

Does Social Labeling Displace Child Labor and Increase Child Schooling? Evidence From Nepal



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Outline of the Presentation

- Motivation
- Justification of the Study
- Objectives of the Study
- Methodology of Data Collection
- Descriptive Statistics
- Econometric Model
- Results
- Conclusion and Policy Implication

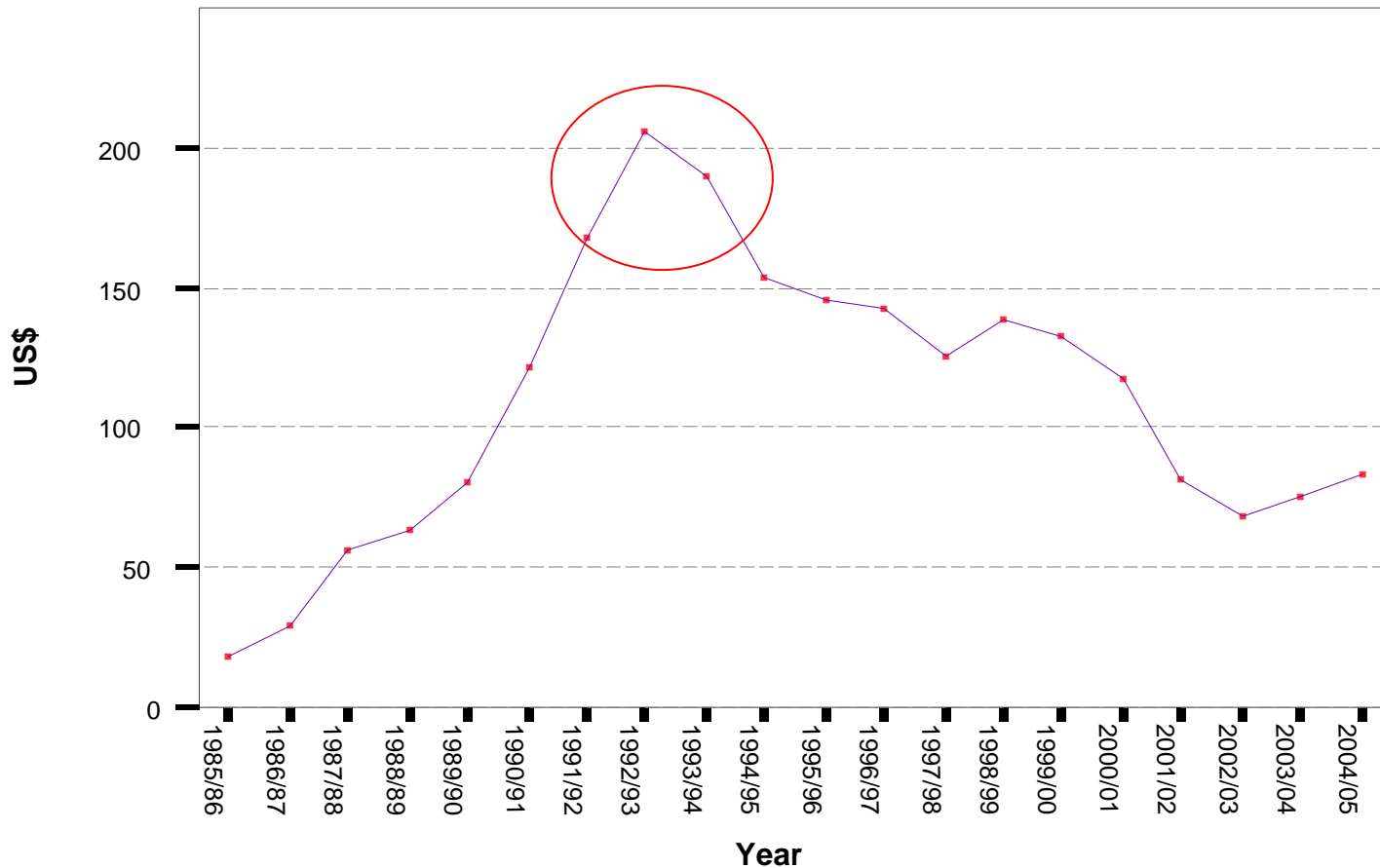


I. Motivation

- Globalization & Incidence of Child Labor
- Fair & Ethical Trade
- Trade Sanctions

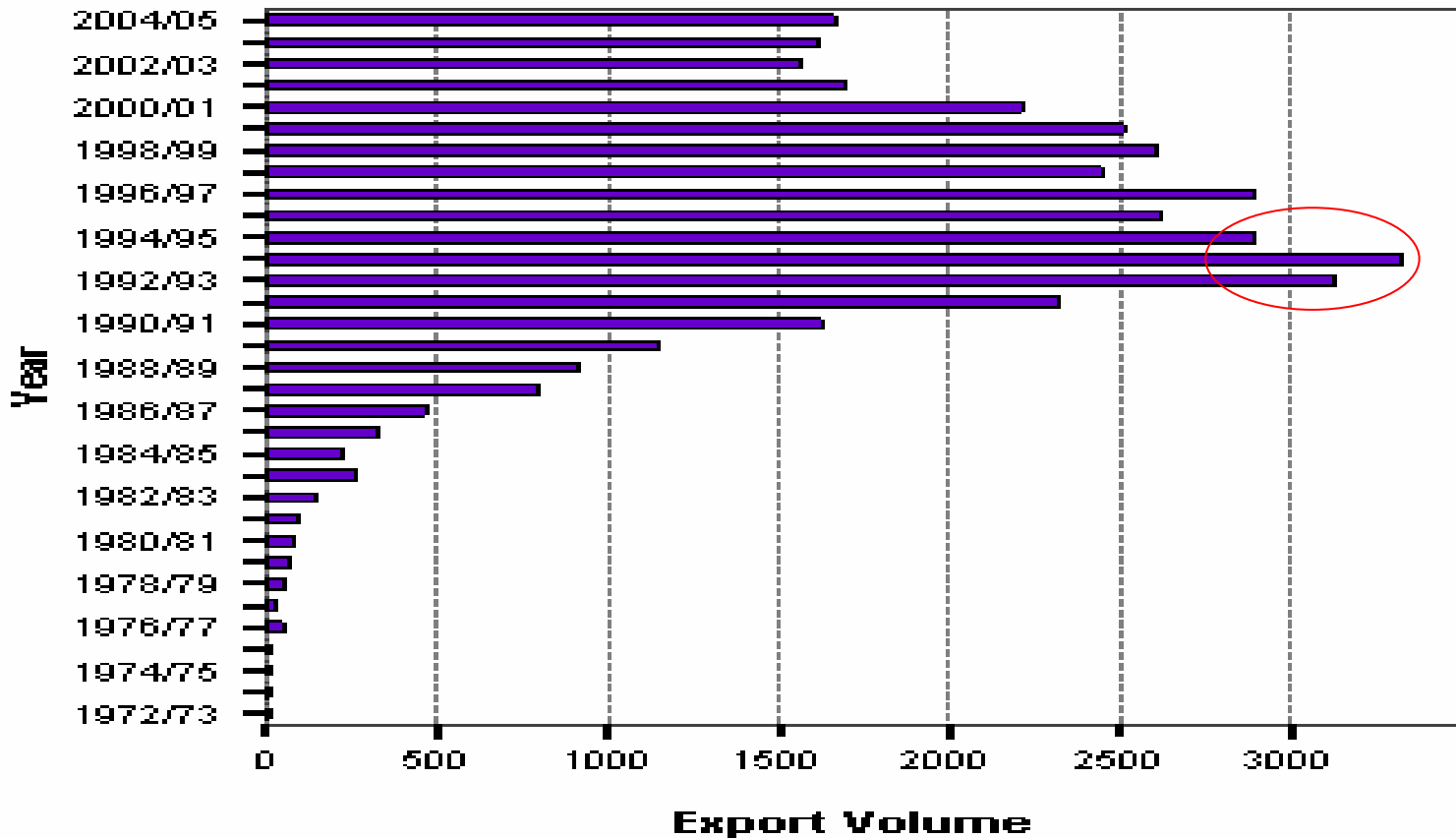
Motivation (Cont....)

Trend in Earnings through the Export of Carpet (in Mil. US\$),
Nepal, 1972-2005



Motivation (Cont....)

Volume of Carpet Exported (in '1000' Square Metre) Nepal, 1972-2005





Motivation (Cont....)

Reasons of The Carpet Shock of 1994/95

- “Panorama” TV-news of Germany transmitted the documentary on the use of child labor in Nepali carpet production in April 1994.
- About 40 percent of orders were cancelled. This is one of the major reasons of the carpet shock in 1994/95.



Motivation (Cont....)

Child Labor in Carpet Industry

- Labor force participation rate is 21% for the age limit 5-9.
- Labor force participation rate is 61% for the age limit 10-14 (NLFS, 1998-99).
- 365 carpet factories within the Kathmandu Valley were surveyed, and it was estimated that about 50 percent of the total laborers were children (CWIN, 1993).
- Of them, almost 8 percent were below 10 years old, 65 percent between 11 and 14, and the remaining 27 percent were between 15 and 16 years (CWIN, 1993).

Motivation (Cont....)



- Trade War
- Labor Standards and Enforcement in Child Labor
- Social Labeling
- In 1995: Rugmark; Step; Care & Fair

Rehabilitation projects

Monitoring

Schooling



II. Justification of the Study

- First empirical study targeting social labeling NGOs
- Findings of this study are expected to be used by developing countries to combat child labor



III. Objectives of the study

The overall objective of this study:

- Test luxury axiom,
nutritional efficiency wage argument.
- Test social labeling program as a tool to combat child labor problem.



III. Objectives of the study (Cont....)

Research Questions

- Does 'luxury axiom' explain child labor supply in Nepal?
- Is nutritional status a determining factor of 'luxury axiom'?
- Does the 'nutritional efficiency wage argument' hold to explain child labor supply in Nepal?
- Does social labeling decrease child labor?



IV. Methodology of Data Collection

- Pilot Survey (2003 -2004)
- Key Person Interviews
- Focus Group Discussions
- Stratified* Random Sampling
20 households in each country
- Local Census
- Final Survey (2004)
- Stratified* Random Sampling
1,130 households in three countries

* Stratification: area; status of industry; type of household



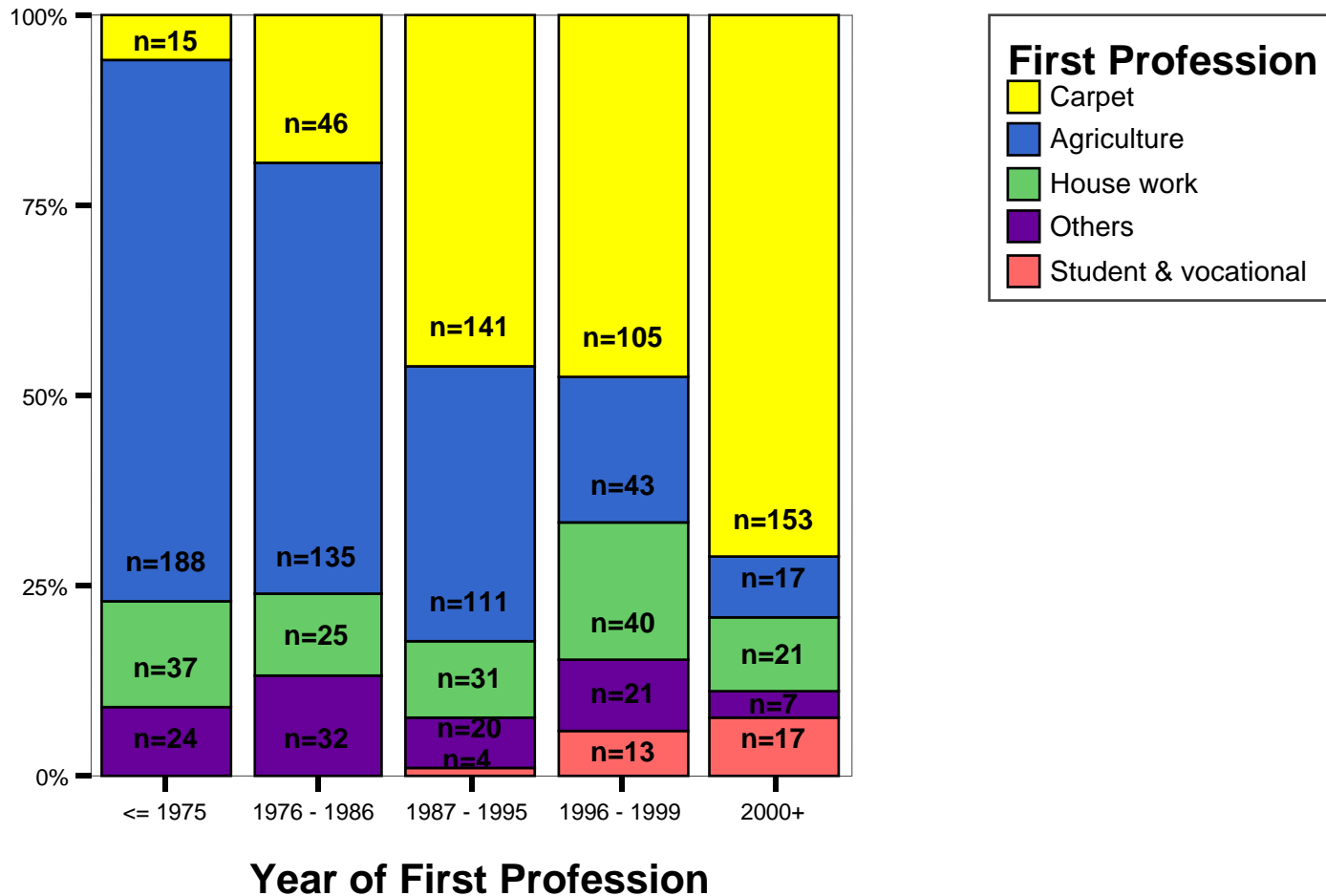
V. Descriptive Statistics of Nepal Study

- Mean household size of 4.8 ([4.6 ; 4.9]*)
- Mean MPC is 83% ([81% ; 85%]*)
estimated net savings rate is 12% ([11% ; 14%]*)
- Mean per capita income is 1,284Rs ([1,229 ; 1,340]*)
- In 91 percent cases the household members joined in the first profession while they were children (mean age is 11)
- The mean age of starting school is 8 years ([7 ; 8]*)
- 32 percent of the children are working only for food

* Confidence interval 95%

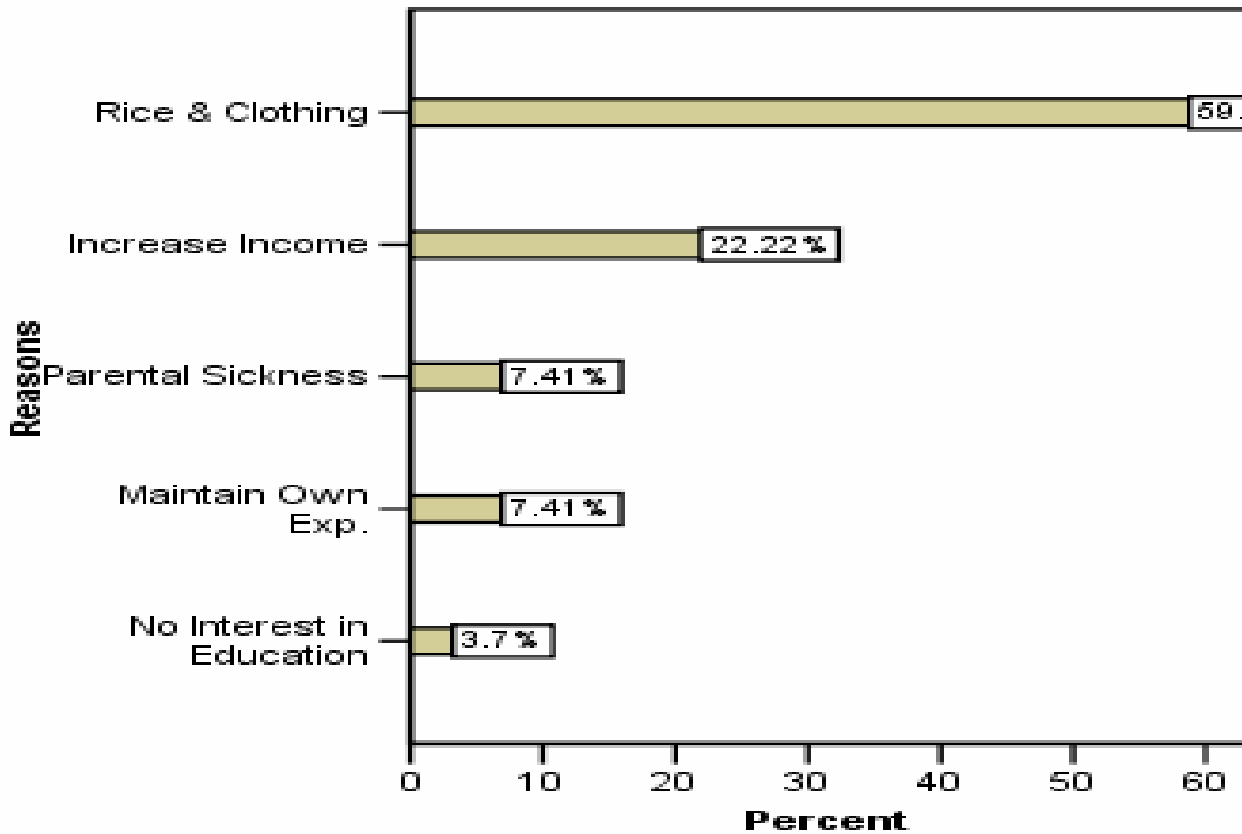
Descriptive Statistics of Nepal Study (Cont...)

Year Wise Distribution of Different First Profession



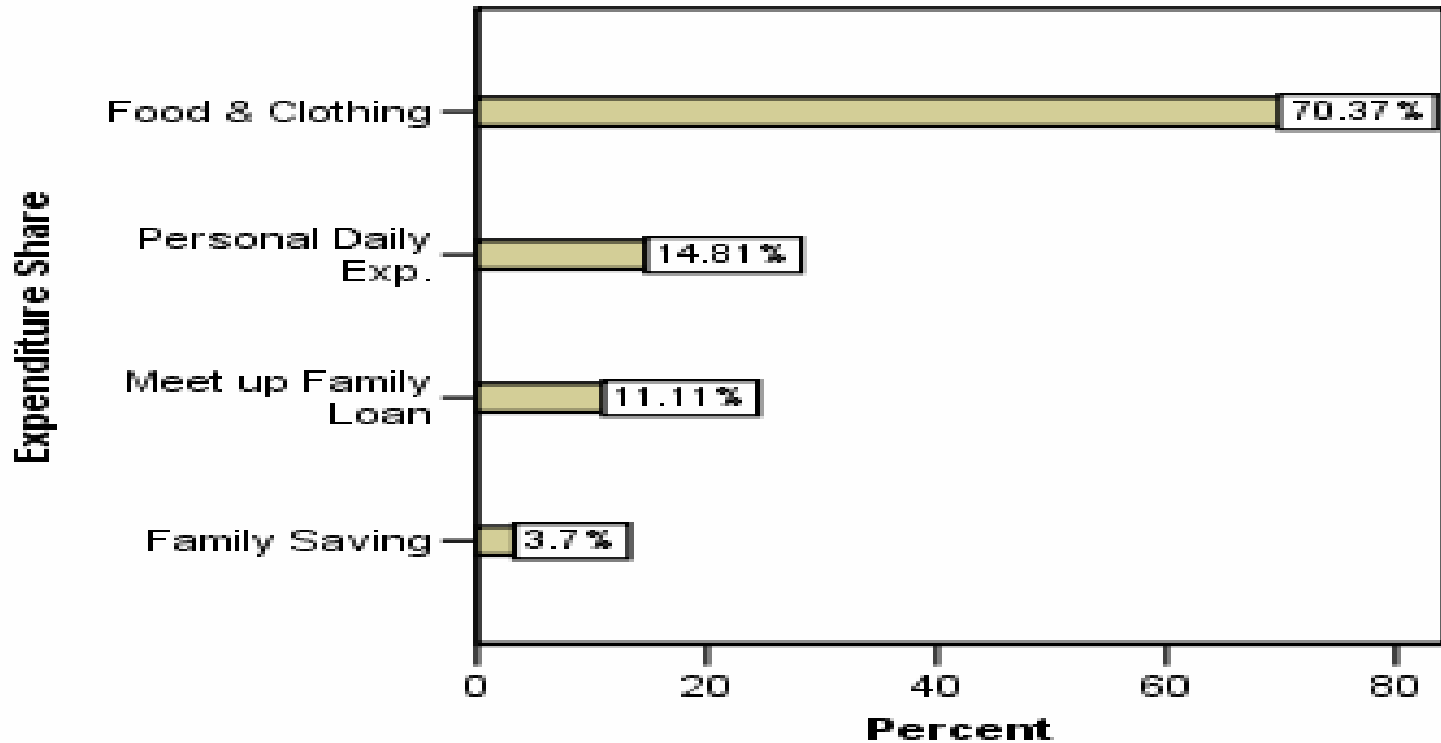
Descriptive Statistics of Nepal Study (Cont...)

Reasons for Being Child Labor



Descriptive Statistics of Nepal Study (Cont...)

Expenditure Share of Child's Income





Descriptive Statistics of Nepal Study (Cont...)

Working Hours

- Almost 53 percent ([46 ; 60]*) of the children are working up to 8 hours
- Roughly 29 percent ([23 ; 35]*) of the total child laborers working more than 8 hours and maximum 14 hours per day
- Almost 18 percent of the child laborers are working more than 14 hours per day

* Confidence interval 95%

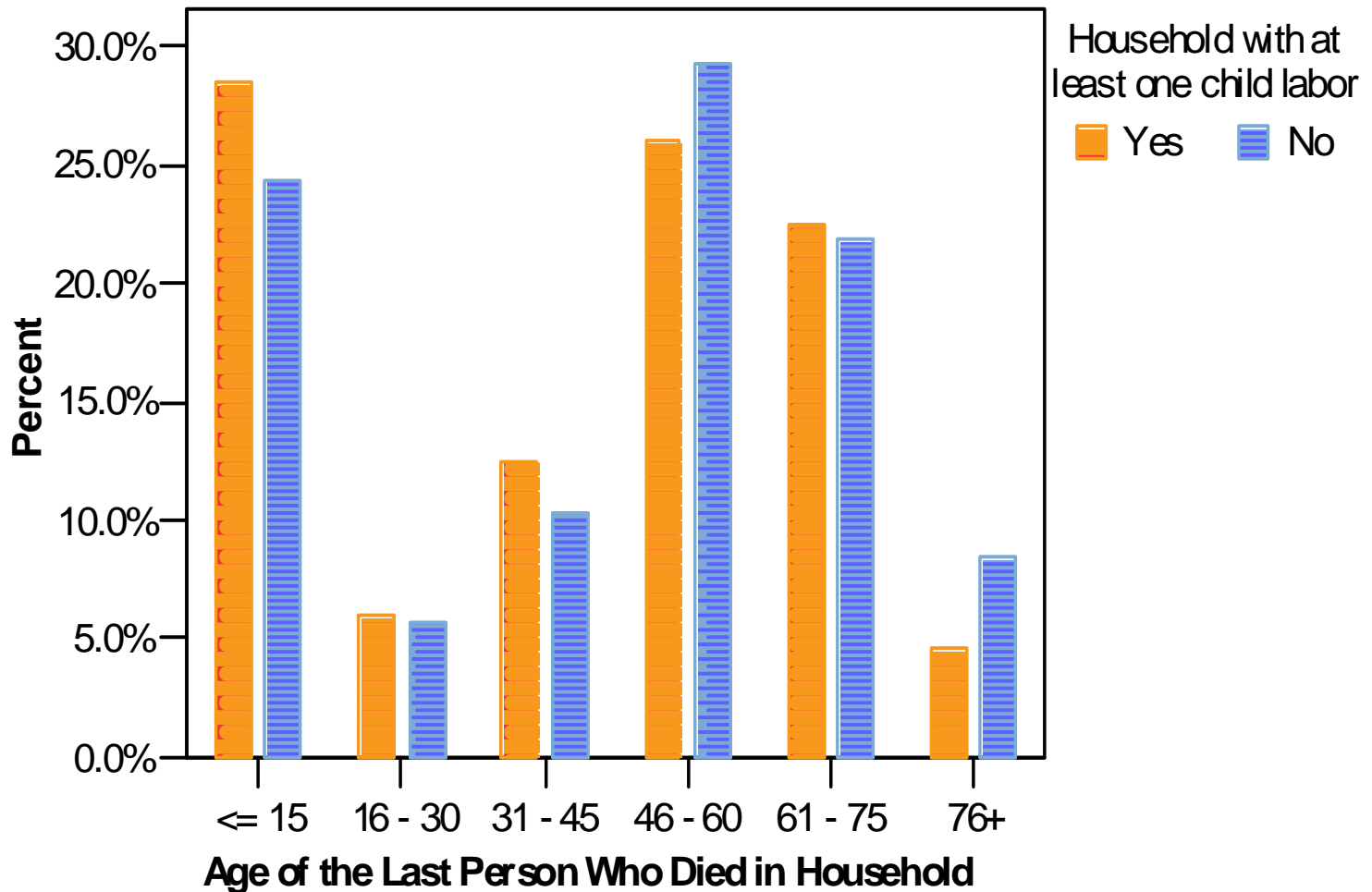


Descriptive Statistics of Nepal Study (Cont...)

Average Micronutrient in Food

Nutrient	Mean intake per person per day	SD
Calories (Kcal)	2,476	653
Iron per (mg)	18	12
Vitamin A (μg)	475	594
Vitamin C (mg)	44	58
Fat (gm)	31	21
Calcium (mg)	240	130
Carbohydrate (gr)	475	135
Protein (gr)	73	29

Life Expectancy and Child Labor





VI. Determinants of child labor supply Model

$$\text{logit} (\text{Prob}(\text{Child Labor}|X)) = \alpha + \sum \beta_i x_i$$

- | | |
|----------|---|
| X_1 | Labeling Status (Yes / No) |
| X_2 | Absolute Poverty (Yes / No) |
| X_3 | Sex of the Head of the Household (Male / Female) |
| X_4 | Education of the Head of the Household (Primary Education / No Education) |
| X_5 | Adult Income / Per Capita Calorie Intake |
| X_6 | Total Number of children in the Household |
| X_7 | Total Amount of Debt in the Household |
| X_8 | Age of the Head of the Household |
| X_9 | Total number of School Going Child |
| X_{10} | Size of the Household |

VII. Determinants of child labor supply Results (Household)

	B	Sig.	Odds Ratio	90% C.I.	
				Lower	Upper
Labeling Status <i>Yes vs. No</i>	-0.37	***	0.48	0.30	0.77
Absolute Poverty <i>No vs. Yes</i>	0.82		5.10	0.93	28.18
Sex of the Head of the Household <i>Female vs. Male</i>	-0.15		0.74	0.30	1.872
Education of the Head of the Household <i>At least Primary Education vs. No Education</i>	-0.39	***	0.46	0.27	0.786
Adult Income	-0.78	**	0.46	0.26	0.820
Total Number of children in the Household	1.31	***	3.69	2.46	5.54
Total Amount of Debt in the Household	0.15	*	1.16	1.01	1.33
Age of the Head of the Household	0.22	**	1.24	1.050	1.464
Total number of School Going Child	-1.27	***	0.28	0.204	0.389
Size of the Household	-0.42	***	0.66	0.510	0.847

Note ***, **, * stand for 1%, 5% and 10% significant level, respectively

Determinants of child labor supply Results (Child)

	B	Sig.	Odds Ratio	90% C.I.	
				Lower	Upper
Child Assisted By NGO <i>Yes vs. No</i>	-1.08	**	0.12	0.02	0.65
Absolute Poverty <i>No vs. Yes</i>	0.27		1.70	0.43	6.69
Sex of the Head of the Household <i>Female vs. Male</i>	0.01		1.03	0.53	1.98
Education of the Head of the Household <i>At least Primary Education vs. No Education</i>	-0.28	**	0.57	0.38	0.85
Child Sex <i>Female vs. Male</i>	0.22	**	1.55	1.11	2.18
Mother's Job <i>Employed vs Housewife</i>	-0.64	**	0.40	0.26	0.62
Mother's Job <i>Expired vs Housewife</i>	0.37		1.10	0.27	4.48
Adult Income	-0.44	*	0.64	0.42	0.97
Total Number of children in the Household	0.28	*	1.33	1.03	1.70
Total Amount of Debt in the Household	0.08	*	1.08	1.00	1.17
Age of the Head of the Household	0.09		1.09	0.98	1.21
Total number of School Going Child	-0.87	***	0.41	0.34	0.51
Size of the Household	-0.33	***	0.72	0.60	0.87

Determinants of child labor supply Results (Household)

	B	Sig.	Odds Ratio	90% C.I.	
				Lower	Upper
Labeling Status <i>Yes vs. No</i>	-0.44	***	0.42	0.33	0.53
Absolute Poverty <i>No vs. Yes</i>	0.02		1.04	0.48	2.27
Sex of the Head of the Household <i>Female vs. Male</i>	-0.20		0.66	0.40	1.08
Education of the Head of the Household <i>At least Primary Education vs. No Education</i>	-0.41	***	0.44	0.34	0.57
Per Capita Calorie Intake	0.68	***	1.98	1.60	2.31
Total Number of children in the Household	1.67	***	5.32	4.38	6.46
Total Amount of Debt in the Household	0.17	***	1.18	1.11	1.26
Age of the Head of the Household	0.23	***	1.26	1.16	1.37
Total number of School Going Child	-1.10	***	0.30	0.26	0.36
Size of the Household	-0.66	***	0.52	0.46	0.58
Is Calorie Above Subsistence <i>Yes (above subsistence) vs. No (below subsistence)</i>	-0.67	***	0.26	0.177	0.386

Note ***, **, * stand for 1%, 5% and 10% significant level, respectively

Determinants of child labor supply (above subsistence with other micronutrients) Results (Cont...)

	B	Sig.	Odds Ratio	90% C.I.	
				Lower	Upper
Labeling Status <i>Yes vs. No</i>	-0.37	**	0.47	0.26	0.86
Absolute Poverty <i>No vs. Yes</i>	-0.14		0.76	0.16	3.66
Sex of the Head of the Household <i>Female vs. Male</i>	0.05		1.13	0.30	4.27
Education of the Head of the Household <i>At least Primary Education vs. No Education</i>	-0.47	**	0.39	0.19	0.79
Per Capita Calorie Intake	0.37		1.45	0.98	2.14
Total Number of children in the Household	1.65	***	5.22	3.19	8.56
Total Amount of Debt in the Household	0.17		1.18	0.93	1.52
Age of the Head of the Household	0.11		1.12	0.91	1.37
Total number of School Going Child	-1.39	***	0.25	0.16	0.38
Size of the Household	-0.71	***	0.49	0.36	0.68
Iron	-0.01		0.98	0.96	1.01
Fat	-0.01	*	0.98	0.97	0.99
Vitamin A	-9.05		1.00	1.00	1.00

Note ***, **, * stand for 1%, 5% and 10% significant level, respectively

Determinants of child labor supply (below subsistence with other micronutrients) Results (Cont...)

	B	Sig.	Odds Ratio	90% C.I.	
				Lower	Upper
Labeling Status <i>Yes vs. No</i>	-0.40		0.45	0.17	1.22
Absolute Poverty <i>No vs. Yes</i>	8.49		>999.99	<0.001	>999.99
Sex of the Head of the Household <i>Female vs. Male</i>	-0.87		0.18	0.023	1.36
Education of the Head of the Household <i>At least Primary Education vs. No Education</i>	-0.32		0.53	0.17	1.59
Per Capita Calorie Intake	1.67	***	5.31	1.69	16.67
Total Number of children in the Household	1.40	***	4.47	1.84	10.83
Total Amount of Debt in the Household	0.28	*	1.33	1.01	1.74
Age of the Head of the Household	0.43	*	1.54	1.03	2.29
Total number of School Going Child	-1.71	***	0.18	0.084	0.38
Size of the Household	-0.32		0.73	0.38	1.43
Iron	-0.13	**	0.88	0.78	0.98
Fat	-0.01		0.99	0.95	1.02
Vitamin A	0.00034		1.00	0.999	1.02

Note ***, **, * stand for 1%, 5% and 10% significant level, respectively



VIII. Research Questions and Answers

- Does 'luxury axiom' explain child labor supply in Nepal?
Yes
- Is nutritional status a determining factor of 'luxury axiom'?
Yes
- Does the nutritional efficiency wage argument hold to explain child labor supply in Nepal?
Partially Yes
- Does social labeling decrease child labor?
Partially Yes



IX. Some Stylized Facts

Spillover Benefit :=

Schooling of the targeted child by NGO might also have an influence on the schooling decision of the other child of the family

- Spillover benefit is 24 percent ([13 ; 38]*),
- The spill over benefit is only 24% because almost 14 percent ([5 ; 27]*) of the estimated children are dependent on their elder brother for their schooling directly or indirectly



Some Stylized Facts (Cont...)

Prevalence of child labour:

- The estimated percentage of ex. child working again in carpet industries is 69 percent ([52 ; 83]*) after being retrained by the labeling initiatives
- This survey observed that roughly 54 percent ([37 ; 71]*) of the total child labourers (full time & part time) working in labelling carpet industries in the weekly holidays



Some Stylized Facts (Cont....)

- A presence of monitoring strategy by the labelling NGOs *influences* the incidence of child labour in carpet industries.
The risk of child labour is at least 49 percent higher for the not monitoring group
- Monitoring by the labeling NGOs has an *influence* on transferring child laborers from carpet industry to school
NGO failure is 4.47 times higher for those with no monitoring than for those with monitoring



VII. Conclusions & Policy Implications

- Luxury Axiom (Basu and Van, 1998) is valid in determining child labor
Implies:
 - Increase in adult income
 - Monitoring of the minimum wage regulation
- A below subsistence household is more likely to use child labor than the above subsistence household.



Conclusions & Policy Implications (Cont...)

- ◆ Below the subsistence level (2100 Kcal), Nutritional Efficiency Wage argument is valid in determining child labor, but social labeling NGOs has no significant influence.
- ◆ Above the subsistence level (2100 Kcal), Nutritional Efficiency Wage argument is not valid in determining child labor, but social labeling NGOs has significant influence.
 - Implies: Food Subsidy Program
Food for Education
Social Labeling Welfare Program

Thank You







Luxury Axiom

- The contemporary fact that the children of the non-poor seldom work even in very poor countries.
- This phenomenon is best explained by supposing that parents withdraw their children from the labor force as soon as they can afford to do so (Basu & Van, 1998).

The Luxury Axiom: A family will send the children to the labor market only if the family's income from non-child-labor sources drops very low.



Minimum Daily Caloric Requirements by Sector and Gender

Age (years)	Urban		Rural	
	male	female	male	female
1]	820	820	820	820
(1 : 2]	1150	1150	1150	1150
(2 : 3]	1350	1350	1350	1350
(3 : 5]	1550	1550	1550	1550
(5 ; 7]	1850	1750	1850	1750
(7 ; 10]	2100	1800	2100	1800
(10 ; 12]	2200	1950	2200	1950
(12 ; 14]	2400	2100	2400	2100
(14 ; 16]	2600	2150	2600	2150
(16 ; 18]	2850	2150	2850	2150
(18 ; 30]	3150	2500	3500	2750
(30 ; 60]	3050	2450	3400	2750
(60 ;	2600	2200	2850	2450

Source:
Caloric requirements are from WHO (1985, Tables 42 to 49) as cited in IFRI



Nutrition-Based Efficiency Wage Model

Employers do not lower the wage because the worker would then consume less, thereby lowering his productivity; paying a lower wage may raise the cost per efficiency unit of labor (Swamy, 1997).