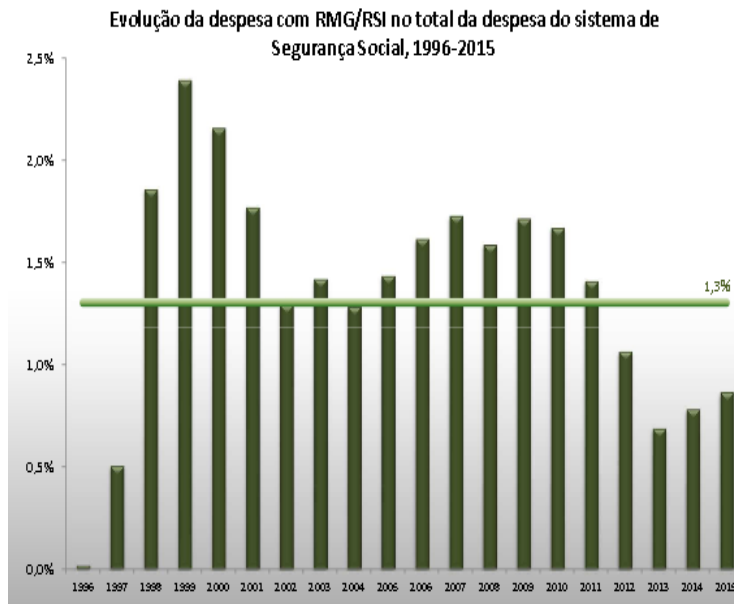
To better understand the size of the programme and its evolution we can look at Graph 8 and Graph 9. The graphs show us that each beneficiary receives around 110€, an amount that has been increasing over the last decade. On the other hand the number of beneficiaries has been dropping and is currently around 300.000. The total amount spent on this programme has also been decreasing since its implementation with a little turn over the last two years. RSI accounts for barely 1% of the total amount spent with social security, a sum that is around 300M€.

Graph 8 - RSI Evolution – Individuals vs Amount



Source: Social Security Portugal(2017)

Graph 9 - RSI as % of Social Security Expenditure



Source: *Rendimento Mínimo em Portugal – Retratos de 20 anos a desafiar práticas e (pre)conceitos* ; *Minimum Income in Portugal – a 20 year Portrait of challenges and pre(concepts)*

According to Statistics Portugal (INE), in 2015 the annual value that defined the poverty line in Portugal was 5268€. This corresponds to an average monthly value of 439€. Given that on average each beneficiary obtains 110€, this corresponds to about 20% of the poverty line income. Moreover the median net income in Portugal in 2015 was 8780€ (INE). Thus a benefit of 110€ represents around 12% of this average net income. These percentages are in accordance to those of the Alaska Dividend, although as we know in the Alaskan case the

benefit is universal. However when we compare to the amounts distributed in the other three experiments we see that the Portuguese scheme’s amount falls way below. The population targeted is more or less similar - those who are in the bottom deciles - with the obvious differences that exist between a nation as Portugal and the underdeveloped regions of Otjivero and Madhya Pradesh. This target is confirmed by the data. According to INE, the percentage of people at risk of poverty after social transfers is 19%¹⁹. This means roughly 2M citizens. With the programme targeting only 300.000 it is clear that the policy does indeed target those who are in the most severe situations leaving behind a large share of poor people. Lastly and given the relevance of the labor market topic for this work I believe that as an introductory note it is relevant to see how the RSI population compares with the country’s population in terms of work situation. Table 12 compares nationwide indicators with an RSI sample. The key figure is the difference in the share of unemployed people. With 60% of beneficiaries being unemployed, active market labor policies have to be taken into account when discussing the importance of a Minimum Income scheme. This discussion should take into consideration the results earlier found for the BI experiments namely how those in the bottom deciles behave in the presence of this kind of incentive

Table 12 - RSI Sample vs Portugal - Employment Data

	Portugal	RSI sample
Active	60,2	75,3
Employed	49,6	14,6
Unemployed	10,6	60,7
Inactive	39,8	24,7

Source: Impactos dos Acordos de Inserção no Desempenho do RSI(entre 2006-2009) - DINÂMIA’CET; Impact of inclusion Agreements in RSI performance (2006-2009); Statistics Portugal

After this short description, it is now interesting to look at the performance of the system in the context of the Portuguese economy and compare it to the results that were found on the Basic Income trials here examined. Several papers and reports have looked on the subject of RSI and its impact and I should refer to them on assessing the scheme. For this analysis I will look at the usual two main topics: Poverty and Labor Market.

¹⁹ The at-risk-of-poverty rate here described corresponds to an annual net income below €5,268 in 2015 (INE)

4.2 Poverty –

The Portuguese Social Security describes RSI as a measure that is mainly intended to intervene in the most severe cases of poverty by protecting and supporting those who are facing a situation of deep scarceness²⁰. Over the next lines we should see how successful has the measure been on achieving this and how different could a BI behave given the current Portuguese situation in this subject.

Existing data on this topic covers two periods, before and after a scheme reform in 2010. This reform changed the means-tested conditions, reducing substantially the number of beneficiaries. For this reason I shall do a comparative analysis rather than a single one. This will allow us to not only evaluate the scheme performance on alleviating poverty but also understand how the reform impacted the numbers. Table 13 shows us that RSI is being successful in lightening the severity and intensity of poverty with interesting numbers for both periods. The decrease on poverty incidence is minor and close to zero after the reform.

Table 13 - RSI Effects on Poverty

2008	Before RSI	After RSI (1)	Var. (%)	After RSI (2)	Var. (%)
Incidence (F0)	17.8	17.5	-1.7	17.7	-0.6
Intensity (F1) x 100	5.2	3.7	-28.8	4.3	-17.3
Severity (F2) x 100	2.5	1.1	-56.0	1.5	-40.0

Source: *Farinha Rodrigues (2012)*

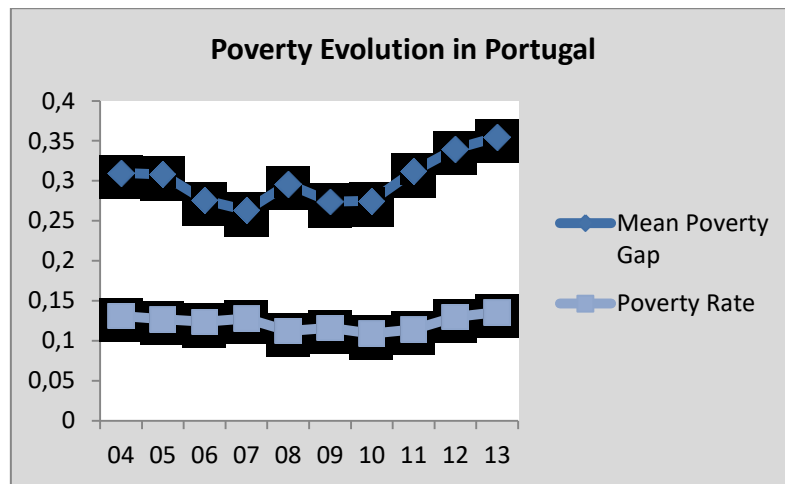
Note: After RSI(1) – Before the Reform;
After RSI (2) – After the Reform

The country’s indicators on this topic are upsetting. Graph 10 shows the evolution of at-poverty-risk rates since 2004 in Portugal. We can see that we still face high rates and that those rates are not improving. These numbers are quite similar to those we saw for Alaska. The dividend in Alaska is not being able to stop the rise in the state’s poverty rates over the last years. The same is true for RSI in Portugal. The amount of the two transfers is also very equivalent. This means that even a universal income if not high enough cannot by itself tackle poverty. However the Alaskan benefit seems to achieve better results than the Portuguese one. In Alaska over the last decades the poverty rate never decreased on average by less than 2%.

²⁰ Source: <<http://www.seg-social.pt/rendimento-social-de-insercao>> viewed at 3 March 2017

In Portugal even before the reform of the policy, RSI was only able to achieve a reduction of 0.3%.

Graph 10 - Poverty Evolution in Portugal



Source: OECD (2017)

The country performs much better regarding the impact on the intensity of poverty. RSI seems able to reduce both intensity and severity by a number close to 1% in absolute value. Farinha Rodrigues (2012) calculates that 2.5% of the population is severely poor. This means roughly 250.000 people. Although the characteristics that define this type of severe poverty are different from those we observe in the under-developed regions²¹ analyzed in this work it is true that BI seems more effective in tackling them. In Namibia the number of people who were under the food poverty line dropped by 56% in absolute value. The best indicator available in Madhya Pradesh, number of children underweight, also enjoyed an interesting reduction of 19.5% in absolute value. Backgrounds are different and so are the conditions. The BI experiments were conducted with relatively small samples and had the clear aim of alleviating scarcity of those receiving the benefit. RSI is only one instrument in the Portuguese set of tools available to act on reducing poverty. Nevertheless the scale of reduction in terms of poverty severity is so high in the regions here observed that I believe that it is worth looking carefully at how beneficial a BI could be in improving these numbers in Portugal.

Looking now at efficiency, Table 14 shows us several measures that can help us with this analysis. The 2010 Reform had no significant impact on both the Vertical Efficiency of the

²¹ The European Commission defines severe poverty as not being able to purchase at least four of the nine following items: to pay their rent, mortgage or utility bills; to keep their home adequately warm; to face unexpected expenses; to eat meat or proteins regularly; to go on holiday; a television set; a washing machine; a car; a telephone.

Programme (VEP) and the Poverty Reduction Efficiency (PRE). The two indicators show really high numbers for both periods with minor improvements reflecting the tightening of rules. This means two things. First, it confirms that RSI is a measure only available to those in need. Such a high value of VEP means that nearly no beneficiary received the transfer without being poor. Second, the numbers for PRE show that the transfer although small is almost entirely devoted to reducing poverty. On the other hand the Poverty Gap Efficiency (PGE) presents less thrilling numbers. This measure which is an indicator of horizontal efficiency had a value of 27.3%, a number that dropped by half after the 2010 reform. Hence, by now RSI reduces the proportion of the aggregate poverty gap by only 15.4%. In the NIT experiments an estimate was made on the average poverty gap change by type of household. When we looked to families as a whole, the poverty gap reduction was over 24% for both of the scheme’s designs. The only situation where the individual would on average be worse off was for the case of single-female headed families. We saw before how these results could partially be explained by the status quo existent at the time in terms of participation of females in the labor market. Thus there is no reason to believe that better results would not be achieved.

Table 14 - RSI Efficiency Indicators

Poverty Gap before the Programme	1842.4		
Poverty Gap after the Programme	1339.1	1558.9	+ 16.4
Reduction of the Poverty Gap	503.3	283.5	- 43.7
VEP – Vertical Efficiency of the Programme	99.4	99.7	+ 0.3
PRE – Poverty Reduction Efficiency	96.6	99.0	+ 2.5
PGE - Poverty Gap Efficiency	27.3	15.4	- 40.0

Source: *Farinha Rodrigues (2012)*

Another important issue debated while analyzing the impact of BI on poverty was its ability to increase the income that beneficiaries generate by its own efforts. For both Madhya Pradesh and Ojtivero, the regions with available data on this, there was on average an increase on the income self-generated. To see how RSI behaves on this variable let us analyze the share of contracts that were terminated due to a change in income. Table 15 demonstrates that half of contracts terminated are so due to a change in the beneficiaries’ income. This should be seen as good news. However when we look at the same table we see that not even 1% are terminated due to integration in the labor market. This means that that income change is mostly conducted by other sources of income such as other social benefits or revenue generated by potentially unproductive activities that do not contribute effectively to promote

integration in society. Thus we see that RSI is not able to improve one’s ability to become more productive and hence self-sustainable.

Table 15 - RSI Contracts Terminated by Motive

End of RSI Contract - Reasons	2005		2006		2007		2008		2009		2010		2011	
	Total	%	Total	%	Total	%	Total	%	Total	%	Total	%	Total	%
Fail to comply with the contract	3550	29,0	7092	25,4	7971	30,2	10278	32,8	14162	35,2	28094	40,7	25676	47,4
By request of the beneficiary	904	7,4	1777	6,4	1877	7,1	2081	6,6	2483	6,2	4193	6,1	3929	7,3
Change of income	6725	55,0	16682	59,9	14324	54,3	16336	52,2	21493	53,4	34549	50,1	22698	41,9
Legal residence away from the country	463	3,8	1043	3,7	870	3,3	1258	4,0	805	2,0	746	1,1	746	1,4
Integrated in the Labor Market	88	0,7	234	0,8	268	1,0	176	0,6	235	0,6	298	0,4	158	0,3
Death	504	4,1	1042	3,7	1072	4,1	1190	3,8	1075	2,7	1101	1,6	929	1,7
Total	12234	100	27870	100	26382	100	31319	100	40253	100	68981	100	54136	100

Source: Social security Portugal(2017)

When I first cross-examined what literature exhausts as the main differences between the effects of BI and Minimum Income on poverty we saw that the main point was the breakdown of the poverty trap provided by the introduction of BI. Minimum Income had the ability of avoiding beneficiaries from falling below a certain threshold that the state defines as a minimum for a decent living. However and mostly due to a marginal tax rate of 100% the measure was only half effective since it trapped the population covered in a cycle of “reasonable”poverty. The results we saw for Portugal confirm exactly this point. The scheme is successful in preventing the most severe types of poverty but it does not really affect its general incidence. Moreover it does not seem able to provide the necessary tools to avoid beneficiaries from becoming welfare dependent. BI on its turn showed more exciting results in fighting both poverty incidence and severity. For the case of under-developed regions it undeniably reduced scarceness and provided the means to prevent people from becoming trapped to the benefit. The boost in self-earned income is a sign of this. For the US experiments, although unable to stop poverty growth, BI was able to reduce much more effectively the incidence of it in Alaska, a region whose reality is fairly similar to Portugal.

4.3 Labor Market –

One of the RSI fundamentals is to promote an active inclusion of its beneficiaries in society. Active labor market policies are essential to achieve this. Thus, to evaluate the effectiveness and potential of the scheme it is vital to understand how successful it has been on promoting this inclusion. Over this chapter we will look at some of the indicators that describe the impact of RSI in the labor market. Furthermore and similarly to what I did in the previous chapter I will compare those effects to those observed in the BI experiments.

Let me start this analysis by comparing how different is the labor supply response produced by the two schemes. The data available on RSI does not report the changes in terms of hours or days worked. However I believe some interpretation can be made through several other indicators. As we saw earlier the unemployment rate amongst those who are under RSI is much higher than the national average (60.7% vs 10.6%). This shows how important it is to effectively promote inclusion with the scheme. Yet the number of people whose contracts were ceased due to finding a job is almost insignificant (Table 14). The number was never above 300 people, which represents a share of 1% or less from all the contracts terminated. Unable to act on those who are unemployed let us now see how does it affect those who are working. Tables 16 and 17 show that from the initial small share of people who were working – 8.1% of those interviewed and 26.5% of their spouses – around 40% became unemployed. In the case of the interviewees, only 39.4% of people kept working, a number that is lower than the one we find for spouses, 57.5%.

Table 16 - % of RSI Beneficiaries working - When claimed vs Now

Interviewee		Spouse	
Then	Now	Then	Now
8,1%	8,6%	26,5%	25,2%

Source: Impactos dos Acordos de Inserção no Desempenho do RSI(entre 2006-2009) - DINÂMIA'CET; Impact of inclusion Agreements in RSI performance (2006-2009); Statistics Portugal-

Table 17 - RSI Beneficiaries by Situation – Working when RSI was claimed and Now

Interviewee					Spouse				
Working	Unemployed	Studying/Working with no pay	Retired /Incapacitated	Training	Working	Unemployed	Studying/Working with no pay	Retired /Incapacitated	Training
36.4%	39.4%	18.2%	3%	3%	57.5%	40%	-	2,5%	-

Source: *Impactos dos Acordos de Inserção no Desempenho do RSI(entre 2006-2009) - DINÂMIA’CET; Impact of inclusion Agreements in RSI performance (2006-2009); Statistics Portugal*

In order to better comprehend these numbers let us look at Tables 18 and 19. A staggering 94% of the people in this sample reported not receiving any job offer in the last year. This number happens even though only around 11% of people claimed to never have looked for a job. I already mentioned the danger of social desirability bias but even if these numbers are not exactly correct, they are so strong that some truth must lie behind them.

Table 18 - RSI - Did you have any job offer in the last year? Table 19 - RSI - Last time you looked for a job?

Did you have any job offer in the last year?	
1. Yes, one, that I did not accept	4,2%
2. Yes, more than one, that I did not accept	1,5%
3. No, I had no offer	93,8%
4. Yes, but they canceled	0,4%
Total	100%

When was the last time you looked for a job?	
1. In the last 3 months	47,1%
2. More than 3 months ago	42,1%
3. Never	10,7%
Total	100%

Source: *Impactos dos Acordos de Inserção no Desempenho do RSI(entre 2006-2009) - DINÂMIA’CET; Impact of inclusion Agreements in RSI performance (2006-2009); Statistics Portugal*

When I looked at what literature had to say about the labor market effects of the two policies under analysis in this work I understood that the focus was on the labor supply effects as well as the ability to prevent unemployment and encourage the inclusion in the labor market.

The under-developed regions of Madhya Pradesh and Oaxaca presented generally positive results. In the Namibian case reports stated a decline in unemployment and an increase in the income generated by individuals through self-employment, farming or working for others. Similar to RSI no direct impact on the number of hours worked was measured. In the African country results seem to be the opposite of those for RSI indicating a rise in employment and a productivity boost. It is interesting to note that despite having contexts that are poles apart, the initial unemployment rate of those under BI and the unemployment rate amongst the beneficiaries of RSI is similar (60%). In India, BI also produced results way above those attained with RSI. Employment rose for the villages under treatment with an increase in the share of people working on their own-account for income. The segment of people unemployed and looking for a job decreased while the number of people not working due to housework grew. However less people were now not working because they were pursuing some form of education or training. India also presented results on the issue of hours and days worked with no significant impact being identified. When we compare these results to those obtained with RSI, the success of BI is hard to question. Under-qualified people dealing with challenging forms of poverty were able due to the incentive to increase their wealth and become more involved in society. On the contrary RSI seems unable to deliver similar results to people who are also under-qualified regarding the country's reality and that are the faces of the country's most severe cases of poverty.

Results obtained in the experiments conducted in the US – Alaska and the NIT trials, are somewhat different. In the case of Alaska the only data available was a survey response regarding the impact of the dividend in the number of hours and days worked. The percentage of Alaskans reporting a decrease in time spent working was small (1%). I already identified the potential cause for this small impact. Representing on average 6% of the medium Alaskan household income, the amount is not big enough to really result as a disincentive to work. In the case of the NIT experiments reality is different. Covering households with income as high as 3.5 times the poverty line in the country resulted in different outcomes in terms of employment and number of hours worked. The generosity of these programmes came in two forms: the amount distributed and the maximum income allowed in order to be part of the programme. What results have showed is that the first seems more important than the second.

Seattle-Denver, the place where the effects on labor supply were stronger was the most generous in the two conditions mentioned above. However in Indiana, where the level of income accepted was high but the guarantee level was in line with the other programmes – apart from Seattle-Denver- showed results that are similar to those achieved by New Jersey and the rural areas. As we know RSI is both strict in terms of income level allowed to enroll and the value distributed, with amounts that are way below those granted even in the less benevolent NIT experiments here analyzed. Based on the above it seems like the broken link we have identified between RSI beneficiaries and the labor market has nothing to do with a too generous scheme or the disincentives produced with the transfer – a common belief amongst the population (Martinez & Silva, 2013). The impact on employment produced by NIT was as we saw not measured but rather estimated. However the results are similar. The scheme seems to increase the probability of being unemployed and enlarge the time spent without a job. In the case of RSI although a significant percentage of people who were working when they claimed the benefit became unemployed at some point, the overall percentage of those having a job tends to be stable. Thus despite not promoting employment, RSI does not seem to encourage idleness either. However it seems to create dependence. Almost 80% of people claim that they cannot imagine their life without RSI. This can be interpreted in two ways. We can look at this number as a symptom that beneficiaries are not willing to make an effort to change their situation and seem to be accommodated. The other way of looking at this number is that RSI rather than contributing in some way to social mobility or acting as a promoter for inclusion, it provides instead some sort of mobility trap where those under the scheme struggle to escape from. As a matter of fact from those 80% who do not see themselves living without RSI more than half of them (55.6%) still claim “finding a job” as the best thing that could happen. A share that is slightly higher than those who would prefer an increase on the benefit, 47.2%. However from the share of people who believe they will be able to exit the scheme either in less or more than one year, most mention finding a job as the best possible outcome (81.5%).

5. Conclusions

This work was developed with two purposes: first to identify the current state of the Minimum Income Scheme Policy as a method to tackle poverty and promote inclusion with a focus on the Portuguese case; and second to analyze and compare the potential advantages and disadvantages of implementing a Basic Income scheme over the mentioned parameters in the nation's context. This is not an easy task due to the low number of BI experiments that were conducted. In addition the information that we can obtain to evaluate them is restricted by data being very limited. Both limitations imply that the ability to extract lessons that could be used for comparisons between schemes or across different sociological and economic realities is sometimes limited. Nevertheless, the current low results of Minimum Income and the growing attention that public authorities are giving to BI led me to believe that a work of this nature would be relevant. A Minimum Income Scheme is aimed at alleviating poverty while contributing to successfully promote inclusion amongst its beneficiaries. Nonetheless in Portugal the policy only does half of the job. Poverty intensity is indeed reduced, but individuals seemed trapped in a cycle of poverty where finding a decent job or any job at all is a rare occasion. Moreover what results show is that rather than being a problem of supply only, there seems to be a mismatch between the market needs and the beneficiaries's abilities and skills. Given the analysis developed in this work I believe that I can argue that Basic Income experiments seemed to produce better results on both tackling poverty and promoting inclusion. The scheme was able to raise beneficiaries' income while preventing dependency from the policy and promoting inclusion in society as a whole and the labor market in particular. Nonetheless in more developed regions it was observed that a more generous benefit both in size and in coverage can raise labor response issues. In sum this work raises some questions about the ability of the Portuguese Minimum Income Scheme to fulfill the goals that were behind its foundation and hence it needs some type of reconfiguration. It also believes that past Basic Income Experiments have produced results that are too good to be ignored. Finally it suggests that the idea of a Basic Income should be considered as an alternative policy to the current measure. All of this does not dismiss the idea that further research is needed on the topic, namely through small scale BI experiments and further examinations of the schemes currently in place. Only with more extensive data can we produce final conclusions on this topic.

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