

Theoretical

Figure 1
1999 Tax Benefits Associated With Having One Child
Married Couples Under Current Law
Assuming Child Care Expenses of 5% of Income

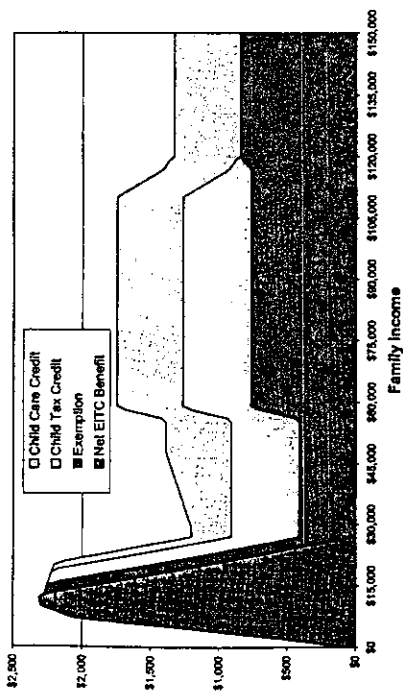


Figure 2
1999 Tax Benefits Associated With Having Two Children
Married Couples Under Current Law
Assuming Child Care Expenses of 5% of Income

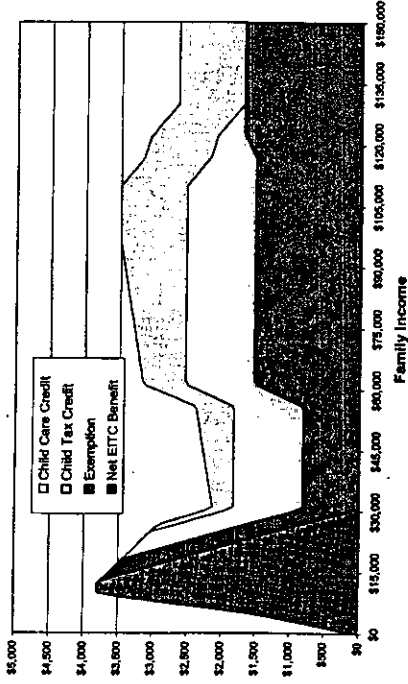


Figure 3
1999 Tax Benefits Associated With Having Three Children
Married Couples Under Current Law
Assuming Child Care Expenses of 5% of Income

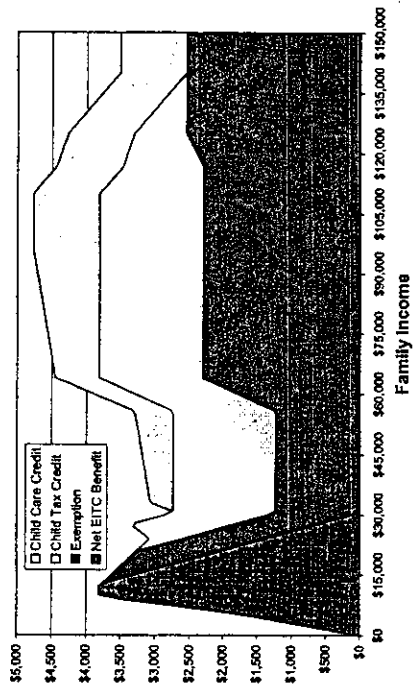
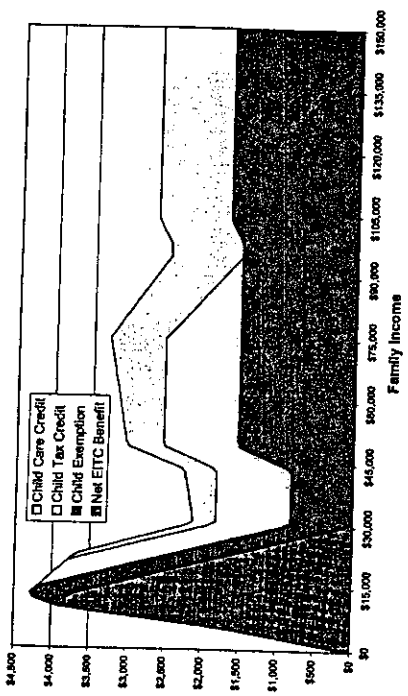


Figure 4
Tax Benefits Associated with Having Two Children
Unmarried Adult Under Current Law - Ignoring Change in Filing Status
Assuming Child Care Expense of 5% of Income



(Ellwood & Liebman, 2000)

Attwood

Figure 7
Average Tax Benefits from Children by AGI

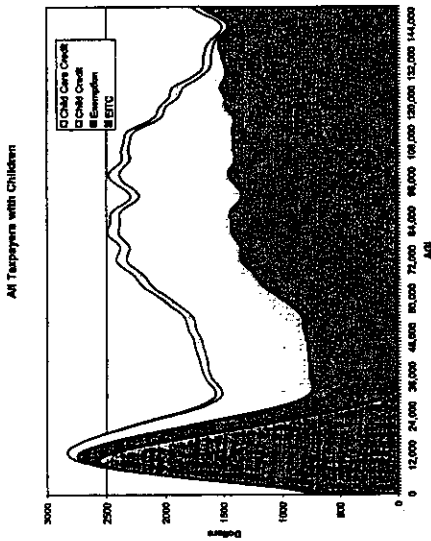
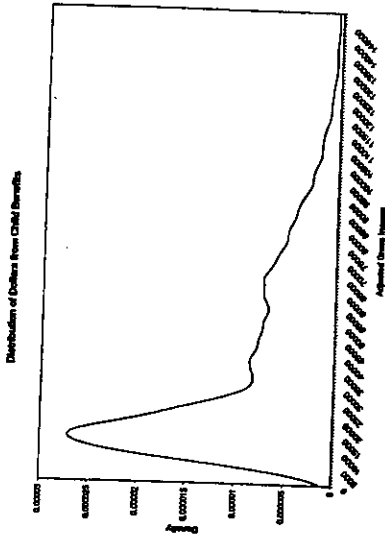
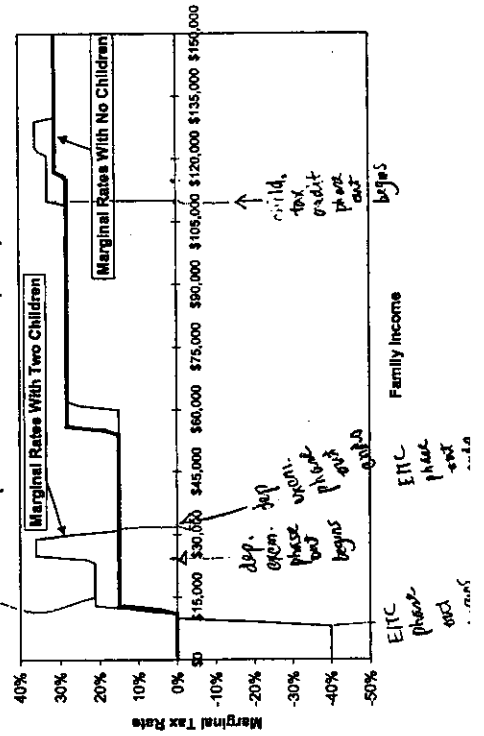


Figure 8
Distribution of Dollars Spent on Child Benefits by AGI



Handwritten: Marginal EITC phase-out rate = 19%
EITC phase-out rate = 15% (tax)

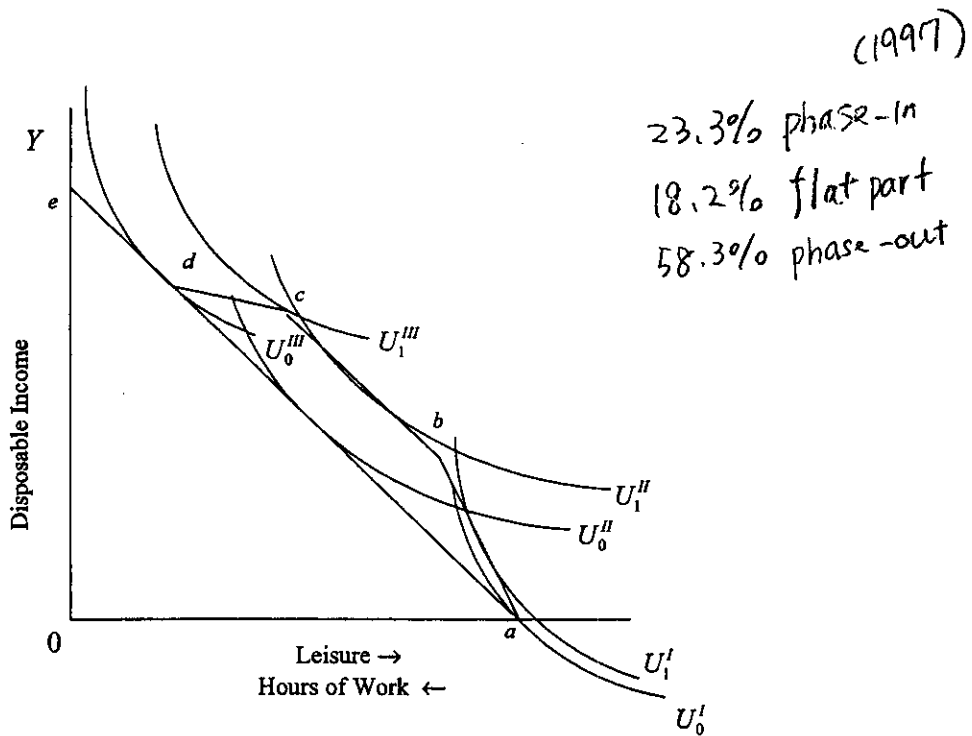
Figure 9
Marginal Income Tax Rate For Married Couple With Two Children Under Current Law As Compared to a Couple With No Children (No allowable child care expenses)



(Ellwood & Liebman, 2000)

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Figure 4: Effects of the EITC on Labor Force Participation and Hours of Work



(Hotz & Scholz, 2001)

表3 アメリカ税制の子どもにかかわる所得控除(Exemption or Deduction)、税額控除(Tax Credit) 所得制限(AGF\$)

制度名	対象者	額	Phase-out from: limit:		備考
			Lower	Upper	
非返還性税額控除 Non-Refundable	Dependent Exemption	1人あたり\$2750	126,600 189,950 158,300 94,975	249,100 (single) 312,450 (married) 280,800 (head) 156,225 (married, filin g separate)	扶養家族のクライテリア: 1. Support test (>50% of support) 2. Gross Income Test (\$2750>income of dependent), 3. Citizenship Test, 4. Joint Return test, 5. Relationship test 税率付録1
	Education Exemption	自身、配偶者、扶養者の職業訓練または大学レベルの学生がいる世帯	AGIの2%まで。最高\$3000	65,000 (Single) 130,000 (married) (mAGI)	2002-3年度の教値、HOPEやLLCとの併用は不可。1997年の税制改正により、今まで職業スキル向上のための教育費のみ可だったのが大学等も対象に加えられた。
2001年以前返還性税額控除 Refundable	Child and Dependent Care Tax Credit	共働き世帯か働く片親世帯で保育費がかかる13歳以下の子ども(または障害者)がいる世帯	保育料の20-30% (最高額一子目\$2,400, 二子目以降合わせて\$4,800/年または所得の低い方の所得)	クレジット率: AGF\$10,000まで30%、以下\$2,000毎に1%減、\$28,000以上(上限なし)は20%	配偶者が学生または障害者の場合は共働きでなくてもよい。企業福祉のFSA(Dependent Care Flexible Spending Account)の方が税には有利
	HOPE (scholarship) credit	高校卒業後の教育2年間の学生(大学1, 2年、年齢制限なし)がいる世帯	学生1人あたり: 最初の\$1000+次の\$1000の50% (最高額\$1,500)	40,000 (single) 80,000 (married)	1997年の税制改正より導入。HOPEとLLCを併用することはできない。教育(所得)控除にカウントした教育費は対象とならない。
	Lifetime Learning credit	20歳以上の学生がいる世帯(パートでもok、職業訓練も可)	20% of 教育費(1世帯あたり最高\$1000-2003年より\$2000)	40,000 (single) 80,000 (married)	
返還性税額控除 Refundable	Child Tax Credit	17歳以下の子どもがいる世帯	(勤労所得-\$10,000)x10% 最高子ども1人あたり\$500 (2001年から\$600までRefundable)	75,000 (head) 110,000 (married) (married, filin g separate)	1997年の税制改正より導入。2001年度までは3人以上の子の場合のみRefundable 2001~2004年\$600、2005~2008年\$700、2009年\$800、2010年~\$1,000
	Additional Child Tax Credit	17歳以下の子どもが3人以上いる世帯			
	Earned Income Tax Credit (EITC)	低所得者(学生は23歳)で同居子どものない場合は25<年齢<65		27,413 (1 child) 31,152 (2+child) 10,380 (0 child)	左記はmodified AGIで計算。 mAGI=AGI+non-tax pension, annuity-capital loss

表4 受給率と参加率(participation rate) (1999年)

	世帯数			参加率(%)
	該当者	参加者	不参加者	
全体	17.4±0.4	12.9±0.4	4.3±0.5	75.0±2.7
子どもなし	4.7±0.2	2.1±0.2	2.6±0.3	44.7±3.9
子ども1人	5.0±0.2	4.8±0.3	0.3±0.4	96.0±7.7
子ども2人	4.3±0.2	4.0±0.3	0.3±0.4	93.0±8.3
子ども3人以上	3.2±0.2	2.0±0.2	1.2±0.3	62.5±8.3

注：CPSとIRSのデータ in White (2001)

表6 EITCの受益者の所得(2000年)

所得層(ドル)	夫婦ジョイント		HH+独身		合計	
	人数	総額	人数	総額	人数	総額
0～10,000	592	\$1,041	4,490	\$4,575	5,082	\$5,616
10,000～20,000	1,187	\$2,993	4,724	\$10,056	5,910	\$13,049
20,000～30,000	1,747	\$3,196	3,312	\$5,989	5,059	\$9,185
30,000～40,000	1,026	\$996	1,143	\$970	2,169	\$1,966
40,000～50,000	172	\$130	17	\$12	189	\$141
50,000～75,000	29	\$43	0		29	\$43
75,000以上	0	\$0	0		0	\$0
合計	4,757	\$8,398	13,685	\$21,602	18,459	\$30,000

注：受益者数は千人単位、受益額は百万ドル単位

出所：Joint Committee on Taxation in USHouse of Representatives, GreenBook 2000

表5 EITCについての近年の主な研究
データ

	年	対象	サンプル数	欠点	方法
Dickert, Houser & Scholtz (1995)	1990	SIPP(クロス)		州毎のEITCの違いがない	州毎の税制と社会保障制度の違いを利用
Scholtz (1996)	1990	SIPP(クロス)		州毎のEITCの違いがない	州毎の税制と社会保障制度の違いを利用
Eissa & Liebman (1996)	1985~91	CPS(クロス)の複数年	母子世帯	同上、D-in-Dなので、TANFの改正など他の影響を分離できない、TとCの構成比の変化	D-in-D, 子どものない単身女性と子どものある単身女性の比較
Eissa & Hoynes (1998)	1985~97	CPS(クロス)の複数年	12歳以下の子どもがいる両親世帯	同上、D-in-Dなので、TANFの改正など他の影響を分離できない	D-in-D, 2人以上の子がいる世帯と1人の子がいる世帯との比較
Meyer & Rosenbaum (1999a)	1984~96	CPS/SIPP(クロス)		1. データに福祉受給者が少ない 2. 地域の労働市場の状況を失業率のみで捉えている	
Eliwood (1999)		CPS/SIPP(クロス)		同上、D-in-Dなので、TANFの改正など他の影響を分離できない	Difference-in-Difference Approach, 第4四分位の女性と第1四分位の女性との比較
Hotz, Mullin & Scholz (2001)	1992-1997 (受給歴は1987から)	加州4郡の福祉対象者 (California Work Pays Demo. Pro.)	1人または2人の受給世帯	1. データに受給者のみしか入っていないので、バイアス	EITCの1子と2子以上の給付額の差とCWPDの実験サンプルを利用。
Grogger (2001)	1978-1999	CPS	女性世帯主の世帯	女性世帯主のみなので、福祉改革の影響が女性の結婚動機に影響していればバイアスが生じる	TANFやEITCの州毎の違いを利用。
Neumark & Wascher (2000)	1986-1995	CPS(panel) 各年の世帯をマッチ	全世帯 全低所得世帯 (非受益者含)	連邦と州のEITCの変化率の影響を別々に推計しているが、連邦のEITCのvariationが少ない	世帯のバネルから、EITCの(州毎)変化を算出、勤労収入の変化(貧困脱却の可能性)を説明
Burkhauser et al. (1996)					シミュレーション

推定式

EITCの影響

	93年のEITC拡充は、母子世帯の母親の就労率を3.3%上昇させる(ベース56.4%)。しかし世帯内の第2所得者の就労率は減少。
Probit Estimate $P(L_i) = \alpha + \beta w + \gamma AFDC + \gamma 1FS + \gamma 2Z$	93年のEITC拡充は、既に働いている世帯ののべ就労時間を5450万時間(単身親世帯2640、二親世帯の最多所得者1360、二人目所得者1450)減少させるが、新しく労働市場に入る人々の就労が週20時間以上であれば、それはオフセットされる
Probit Estimate $P(L_i) = \theta(\alpha + \beta Z_{it} + \gamma T_{ij} + \gamma 1P86 + \gamma 2(T \times P86))_{it}$	1986年の改正によって、こどものある単身女性の就労率が2.8%上昇
	1984年から96年のEITCの拡大は、結婚している男性の就労率を0.2%増加、結婚している女性の就労率を1.2%減少。
	母子家庭の母親の就労増加の63%
	母子家庭の母親の就労増加の30%(20%景気、50%福祉改革)
$E_{itc} = \sum \alpha T(EITC)_{it} + \sum \beta T(AFDC)_{it} + \gamma X_{it} + \delta L_{it} + \theta W_{itc} + \epsilon_{it}$	EITC給付額\$1000につき就労率5.1%増。新規加入者のほうがその影響が大きい。
$Y_{ist} = \alpha A_{ist} + \beta Ret + \gamma E_{it} + \delta Z_{ist} + \theta X_{ist} + \mu st + \epsilon_{ist}$	TANF受給: 末子の年齢が高いほど、就労+ (末子の年齢は関係なし) 勤労収入: 勤労収入がゼロの世帯には+ (末子の年齢が高いほど+) 収入: 影響なし (EITC Refundがデータに入っていない?)。 (TANFの通算受給期間制限は受給に大きく、就労にほどほどに+) (特に末子が小さい世帯)。 勤労収入には影響なし (SSIや家族からの仕送りで補填?)
Linear Probability Model: $I(P_i) = \beta P_{ist} + \gamma \Delta U_{st} + \pi Z_{ist} + \delta s + \theta t + \epsilon_{it}$	EITCは、貧困脱却の可能性にプラスに影響。しかし、この影響は、年1に勤労者数=0の世帯における勤労所得と労働率への+の影響による(勤労者数=1の世帯では、むしろマイナス)。最低賃金と比べると、年1に勤労者=0の場合はEITCのほうが大きな影響。=1の場合は労働賃金の方が大きい。(貧困か否かの決定には税前勤労所得を使用-EITC給付は入っていない)
	最低賃金に比べ、EITCの方が低所得者をよりよくターゲットとしている。最低賃金は、低所得世帯よりも高所得世帯に多く便益を与えている。

表7 子どものWell-Beingへの影響

	AFDC	EITC/NIT	Food Stamp	Housing	Medicaid	WIC	給食	ヘッドスタート
保健・健康								
乳児致死率+出生児体	0	+/?	?/+		+	+	?/?	
食料・栄養への支出					+	+		+
予防ケア					+	+		
初等教育								
成績	0	+/?		+/?		+	+	+
就学率								+
長期的アウトカム								
福祉依存	?							?
十代の妊娠	?			+/?				?
就労		-						?
高校卒業								?
犯罪								?

出典: Currie (1996) in Haaga & Moffitt (1998)

厚生科学研究費補助金政策科学推進研究事業
「公的扶助システムのあり方に関する実証的・理論的研究」

**Universalism and Targeting:
An International Comparison using the LIS database**

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1. Introduction

In combating poverty, whether or not to design a universal program or a targeted program has been a perpetual dilemma. As early as 1971, Marmor (1971) suggested 6 criteria for comparing alternative income maintenance programs: adequacy, stigma, equitable efficiency, incentive effect, program cost and political support. Thirty years later, these criteria remain as key concerns for policy makers and there has been no consensus as to what type of system is more effective in efforts to alleviate poverty. This dilemma needs to be reviewed now that many countries are turning towards more targeted systems in response to rising social spending. In 2001, the International Social Security Association published a book entitled *Targeting Social Benefits: International Perspectives & Trends*, in which Gilbert (2001) states:

Thus, over the last decade many social welfare policies have been redesigned to narrow the scope of recipients by targeting benefits through means tests, income tests, claw-back taxes, diagnostic criteria, behavioral requirements, and status characteristics.

As suggested by Gilbert, the question is no longer just which is better, a universal program or a means-tested program?, but rather that of who should be targeted and how?. Means testing is one way of targeting. However, on top of the means test, more and more stringent eligibility criteria have been put in place and thus created a demarcation between the “deserving” poor and the “non-deserving” poor. For example, single-mother households, which tend to be the target of anti-poverty policies in many countries, might have a higher possibility of getting out of the poverty as compared to other households of the same poverty level that are not typically targeted.

To further complicate matters, it is hard to grasp the universality or targeting of a country’s social security system, because in most countries, the social security system is composed of many programs and while some programs are designed to be universalistic others are targeted (or means-tested)¹. Therefore, to assess the universality of a country’s entire system, it is necessary to examine how its constituent programs interact and compliment each other.

The objective of this paper is to conduct an international comparison of the “universality” and “targeting” of social security systems. The paper first defines

¹ For example, in Japan, fairly universal pension and medical insurance programs are supplemented by a means-tested public assistance program for the poor and a means-tested child allowance.

“universality” as it will be discussed in the following pages. The paper then presents an outline of methodologies used in assessing the universality and categorical targeting of the poor. Two methodologies are employed. The first builds on the work of Beckerman (1979) and examines how positive and negative net transfers are distributed using micro-data from eleven countries; the second employs a logistic regression method to estimate the effects of the initial poverty gap and categorical status of a household on its poverty outcome.

The data used are drawn from the Luxembourg Income Study (LIS) database and a micro-data from the Ministry of Health, Labor and Welfare of Japan. Although the Japanese data includes imputed values of medical services, the LIS data includes only near-cash benefits. Thus, only the in-cash and near-cash transfers such as pensions, child allowances, social assistance and food stamps are considered in the study, which presents a limitation in that it may lead to under-estimating positive transfers in countries where significant non-cash transfers (housing, food provision, education, medical services, etc.) are provided.² Another noteworthy limitation is that the study also excludes indirect taxes from the negative transfer, because there are only a handful of countries in the LIS database for which such data is available, and so this may result in under-estimation of negative transfer in some countries. Yet another limitation of the study is that it does not take account of assets in determining the poverty status of a household. Further, Bradbury and Jantti (1999) points out that the international comparison of poverty rate based on income, rather consumption, may lead to a wrong conclusion if countries differ in the patterns of lifecycle saving. In a country where a private saving is more significant than public saving for old age, poverty rate based on income will be under-estimated.

Even though these are serious constraints, the study is useful in understanding the degree of “universality” and “targeting” in welfare states’ poverty alleviation systems.

2. Definition of “Universality”

One of the most renowned studies of welfare state typologies to use the concept of “universalism” is that of Esping-Andersen (1990). In which “(program) universalism” is defined as the percentage of the relevant population (labor force between ages 16 and 65) covered under the respective programs for sickness, unemployment and pensions (Esping-Andersen, 1990, p.71,78). However, Esping-Andersen specifically excludes income-tested social assistance programs since “none provides full citizen rights to

² However, according to Bradbury and Jantti (1999), the poverty rate based on income is highly correlated with the poverty level based on income and non-cash transfer such as education and housing.

benefits" (ibid., p.71). Thus, to cover the social assistance part of the welfare system, Esping-Andersen uses another measure called "relative importance of social assistance" defined as "means-tested poor relief as a percentage of total public social expenditure". The "(program) universalism" is an attribute associated with what he defines as "socialist regimes" while the "relative importance of means-tested welfare benefits" is an attribute associated with "liberal regime"³.

Both of the measures devised by Esping-Andersen essentially indicate a characteristic of the system design: the first involves the coverage of non-social assistance programs, and the second concerns the relative importance of social assistance programs where a distinction is made according to program purpose, namely, "social assistance" versus other purposes. It does not indicate how the benefits are actually distributed. Neither a high level of program universality nor a low share of means-tested programs directly implies that the benefit is distributed equally across the population. For example, a universal unemployment benefit might disproportionately distribute transfers to the poor because the unemployment rate amongst the poor tends to be higher than it is amongst the rich. By looking at the aggregated data, it is not possible to see the distributional pattern of a program, or for that matter, the way in which transfers are distributed across an entire welfare system. To do so, it is necessary to draw upon the micro-data.

Mitchell (1992) provides one of the earlier studies using micro-data. Using micro-data from the LIS, Mitchell calculated various measures including, among others, pre- and post-transfer poverty rates and progressivity of the transfer system. In this work, Mitchell does not specifically discuss universalism, but she does discuss the concept of vertical expenditure efficiency (VEE) based on the work by Beckerman (1979), whereby VEE is defined as a share of transfer received by the pre-transfer poor as a percentage of total transfer. VEE is a measure that illustrates how transfers are distributed between the rich and the poor, and thus it can also be used in evaluating universality: if a program is universally distributed, VEE will be low; and if a program is means-tested, VEE will be high.

In this paper, the concept of "universality" of an income transfer system is defined as follows: Universality is a degree of how flat the transfer is distributed across a population of different incomes. For example, if a transfer system distributes its transfer at a flat rate to everybody, the system is completely universal; at the opposite end of the

³ In his later work (Esping-Andersen, 1999), he uses two measures as the key measures associated with the "liberal" nation: "means-tested assistance as a share of total transfers" and "private pensions as a percentage of total pensions".

spectrum is a completely means-tested system in which only those at a certain income or below receive transfers.

As earlier stated, the income transfer system of a country is composed of various programs such as public pension, social assistance and child allowance, and even though each individual program may be universal or means-tested, the system as a whole is often neither completely universal nor means-tested. It lies somewhere in between being either completely or means-tested—it is this degree of universality that this paper seeks to address. The definition of universality being used here, following on from Beckerman and Mitchell essentially examines how the transfer is actually distributed. For comparison, this paper will also examine universality based on Esping-Andersen's approach, focusing on system design, using available micro-data.

Two levels of “universality” are examined: one is the universality of the entire population when the population is divided into the poor and the non-poor; the other is the universality within the poor. This is done in conjunction with an examination of “categorical targeting within the poor”, where “categorical targeting within the poor” is defined as the degree to which a system favors a certain category of the poor over other categories of the poor.

3. Methodology

3.1. Beckerman's Poverty Reduction Efficiency

As with previous papers, this paper uses the “efficiency” indexes developed by Beckerman (1979) as a starting point for devising an index for universality. Diagram 1 is a depiction of a transfer program constructed by Beckerman. The area denoted “D” is the post-benefit poverty gap, i.e. the poverty gap that remains after the transfer, and the area denoted “A” is the poverty gap that is reduced. Area “B” is the amount of transfer that goes to the poor in excess of reducing the poverty gap, and area “C” is the amount of transfer that goes to the non-poor. Beckerman (1979) defines “Vertical Expenditure Efficiency (VEE)” as $(A+B)/(A+B+C)$, and “Poverty Reduction Efficiency (PRE)” as $A/(A+B)$. Put simply, VEE is the share of net benefit (transfer) going to the poor in the entire net benefit, and PRE is the share of the net benefit actually alleviating the poverty gap in the entire benefit. Mitchell (1991) uses this concept and formularizes the post-transfer income as follows (Eq. 1). Using the LIS database, she then calculated each term for 10 OECD countries.

$$P_{\text{post}} = P_{\text{pre}} - (\text{size} \times \text{efficiency}) \quad (\text{Eq. 1})$$

Where P_{post} = Post-tax, transfer income

P_{pre} = Pre-tax, transfer income

size = amount of social expenditure

efficiency = Beckerman's poverty reduction efficiency

However, Diagram 1 is misleading in two aspects. First, it omits the possibility that the net transfer might be negative, i.e., where the pre-tax-benefit net disposable income (solid line) is above the post-tax-benefit disposable income (broken line). Second, the model does not consider the possibility that the amount of net benefit is not always inversely proportional to income. Although the first problem can easily be solved by extending the solid and broken lines, the second is not so straightforwardly resolved. For example, in reality, poverty alleviation programs are not flawless and some families with income below the poverty line may actually suffer negative net transfers, let alone receive any positive transfers. Furthermore, if we are to include pension programs in the picture, the amount of benefits is often related to past earnings, and therefore has little connection with current income level.

Recognizing that there could be negative transfers to the poor and therefore an increase in the total poverty gap, Kim (2000) introduces a term into Mitchell's equation to represent the increase in the aggregated poverty gap (P_{inc}).

$$P_{post} = P_{pre} - (size \times efficiency - P_{inc}) \quad (\text{Eq. 2})$$

where

$$P_{post} = \left(\frac{D}{G} \right)$$

$$P_{pre} = \left(\frac{A + D}{G} \right)$$

$$size = \left(\frac{A + B + C}{G} \right)$$

$$efficiency = \left(\frac{A}{A + B + C} \right)$$

P_{inc} = the aggregate amount of poverty gap increased by negative net transfer.

Kim's equation is an improvement to Mitchell's in that it captures a reality of the tax and transfer systems. However, by aggregating the entire population's positive and negative transfers into a single equation, it omits many details, for example what share of the poor experience net negative transfers and the value of positive and negative transfers that flow to the rich.

3.2 Indexes

First, all households were divided into the categories of either “poor” and “rich” by comparing equivalized pre-tax-transfer disposable income with the poverty line. Each category was then divided into four categories according to post-tax-transfer poverty status: 1) Pre-poor -> Post-poor, 2) Pre-poor -> Post-rich, 3) Pre-rich -> Post-rich, 4) Pre-rich -> Post-poor. For example, the first category includes those households whose income was below the poverty line both before and after tax and transfer. Next, each category is further divided into three sub-categories according to the amount of net transfer to that household: a) households that received positive net transfer, b) households that received negative net transfer, and c) households that received zero net transfer. For each category and sub-category, net transfer is calculated.

Next, the paper calculates two “universality” indexes: positive universality and negative universality. The first is the share of positive net transfer that went to the Pre-rich in the total positive net transfer. The second is the share of negative net transfer taken from the Pre-rich in the total negative transfer. The third universality index, “system universality” which is defined as the share of non-means-tested positive transfer in the total positive transfer, is also calculated.

3.3 Logit analysis

In order to evaluate the universality and categorical targeting within the poor, a simple logistic regression is performed. Using a sample of households whose pre-tax-transfer income is below the poverty line, i.e. pre-tax-transfer poor (Pre-poor), let P_i denote the probability of household i getting out of poverty after the tax-transfer, and G_i the poverty gap (= poverty line – pre-tax-transfer income) of household i . Then,

$$\ln\left(\frac{P_i}{1 - P_i}\right) = \beta_1 + \beta_2 G_i + \beta_3 H_i \quad (\text{Eq. 3})$$

where P_i = probability that Poor i gets out of poverty after transfer

G_i = poverty gap of Poor i

H_i = household type dummies

Household types were divided into nine categories: single old female household, single old male households, single young female household, single young male household, household with more than one old person but no young person (Old only), household with more than one young person but no old person and no children(young

$$\text{Post-tax-transfer income} = \text{Pre-tax-transfer income} + \text{Public Pension}^7 \\ + \text{Other Benefits} - \text{Social Security Contributions} - \text{Income tax}^8$$

Child and alimony support are included in the Pre-tax-transfer income, because it could be interpreted as an individual transfer⁹. The equivalence scale is the one often used in LIS studies.

$$\text{EquivalenceScale} = (\# \text{adults} + (\# \text{children}) \times 0.7)^{0.7}$$

The poverty line is defined as 50% of the median DPI. The use of such a statistical measure as a poverty line has caused some arguments. For one, the established “official” poverty lines in many countries often differ from 50% of median DPI. Some have argued for using an absolute poverty line adjusted by purchasing price parity across nations (Kenworthy, 1999). However, no index has conclusively proven to be better than any other in conducting international comparison. In this paper, “50% of median DPI” is used on account of the measure’s simplicity and widespread usage.

5. Empirical Results

5.1 Poverty Outcome and Universality

Tables 1 through Table 5 summarize the findings from the first section of the analysis. Poverty outcomes are shown in Table 1, and Table 2 and 3 detail who receives and who pays out the transfer. More specifically, Table 2 shows the percentage share, in household numbers, of households’ net transfers and poverty status. Over all, slightly above 50% of all households in the sample received negative net transfers, while slightly below 50% received positive net transfers. Of the households that received negative net transfer, most are in the “Pre-rich Post-rich” category. This is consistent with the spirit of redistribution associated with a welfare state. However, there are also those households that are in the “Pre-poor Post-poor” and the “Pre-rich Post-poor” category which received negative net transfer. Although the share of such households is generally small, it is not insignificant. For example, in Japan, Germany and the United States, households that were poor to begin with and became poorer comprise 4.6%,

⁷ For Japan : Employees’ Pension Insurance benefits, National Pension benefit and other public pension benefits including Veteran’s benefits, Employment Insurance benefits, Child rearing and allowances under public medical insurance, Public assistance for the poor (Seikatsu Hogo), Cash benefits, child allowance and other benefits. For LIS : Social security benefits(old age, survivor’s ,etc.),Disability pay, military/vet benefits, child or family allowances, unemployment compensation, sick pay, accident pay, maternity pay, other social insurance, means-tested cash benefits, near-cash benefits (food, housing, education)

⁸ Japan: Income tax and local tax, LIS: Income tax. Property tax, other direct taxes and indirect tax (consumption tax) are available in the Japanese data, but not in LIS, and therefore not included here.

⁹ Child and Alimony support is not in the Japanese data, however the transfer in this category is expected to be negligible.

4.3% and 2.6% of all households respectively. Regarding the households that received positive net transfers, looking at the right-hand side of Table 2, it is interesting to note the compositional variation across countries. The share of “Pre & Post-poor” relative to the share of “Pre-poor Post-rich” indicates the proportion of poor households that received positive net transfer which were actually lifted out of poverty. In all countries except Australia, Canada, Japan and the United States, those households that were lifted out of poverty have a much larger share of transfers than those that remained in poverty. In the United States, the share of households remaining in poverty is larger than that of those lifted out of poverty. However, the United Kingdom, which like the United States is a country labeled as a “liberal” state, does not share this feature. However, an international comparison must be made with a care, because the data does not include indirect taxes. For a country in which significant negative transfers are made through indirect tax, the share of households that experience negative net transfers will be underestimated while the share of households with positive net transfers will be overestimated.

Table 3 shows the amount of net transfer aggregated by net transfer and poverty status. The two main “Social Democratic” states, Sweden and Norway, are characterized by a low negative net transfer to both the “Pre & Post-poor” and the “Pre-rich Post-poor”, and a high positive net transfer to the “Pre-poor Post-rich”. Germany shares similar characteristics, except that it also shows the largest negative transfer for the “Pre-rich Post-poor”. The “liberal” states, the United States, United Kingdom, Australia and Canada, are characterized by large positive transfers and fairly low negative transfers to the “Pre & Post-poor”. However, there is variation within “liberal” states in terms of the amount of positive net transfer to the “Pre-poor Post-rich” category. The United Kingdom and Australia have transferred a fairly large amount to this group, which might lead one to speculate that transfers to the Pre-poor actually lifted them out of poverty; in contrast, the United States has transferred comparatively little to this group, which might lead one to conclude that a relatively smaller share of the Pre-poor were provided with sufficient transfers to lift them out of poverty.¹⁰

Another interesting finding is the existence of households that were made worse off because of a negative transfer. In the “Pre & Post-poor” category the Netherlands,

¹⁰ One of the possible explanation of this finding is the depth of poverty. It could be that the poverty in the United Kingdom and Australia is “shallower” than that in the United States, and, therefore, a relatively small transfer is sufficient to change a household’s status from “Pre & Post-poor” to “Pre-poor Post-rich”. However, given data that suggest the average poverty gap in the United States is lower than in the UK or Australia (Table 6), this explanation seems unlikely.

Japan and Denmark have large net negative transfers, which contributed to the widening of the poverty gap for these households. For Denmark, the United Kingdom and Japan, there are also some net negative transfers to “Pre-rich Pre-poor”. This result is disturbing, especially if one considers the fact that the data does not account for the effects of indirect taxes, another large source of negative transfer.

5.2 Positive, Negative and System Universality

Table 4 shows the universality indexes. The left column shows the “System Universality”, the share of non means-tested positive transfer as a percentage of total transfer. This is close to the concept of what Esping-Andersen (1990) calls the “relative importance of social assistance”. In all countries, the bulk of positive transfers are not means-tested, but there is some cross-national variation, ranging from 0.79 (United Kingdom) to 0.98 (Japan). The variation more-or-less follows Esping-Andersen’s welfare state typologies; “liberal” states such as the United Kingdom and United States have smaller share of non-means-tested transfer as opposed to “Social Democratic” or “Conservative” states. The middle column shows the “Positive Universality”, the share of positive net transfer going to the Pre-tax-and-transfer Poor among the households that received positive net transfer. In all countries, a large portion of the positive net transfer goes to the Pre-poor, and relatively smaller portion, to the Pre-rich. Thus, even though countries provide the most transfers through universal (not means-tested) programs, in actuality, the poor get relatively more than the rich. Graph 1 shows the relationship between the “system universality” and the “positive universality” indexes; overall, no relationship between the two universality indexes is evident. For example, Japan and Sweden both show very high “system universality”, however, while Japan transfers 34% of its positive transfer to the Pre-rich, Sweden transfers only 16%. Furthermore, the United States and Denmark both have relatively low “system universality”: the United States transfers 26% to the Pre-rich, and Denmark, only 11%. Indeed, the correlation between the two universality indexes is 0.064, showing a weak relationship between how the transfer programs are designed and how much transfer actually goes to the poor. However, it does suggest there are two groups of countries. Among each group, a positive correlation between the two universalities exists (Graph 2). The right column shows the “negative universality”, the share of negative net transfer going to the Pre-rich among the households who received negative net transfer. Japan and Germany show relatively low negative universality, compared to other nations. Graph 3 shows the relationship between “positive universality” and “negative universality”. There does not appear to be any relationship between the two.

5.3 Logit Analysis

The descriptive statistics and the result of the estimation are shown in Table 6 and 7. In all eleven countries except Norway, the coefficient for the poverty gap (β_2) is negative and significant. This indicates that in almost all countries, the amount of the poverty gap has some effect on the household's probability of getting out of poverty through government transfer. Thus, there is some evidence of the universal character in almost all countries. However, the marginal effect at the mean differs quite significantly across the nations surveyed. Larger marginal effects at the mean are seen in the United States, Canada and the United Kingdom. Smaller marginal effects are observed for Norway, Sweden, Denmark, and to some extent, Germany and Japan. The middle countries are Finland, the Netherlands, and Australia. According to the model, these results suggest that the United States, Canada and the United Kingdom are more "universal" while Norway, Sweden, Denmark and Japan are more "means-tested". This conclusion does not fit the typologies of Esping-Andersen, nor the results from Section 5.2. How could this be?

One explanation is that the model only measures the universality within the poor. The smaller effects only indicate that the probability of getting out of poverty is the same for a very poor household and a household just below the poverty line, taking into account of different household types. For this to happen, a system either 1) provides benefits in accordance to the poverty gap of a household, or 2) provides a flat rate benefit that is adequate to lift even the poorest out of the poverty. For 2) to be valid, the poverty gap reduction rate must be high. The estimation results alone say nothing about the overall probability of a poor household getting out of poverty. For this, we need to turn to the results from Table 1. The poverty gap reduction rates for Norway, Sweden, Denmark and Germany are quite high. Also from Table 1, Sweden, Norway and Germany provide only a small portion of their positive transfers through means-tested programs. Thus, it is likely that these countries have managed to transfer the benefits to the poor, through a system that is basically universal in its design, but is generous enough that even the poorest can get out of poverty. Japan is an interesting case. Japan also has a small marginal effect of β_2 , showing that the poverty gap has small effect on the poverty gap, and a high system universality, as with Sweden, Norway and Germany. But, Japan's poverty rate reduction rate is very low, indicating, within the poor, Japan's transfer system is strictly means-tested. The United States, Canada and the United Kingdom show a relatively large marginal effect of β_2 , indicating that the initial poverty gap in those countries has strong influence on the final poverty outcome. As the three countries

have fairly low system universality, and a moderate positive universality, it can be said that these countries employ transfer systems with significant means-tested components, but the transfer amount is not in accordance of the poverty gap of a household.

Next, looking at the estimation for the household-type dummy variables, several interesting observations can be made. The base category for household type dummies is “household with more than one young person but no old person and no children”, for example a working generation couple without children. The odds ratio in Table 7 represents the ratio of odds of getting out of poverty for that particular household type and for the base category. The odds ratio for “Old Only” households (households containing only those aged above 65), the coefficient is positive and significant in all countries. This is not surprising since the pension program is the largest portion of government transfer in most countries. The marginal effect for this category is fairly large for the United States, Japan, Canada, Australia and the United Kingdom, and fairly low for Finland, Sweden, Netherlands, Denmark and Norway. What is interesting is the difference between coefficients for “single elderly woman” and “single elderly man”. For both of them, the coefficients are positive and significant for almost all countries. However, in all of the countries except for Japan and the United States, the marginal effect for (single elderly) women are higher than that for (single elderly) men. Especially in Japan, the difference is large, indicating a gender bias in Japan’s pension system.

The estimates for single young men and women are mixed. For all countries except the United States, the United Kingdom and Canada, the coefficients for these groups are negative and significant, showing that single men and women are less likely to get out of poverty than a couple (without children or elderly in the household), among young generations. For the United States, the United Kingdom and Canada, the trend was reversed.

The estimate for “young household with children (excluding single-mother households)” is interesting in that it gives the country’s “family friendliness”. Interestingly, despite the fact that many countries have policies and programs to help the families with children, none of the coefficients (except Sweden) turned out to be positive and significant. The coefficient for Sweden is positive and significant, but its magnitude is rather small. Others are mostly negative and significant, indicating that given same poverty level, families with children are less likely to get out of poverty than families without children. The marginal effect of being a family with children is the lowest in Japan, followed by Germany and the Netherlands.

The same story can be told about the “household with a single woman with children”.