MONMOUTH UNIVERSITY
SCHOLARSHIP WEEK

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Economic Variables that Contribute to Happiness in the United States

A relationship between household level economic variables and their self-reported level of life satisfaction

Figure 1. Total Utility

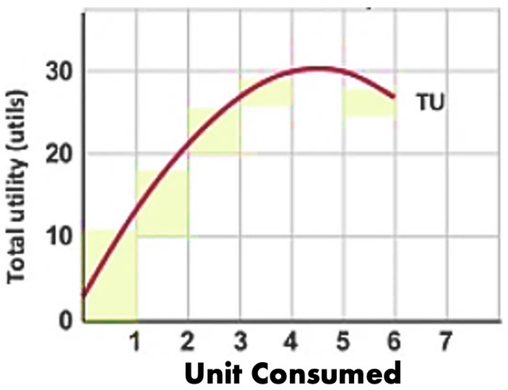

Figure 2. Marginal Utility

Source: McConnell, Campbell R., Stanley L. Brue, and Sean M. Flynn. Economics: Principles, Problems, and Policies

Table 1: Hypothesis 1 Results

	Dependent Variable of Happiness		
Predictors	*Estimates*	*CI*	*p*
(Intercept)	2.06	2.05 – 2.07	<0.001
Income	$4.036e^{-06}$	0.00 – 0.00	<0.001
Observations:	31019		
R^2 / R^2 adjusted:	0.032 / 0.032		
p-value:	$2.2e^{-16}$		

Source: Calculation by Author

Table 2: Hypothesis 2 Results

	Dependent Variable of Happiness	
Predictors	*Estimates*	*p*
(Intercept)	1.96	<0.001
Income	$1.005e^{-5}$	<0.001
Income Square	$-5.062e^{-11}$	<0.001
Observations:	31019	
R^2 / R^2 adjusted:	0.042 / 0.042	
p-value:	$2.2e^{-16}$	

Source: Calculation by Author

3 Table: Hypothesis 3 Results

	Dependent Variable of Happiness		
Predictors	*Estimates*	*CI*	*p*
(Intercept)	1.300e+00	1.24 – 1.36	<0.001
Income	1.322e-06	0.00 – 0.00	0.001
Income Squared	-6.331e-12	-0.00 – -0.00	0.027
health	0.1758	0.17 – 0.18	<0.001
class	0.07649	0.06 – 0.09	<0.001
Financial Status	0.06595	0.06 – 0.08	<0.001
Education	-0.005598	-0.01 – -0.00	<0.001
Age	0.01945	0.02 – 0.02	<0.001
Sex	-0.07119	-0.08 – -0.06	<0.001
Race	0.03858	0.03 – 0.05	<0.001
Marital	-0.1007	-0.11 – -0.09	<0.001
Region	0.004670	0.00 – 0.01	0.001
Observations:	31019		
R2 / R2 adjusted:	0.140 / 0.139		

Source: Calculation by Author

DATA SOURCE

- General Social Survey (GSS): NORC at the University of Chicago
- The GSS is a nationwide survey of adults in the United States and collects data on contemporary American society in order to monitor and explain trends in opinions, attitudes, and manners.

THEORY

Total Utility - (Figure 1)

- The principle I used for the research is the law of diminishing marginal utility. Total utility is increasing for every until gained but there is a maximum amount of utility as the total utility curve (TU) concaves downwards.

Marginal Utility - (Figure 2)

- . As total utility increases, marginal utility decreases, and because there is a diminishing return between total and marginal utility (shown on the downward sloping marginal utility curve – MU). The yellow areas in graph A are reflected in graph B with the same increments.

METHODS

Multivariate Regression

- *Hypothesis* 1: $Y_i = \alpha + \beta_1 X_i + \varepsilon_i$
- *Hypothesis* 2: $Y_i = \alpha + \beta_1 X_i + \beta_2 X^2 + \varepsilon_i$
- *Hypothesis* 3: $Y_i = \alpha + \beta_1 X_i + \beta_2 X^2 + \gamma Z_i + \varepsilon_i$

RESULTS

Hypothesis 1: (Table 1)

- The estimated value (β_1) for income is $4.036e^{-06}$, meaning the relationship between happiness and real income is positively related, so as happiness level increases income is also increasing. The result from hypothesis 1 supports my argument: income will increase with happiness because of utility maximization.

Hypothesis 2: (Table 2)

- The square income variable estimated value (β_2) is $-5.062e^{-11}$ showing that the relationship between happiness and income squared is inversely related. Squaring income in the model makes income a negative quadratic variable.

Hypothesis 3: (Table 3)

- Health's coefficient is positive in the model showing a positive relationship with happiness, concluding that if a person is healthier, they are more likely to be happier.
- Education in the happiness model shows an inverse relationship with happiness because of its negative coefficient. The results show that the more years of education a person has happiness will be negatively impacted.
- Age is another consistent variable to consider when measuring happiness and when added to the model it shows a positive relationship with happiness.