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The Deadweight Loss of Diwali

By

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Introduction

Consumption decisions, if taken by the buyer himself, will not result in any efficiency loss, efficiency loss being defined as the difference in market price and own valuation. Being a part of the transaction he can always decide if he wants to buy the commodity or service at the given price. Thus, a market price signifies unified value perception on the part of buyer as well as seller and hence a zero efficiency loss.

Gift giving, however, differs from a market transaction where the consumer is himself involved. It implies taking consumption decision on behalf of someone else in expectation that valuation of the ultimate consumer is same if not more as of the buyer.

Notwithstanding the generous intentions of the gift giver, as a result there is always a high possibility of loss of value when consumption decisions are not taken by the consumer. To the extent this is true it signifies the overall loss of efficiency that the process of gift giving inflicts on the economy as a whole.

Waldfoegel(1993) tries to estimate such efficiency loss of gift giving on Christmas. We, in this paper try to do the same for gift giving on Diwali, a festival of lights, celebrated all over India, during the month of November.

Traditionally, gift giving was not an important part of the Diwali festival, though it always involved purchase of new clothes for the family as a whole. To the extent that all the family members do not have a say in the total expenditure for the purpose, purchase of new clothes or any other goods implies the consumer not making the buying decision. With the incomes rising steadily, at least in the urban India, over the last decade, shopping for Diwali is certainly turning out to be more than just buying clothes for the family now. Though, there is no concrete evidence of increased spending on gift giving for the lack of data, casual observation of spending patterns of friends and relatives suggest a marked tendency to buy some gift for non family members on such festive occasions. Moreover with greater financial freedom for

non-earning kids on account of increase in per capita incomes, tendency to gift friends and cousins also can be expected to be on rise.

To get some empirical sense of these theoretical expectations about changing consumption patterns in relation to festive occasions, we decided to look at the kind of commodities purchased and amount spent on gifts and purchases in addition to clothes on the occasion of Diwali. We decided to sample this information from our students who typically come from higher middle class and richer families. We also thought that it will be useful in instruction of intermediate microeconomics courses if we could conduct an analysis of efficiency loss of gift giving on the lines of Waldfogel (1993).

Survey Methodology

Deadweight loss is defined as the ratio of difference in market price and own valuation to the market price, the ratio of own valuation to market price being the yield.

We have in all around 300 students on campus. We took a sample of 74 students, basically those who were willing to share the information. We asked them to list the gifts that they received and estimate its market value. In most of the cases they knew the market price or at least could put a number which was reasonably close to the market price. In addition to this they were asked to put their own valuation on these gifts and mention the relation of the person giving the gift. While explaining the concept of own valuation we told them that if they were window shopping and happen to see the commodity they got as gift, without a price tag, how much would they be willing to shell out of their pocket to acquire it. We found that the point of keeping emotional value out of own valuation was driven home better if we posed the situation to them in such a way.

The straight implication of posing the question in this way is that the reported valuations are based on willingness to pay (WTP) rather than willingness to accept (WTA). To this extent the valuations will tend to be lower suggesting higher deadweight loss at least when compared

against own purchase bench mark of 100 % (Waldfogel 2004, Knetsch & Sinden, 1984)). In spite of this we got a couple of responses like 'invaluable' or 'too good' which we obviously dropped from the analysis.

The gifts that were reported have been categorized as Food Items, Clothes, Electronic Goods, Accessories, Cash, and Others. The people gifting have been categorized as Parents, Siblings, Friends, Uncle/Aunt, Grand Parents, Cousin, & Others.

The following table gives the average yield on all the commodities received as gifts and number of respondents.

Table No. 1

Number of Respondents	74
Average Yield on Gifts	85%

Analysis & Results

Type of Gifts and Yield

Will a gift of a food item be valued differently than say an accessory? Table No.2 sheds light on this aspect. It gives the yield or the extent of deadweight loss by type of commodities.

Table No.2

Deadweight Loss by Type of Gifts

Description	N	Mean	Std. Deviation
Yield on Food Items	19	86	27
Yield on Clothes	55	82	25
Yield on Electronic Goods	32	87	17
Yield on Accessories	30	92	35
Yield on Others	12	88	31
Yield on Cash	6	100	0

Accessories top the list having the highest yield of 92% followed by others and electronic goods. This is quite obvious as the people receiving the gifts are in the age group of 18-20 years. They can be expected to be sensitive to fashion trends and in the tech savvy world of today they are the ones who are on the frontiers of consumption when it comes to electronic goods. Also the yield on electronic goods has lowest variability compared to other gift items. There might be what we call as an endowment effect in play here. We tend to value what we own more highly, simply because we own it (The Economist, 2006). There is relatively less possibility of something out of the blue to be called as clothes or food. Whatever, we buy or get as gift in this category is going to be similar to what we own or might have consumed in past. However, in case of electronic goods, the possibility of new conceptual products coming in market place tends to be very high. The product today may have very little resemblance to what we had earlier. Hence, the consumer might value an electronic good highly compared to a food item or clothes.

Yield and the Person Giving the Gift

If we accept that consumers are perfectly informed about their preferences at least when it comes to current consumption choices and commodities familiar to them, then it will be impossible for the givers at matching the recipient's preferences or choices. However, the evidence on consumer irrationality also provides contrary evidence where givers have a better idea of the recipient preferences than the recipient himself. This implies that gift givers more familiar with recipient preferences will choose items more highly valued by recipients, per dollar spent (Waldfogel 2004 pp. 6). The evidence to this end hence would me that the consumer acts rational, though in a limited sense.

The relevant question is then do we value gifts differently depending on who gifts them? Put another way are some people better at approximating our consumption preferences while giving gifts? Table No.3 gives the deadweightloss on gifts according to the type of person gifting.

Table No.3

Deadweightloss by Type of Person

	N	Mean	Std. Deviation
Yield on Gifts given by Parents	54	85	18
Yield on Gifts given by Siblings	20	100	42
Yield on Gifts given by Friends	27	89	23
Yield on Gifts given by Uncle and Aunt	23	74	17
Yield on Gifts given by Grand Parents	5	69	12
Yield on Gifts given by Others	2	101	7
Yield on Gifts given by Cousins	6	92	20

Yield on gifts given by siblings is the highest at 100% followed by yield on those given by cousins and friends at 92 % and 89% respectively. Yield on gift given by others include data for only two cases. Grand parents get the lowest ranking followed by uncle and aunt with parents getting a 4th rank at 85%. This signifies that generation gap as well as proximity of the person giving the gifts is an important determinant in valuation of gifts. Smaller the generation gap and closer the person giving the gift, higher would be the yield on the gift and hence lower the deadweight loss.

We also ran a regression of total yield for all the gifts on the type of person gifting. Out of all the kinds of people gifting we found the dummy for parents, siblings and grand parents to be statistically significant. Table No. 4 reports the results of regression of total yield on dummy variables for parents, siblings and grand parents. The regression and the individual coefficients are significant at 5% level of significance. The mean yield for parents giving the gift is 83%. The mean yield for gifts given by siblings is higher by 10% and that on gifts given by grandparents is lower by 14% compared to the mean yield of gifts given by parents.

Table no. 4

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.379	.143	.119	15.95051

a Predictors: (Constant), DGR, DSB

ANOVA

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	3025.858	2	1512.929	5.947	.004
	Residual	18063.743	71	254.419		
	Total	21089.601	73			

a Predictors: (Constant), DGR, DSB

b Dependent Variable: TYLD

Coefficients

Model		Unstandardized Coefficients	Std. Error	Standardized Coefficients	Sig.	95% Confidence Interval for B	Lower Bound	Upper Bound
1	(Constant)	83.203	2.302		.000	78.612	87.793	
	DSB	10.195	4.245	.268	.019	1.730	18.659	
	DGR	-13.815	6.907	-.223	.049	-27.586	-.043	

a Dependent Variable: TYLD

Gender & Valuation

We also thought it worthwhile to check if there is any difference in valuation of gifts according to gender of the recipients. Table No.5 gives the comparative yields across type of gifts and type of person gifting.

Table No. 5

Significance of Difference in Valuation of Gifts according to Gender

	GENDER	N	MeanYield	Std. Deviation
Yield on Food Items	0	8	90	35
	1	11	83	21
Yield on Clothes	0	18	82	36
	1	37	82	19
Yield on Electronic Goods	0	9	90	17
	1	23	86	18
Yield on Accessories	0	5	92	11
	1	25	92	38
Yield on Gifts given by Parents	0	15	83	22
	1	39	86	17
Yield on Gifts given by Siblings	0	7	90	21
	1	13	105	50
Yield on Gifts given by Friends	0	8	93	37
	1	19	88	15
Yield on Gifts given by Uncle and Aunt	0	8	71	14
	1	15	75	18

Though there is a difference in the way male students value gifts compared to female students, there is no tendency of female valuation to be greater than, less than, or equal to male valuation across categories. Moreover, as table no. 6 suggests the difference is not statistically significant.

Table No. 6

Statistical Significance of Difference in Mean Valuation by Gender

		Levene's Test for Equality of Variances		t-test for Equality of Means		Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
		F	Sig.	t	df				Lower	Upper
GFTFDYLD	Equal variances assumed	.460	.507	.554	17	.587	7.0428	12.71783	-19.78950	33.87504
	Equal variances not			.511	10.542	.620	7.0428	13.79045	-23.47134	37.55688

	assumed										
GFTCLYLD	Equal variances assumed	4.746	.034	-.059	53	.954	-.4321	7.38032	-15.23517	14.37092	
	Equal variances not assumed			-.047	21.456	.963	-.4321	9.09908	-19.33026	18.46601	
GFTELYLD	Equal variances assumed	.263	.612	.558	30	.581	3.8185	6.84345	-10.15772	17.79467	
	Equal variances not assumed			.564	14.975	.581	3.8185	6.77464	-10.62343	18.26039	
GFTACYLD	Equal variances assumed	.971	.333	.005	28	.996	.0944	17.47776	-35.70717	35.89595	
	Equal variances not assumed			.010	24.466	.992	.0944	8.99975	-18.46149	18.65028	
GFTPRYLD	Equal variances assumed	3.294	.075	-.527	52	.600	-2.9602	5.61731	-14.23212	8.31181	
	Equal variances not assumed			-.465	20.436	.647	-2.9602	6.36809	-16.22564	10.30533	
GFTSBYLD	Equal variances assumed	.986	.334	-.745	18	.466	-14.8676	19.95323	-56.78774	27.05263	
	Equal variances not assumed			-.932	17.397	.364	-14.8676	15.96018	-48.48219	18.74709	
GFTFRYLD	Equal variances assumed	2.357	.137	.496	25	.624	4.9191	9.91164	-15.49429	25.33254	
	Equal variances not assumed			.363	8.022	.726	4.9191	13.56867	-26.35556	36.19381	
GFTUAYLD	Equal variances assumed	1.863	.187	-.529	21	.602	-3.9266	7.41602	-19.34909	11.49581	
	Equal variances not assumed			-.578	18.298	.570	-3.9266	6.78811	-18.17127	10.31798	

Gift Preferences, Relationship, and Implications for Advertising

It is interesting to see what kind of commodity is preferred by which person for gifting. Table No. 7 gives the data relating to this phenomenon. While parents gave 44 % of the total gifts received, 41 % percent of those gifts comprised of clothes, 32% of electronic goods, and 19% of accessories. This shows the increasing tendency to buy goods other than clothes for the kids on festive occasions. This coupled with the fact that electronic commodities as gifts have a relatively higher yield it makes sense for concerned companies to target parents in their advertisements, especially on festive occasions.

Siblings show an almost equal preference for gifts of different types with no cash gifts at all. 41 % of gifts given by friends comprised of accessories followed by 24 % of clothes. Again for the companies manufacturing accessories, it will help to target sibling relation in their advertisements. Gifts given by uncle and aunt mainly comprise of food items and clothes.

Table NO. 7

Type of Gifts by People

	Food	Clothes	Electronic Goods	Accessories	Cash	Others	Total
Parents	1	32	25	15	1	4	78
Siblings	2	8	6	5	0	4	25
Freinds	5	7	4	12	0	1	29
Uncle/Aunt	9	8	1	3	3	1	25
Grand Parents	2	2	0	0	1	1	6
Others	1	1	0	0	1	1	4
Cousins	1	3	1	1	0	3	9
Total	21	61	37	36	6	15	176

Conclusion

Empirical aspects of economics of gift giving is a very under researched area in India. This paper tries to fill in the gap in a small way. We found that accessories and electronic good had higher yield compared to other kinds of gift items. Also the closer the relation and/ or lesser the age difference between the person gifting and the receiver, lesser is the deadweight loss. This implies that the consumer acts rational by valuing gifts by people capable of guessing his preferences with a higher probability of success higher than those not so capable. We, however, did not find any systematic difference in valuation of gifts by gender of the recipients.

This study does not lend itself to robust generalizations, though. The sample that we have belongs typically to higher income group and hence the behavior of deadweight loss according to income categories of recipients could not be dealt here. We plan to expand our sample to educational institutions with relatively higher degree of diversity in their students as our follow up effort to this paper.

Refernces

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