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ASSESSING THE VALIDITY OF ABSOLUTE INCOME HYPOTHESIS IN SOUTH PUNJAB

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ABSTRACT

The study investigates the consumption patterns in South Punjab, focusing on the Keynesian Absolute Income Hypothesis (AIH). Utilizing cross-sectional household data from Bahawalpur, Multan, and D.G. Khan divisions during the period 2022-2023. The present study examines the relationship between income and consumption, along with socioeconomic factors influencing consumer behavior. The Ordinary Least Squares (OLS) regression method is employed to estimate consumption correlates. The findings reveal a strong positive correlation between household income and consumption, consistent with Keynes' AIH. The results also provide the validity of Keynsian consumption hypothesis in south Punjab based on budget study data. Additionally, significant impact of age, education, gender, location, number of earners, and value of assets on consumption patterns are highlighted. Urban, wealthier, and higher-educated households exhibit higher consumption levels, with gender and marital status also influencing household consumption behavior. These results underscore the need for targeted policy interventions, such as income support programs, education and skill development, gender equality initiatives, and efforts to bridge urban-rural disparities. This study contributes to the literature by providing detailed insights into consumption determinants in a specific regional context.

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INTRODUCTION

Consumption is a crucial macroeconomic variable, extensively used in analysis and policy formulation. It determines the pattern of causing investment and employment, interest rates and inflation, through the multiplier. As, it is observed that, the gross domestic product (GDP) is the best indicator of economy's performance measurement. Household's consumption expenditure is a lion's share in the GDP. Carefully speaking, the household expenditures are almost 65 percent of GDP. The Keynesian theory of income and employment give more importance to consumption expenditure for determining the prosperous rout of growing economy.

The consumption expenditures are the integral part of aggregate demand. The theory of aggregate demand and its counterpart consumption expenditures have top priority after collapse of classical theory of employment that is blamed as the major cause of Great Depression 1930's. John Maynard Keynes had turned the face of Macro Economic prosperity by writing his famous book "The General Theory of Employment, Interest and Moey" in 1936. The role of consumption expenditure become pivotal in determining the path of growing economy through management of aggregate demand. According to Keynesian point of view, the solution of rising unemployment, falling economic growth, accelerating poverty and expanding inequality are in managing the aggregate demand through increasing consumption expenditures that are determined by income.

Although at revolutionary stage, the Absolute Income Hypothesis (AIH) sparked a lively debate that ultimately resulted in the creation of new theories of consumption. Economists have put out several ideas for several decades, each of which provides a detailed understanding of the intricate interaction of factors that influence consumer behaviour. The landscape of consumption theory has been witnessing continuous refinement and development, beginning with the Relative Income Hypothesis and progressing to the Life-Cycle Hypothesis and the Permanent Income Hypothesis (Modigliani & Brumberg, 1954; Friedman, 1957; Ando & Modigliani, 1963).

Consumption depends on long-term income, raising questions about altering total income through tax or subsidy changes or examining the lifecycle hypothesis to understand the impact of government retirement policies. Despite previous research by Ali et al. (1997), Ahmad (2002), and Brookins et al. (2015) on the lifecycle hypothesis and Khalid (1994) and Khan and Nishat (2011) on the permanent income hypothesis, household data for Pakistan has not been utilized. This study addresses this gap by using cross-sectional household data from Pakistan.

Theories of consumption have evolved, especially after the Great Depression of the 1930s. Keynes' 1936 Absolute Income Hypothesis (AIH) postulated a link between income and consumption, emphasizing that current income levels primarily determine consumption. Keynes introduced the psychological law of consumption, stating that as income rises, consumption also increases, but not proportionately. This means the marginal propensity to consume (MPC) is positive but less than one. Understanding consumer behavior in South Punjab, an emerging region with significant socioeconomic issues, is vital for boosting the economy and improving livelihoods. The region's agricultural economy, poverty, and limited access to basic amenities make it unique. Cultural norms and government policies also significantly influence consumption patterns.

The main objective of our study is to assess the validity of the Absolute-income hypothesis by using cross-section household data from South Punjab.

South Punjab, with its cultured people and topography, is an important portion of Pakistan because of its cultural and economic significance. This region includes Dera Ghazi Khan, Bahawalpur, and Multan divisions. Both fertile river, plains and arid deserts make up this region. The huge number of individuals who depend on the land for their livelihood is a direct result of the diverse population. Most people in the region are rural residents who work in agriculture or related fields. The agrarian economy of South Punjab is one feature that makes it unique. It does not only play a significant role in Pakistan's agricultural production, but it also propels the economy of the country toward the path of development. The most extensively farmed crops in the area are sugarcane, wheat, and cotton, demonstrating how is adaptable the ecosystem. Despite its agricultural achievements, South Punjab faces a number of issues, including underdeveloped infrastructure, social inequality, and economic underdevelopment. Given the significant discrepancy between the actual and expected rates of economic growth particularly when considering the ways in which different economic factors influence consumer spending. South Punjab is a crucial area for further investigation. Even though the rural and urban areas of South Punjab are very different. The region's cultural heritage is rich and varied. These variations influence people's spending patterns, job security, access to healthcare, level of education, and overall economic behavior. Compared to rural communities, urban cities such as Multan offer more cultural and economic opportunities. Rural South Punjab, on the other hand, relies on subsistence farming and small-scale commerce.

Consumer patterns are intriguing because to the region's emphasis on agriculture, economic concerns, and rich cultural legacy. This study examines how social, and economic factors influence South Punjab’s people consumption behaviors.

THEORETICAL FRAMEWORK

Consumption is the most significant component of total expenditures. A large share in GDP is based on Household consumption. Consumption is that part of income that is consumed on the purchase of goods and services or consumption is the percentage of income spent on the purchase of final commodities (durable and non-durable) and services. The concept of a consumption function pertains to the correlation between spending and disposable personal income. Consumption and disposable personal income have a direct relation. An increase in disposable personal income is positively correlated with an increase in consumption, and conversely.

The consumption function can be expressed mathematically as follows.

$$C = a + bYd \qquad a > 0,\ 0 < b < 1$$

This equation indicates that consumption consists on two components: autonomous consumption (a)[1] and induced consumption (bYd)[2].

Autonomous consumption (a) shows the amount of consumption that happens regardless of income changes, whereas induced consumption (bYd) reflects the additional consumption caused by changes in disposable income. The marginal propensity to consume (b) sets the slope of the consumption function, indicating how much consumption rises with each additional unit of disposable income. A larger value of b indicates a steeper slope and greater sensitivity of consumption to changes in income.

The household consumption pattern is judged by the following two concepts.

i. Average propensity to consume (APC)
ii. Marginal propensity to consume (MPC)

i. Average Propensity to Consume APC

The average propensity to consume explains the interrelationship between consumption and income. "Average property to consume (APC) is defined as the ratio of consumption to income for different levels of income". It is given by the following formula.

$$APC = \frac{C}{Yd}$$

ii Marginal Propensity to Consume (MPC)

Marginal propensity to consume (MPC) explains the interrelationship between change in consumption and change in income. Marginal propensity to consume is defined as the ratio between the change in total consumption and to change in disposable personal income. It is given as follows

The functional relationship

$$MPC = \frac{Change\,\text{in}\,total\ consumption}{Change\,in\,total\,disposable\,income} = \frac{dC}{dYd}$$

According to this theory, individuals tend to spend a portion of every increase in disposable income, known as the marginal propensity to consume (MPC). The Keynesian Consumption Function emphasises the relevance of current income levels in affecting consumption decisions, with a focus on short-term spending behaviour.

Keynesian psychological law of consumption states that the amount of disposable money in a community determines the degree of consumption. Though at a slower rate, consumption rises as income does. Individuals spend a major part of their incomes on the purchase of consumer goods.

The fundamental law of Consumption consists of three propositions, which are as follows:

Proposition – I

When aggregate income increases, consumption expenditures also increase but by a smaller amount. This proposition shows that consumption is a function of disposable income.

$$C\ E = f\ (Y)$$

Proposition – II

When income increases, savings also increase. This proposition shows that as consumption expenditure does not increase at the same rate as the increase in income, a part of the increased income is saved. i.e.

$$Y = C + S$$

As income increases, both consumption expenditure and saving go up. This proposition shows that with the increase in income, it is not possible for consumption expenditure or savings to fall. Symbolically we can represent this proposition as

$$\Delta Y = \Delta C + \Delta S$$

Proposition – III

It is generally accepted that an economy's MPC falls between 0 and 1. The "psychological law" explains why the MPC is positive. When the MPC is positive, consumption increases with rising income and decreases with falling income. When the MPC is 1, it indicates that customers spend all of their extra money and do not save any of it. When a household has an MPC of 0, it indicates that they save all of their extra money and do not spend it. $0 < MPC < 1$.

[1] Autonomous consumption is the portion of consumption that is unaffected by income levels. Simply, the consumption does not depend on the income or is at the zero level of income. $C = a + bYd$, *If* $Yd = 0$, *then* $C = a$

Where:

- *C* represents consumption,
- Y_d represents disposable income,
- *a* represents autonomous consumption, and *b* represents the marginal propensity to consume.

[2] Induced consumption the consumption is associated with income level. If the income increases, consumption increases, and vice versa. It is given by the following equation. $C = bYd$.

Proposition – IV

If income increases (Y), Consumption increases (C) Average Propensity to Consume (APC) decreases but non proportional APC remains greater the MPC.

LITERATURE REVIEW

The literature review is a crucial component of any research project as it offers students valuable insights into the work of other academics in their field. The study of consumer behavior is of utmost importance in economic theory as it helps researchers to understand how individual purchasing patterns affect the larger economic landscape. The current study examine beyond just tracking consumer spending habits and focuses on analyzing the psychological, social, and economic factors that influence their decisions. Numerous theories exist that attempt to explain these complex behaviors, each providing a unique perspective on consumer spending.

The review is primarily based on Keynes' Absolute Income Hypothesis from 1936, which proposes a direct relationship between consumers' spending patterns and their current income levels.

In 2007, Shamim and Ahmad conducted a study based on a household expenditure survey conducted in Pakistan from 2001 to 2002. The study's key findings suggest that changes in total expenditure and household size significantly impact consumption habits. In urban areas, grain, dairy, housing, and healthcare are considered luxury goods, while in rural areas, chicken, fruit, electricity, entertainment, and durables are deemed luxury commodities. They also highlight how economic and demographic factors affect spending patterns in different parts of Pakistan and emphasizes the importance of considering both urban and rural environments when examining household consumption patterns and their implications for poverty and education.

Ariogly Emrah and Tuan Koray (2011) tested the Absolute Income Hypothesis in the USA and Europe," and explored that in both the United States and Europe, the individuals' consumption levels are primarily influenced by their absolute income levels rather than relative income or other economic factors. The relationship between income and consumption, however, seemed less certain in other European nations where there had been examples of both positive and negative associations.

Yu and Chen (2016) looked into how happiness was influenced by absolute and relative income. Subjective well-being was comprised of two elements: life satisfaction and the frequency of positive and negative emotions. According to the results, happiness, and life satisfaction were related to relative wealth, whereas negative emotion was affected by both relative and absolute income.

Tacky and Waldmann (2013) conducted a study examining the impact of relative income and absolute income levels on persons' health. The results of the study revealed a statistically significant and positive relationship between infant mortality and inequality. It had also been found that relative poverty could appear when people made comparisons between themselves and other members of their social class and those who were affluent. Increased income inequality was linked to a higher infant death rate because of lower public spending on basic amenities like water, healthcare facilities, education, and stationary facilities.

Almi (2015) attempted to explain the consumption function of Nigeria and South Africa. Using Cagan's adaptive expectation model, the study evaluated the long-run parameter MPC. The findings demonstrated a long-term link between consumption and income in both countries. According to the data for Nigeria, consumers tended to be forward-thinking in their behavior, which means they based their spending decisions on predicted future income.

Ofwona A.C., (2013) analyzed the total consumption expenditure of households in comparison to their total income, collecting time series data from the World Bank database for the period 1992 to 2011. Based on the findings, it was also found that income was a factor that determined consumption, particularly when the MPC was positive or less than one. Through the application of the Cochrane-Orcutt technique, the results were adjusted to account for autocorrelation. There was a positive income coefficient, and the MPC was also positive and smaller than one, which indicated that the results were significant. There was a substantial relationship between the variables at both the 1% and 5% levels and the results matched with Keynes's claim that the MPC is positive but smaller than 1.

Bala (2014) examined the income theories for Romania from 1970 to 2013 both absolute and permanent income hypothesis. According to the findings of the study, real final consumption and real gross national income were used as proxies for disposable income. Within the framework of the permanent income model, the coefficient of national income was classified as the short-run MPC. On the other hand, the long-run MPC was determined by

dividing the short-run MPC by one and subtracting the coefficient of the lag consumption variable from the result. According to the author's findings, the absolute income hypothesis is the one that best fits the Romanian economy profile.

Keho (2019) looked into the variables affecting spending on personal consumption. Their study's main goal was to investigate the link and influencing elements of the private-consumption expenditure correlation. The study demonstrated that long-term private consumption is mostly influenced by wealth, inflation, income, government consumption, and interest rates. Moreover, the findings also indicate that government consumption has a beneficial impact on household consumption, whereas real interest rates and inflation have a negative impact.

In 2022, Wei and Lutfi demonstrated the absolute income hypothesis using mathematical statistics, with the contributions of Keynes playing a crucial role. The study also explored the relationship between actual consumption spending and real income, observing that the former was consistently a function of the latter. The marginal propensity to consume (MPC) was found to be positive, albeit smaller than unity, and subject to variation in response to fluctuations in real income. The study emphasized the importance of including mathematical econometrics approaches to address real-world issues in economic models.

DATA AND METHODOLOGICAL ISSUES

This section explains the issues relating to data its measurement, methodology and model specification

Data Source

Sources of data is primary. The data is collected from the respondent directly through questionnaire. The respondent is the household head. data is collected from the head of household in three different divisions of southern Punjab namely the Bahawalpur, Multan, and D.G. Khan divisions in 2022–2023. Simple random and proportionate selection strategies are used for data collection. The questionnaire contained information about demographic characteristics such as age, education, marital status, number of family members, occupation, qualification, and total income from all sources of the household head; family type (nuclear or joint); the total number of children under the age of eighteen; Monthly household expenses are tallied and categorized according to what is spent on food, non-food items, durable and non-durable products and services, etc.

Methodology

The Pakistan Bureau of Statistics (2023) provided the population and household count information for southern Punjab, Pakistan. Table 1 provides the population and household count for the southern region of Punjab.

Table 1: Population and Number of Households of Southern Punjab

Name of Administrative units	Household	Population
PUNJAB	19,855,902	127,688,922
South Punjab	6296371	40377576

Source: Pakistan Bureau of Statistics (2023)

A total of 802 household heads were interviewed from the southern region of Punjab. The sample size of 802 was obtained using the formula provided below.

$$SS = \frac{\frac{z^2 * p(1-p)}{e^2}}{1 + \left(\frac{z^2 * p(1-p)}{e^2 N} \right)}$$

The total number of homes in Southern Punjab is approximately 6,296,371, according to the Pakistan Bureau of Statistics in 2023. A sample size of 802 was determined with a 3.5% margin of error and a 95% confidence interval. The sample size from each district is determined via paired sampling out of a total of 802. During the second stage, the information from the household head is collected via proportionate sampling. The task is accomplished by choosing a suitable methodology. To assess the household consumption expenditures in southern Punjab the Ordinary least squares (OLS) approach is used. The General equation for multiple regression can be stated as follows:

$$Y = b_1X_1 + b_2X_2 + --- + b_nX_n + c + \mu_i$$

Where, coefficients are represented by b's, constant is represented by 'c', and μ_i the error term.

Model Specification

The two models are specified for the present study. the first model is about Keynesian consumption function

Model 1: $CON = \alpha_0 + \beta_1 X_i + \mu_i$

Here α_0 is a constant

β_1, is slope Coefficient

X_i = income of the households

μ_i = error term

Model 2: Extended Keynesian Consumption Model

In order to evaluate the impact of socio-economic factors, the following extended Keynsian consumption model is

Consumption = f (Income, Age, Education, Gender, Household Size, Family Status, Marital Status, Location, Number of Earners, Value of Assets)

$$Con = f\begin{pmatrix}\alpha_0 + \beta_1 Inc + \beta_2 Age + \beta_3 Edu + \beta_4 Gndr + \beta_5 HHSize + \beta_6 FS \\ + \beta_7 MST + \beta_8 Loc + \beta_9 Noernr + \beta_{10} Vast + \mu i\end{pmatrix}$$

Here α_0 is a constant $\beta_1, \beta_2, \beta_3, \beta_4, \beta_5, \beta_6, \beta_7, \beta_8, \beta_9, \beta_{10}$ are all parameters. μi is error term

The chosen variables are presented in Table 2

Table 2: List of Variables and their Description

Variables	Variables Description	
Dependent Variable		
CON	Total Household Consumption	It provides information on the total amount spent by a household in rupees on food, non-durable goods and services, and durable goods and services.
Explanatory Variables		
INC	Total Household income	The total income of the household describes the income of the head of the household from all sources in rupees.
Age	household head age	age in years of the household head
Gender	Gender of the head of the household	1 if the household is male, otherwise 0 for female.
HHSIZE	Size of Household	Total number of persons living in a home
LOC	Location of residence	It specifies the residential area, whether it be urban or rural if the household resides in an urban region,1 Otherwise = 0.
EDUHH	Education of household head	It denotes the years of formal education or schooling attained by the head of the household.
FS	Family system	It denotes the family system of the respondents. It may be nuclear or joint, 1 if joint otherwise 0.
MST	Marital Status	1 if the respondent is married, otherwise 0.
NOERN	Number of earners	The presence of a Total number of earners in the household which include the head of the household
		spouse, children and other family members.
VAST	Value of assets	It includes all of the household's assets, such as land, cars, houses, property, televisions, tractors, and so on.

Source: Authors own Work

FINDINGS AND DISCUSSION

Absolute income hypothesis and Cross-Sectional Data Analysis

The findings of study are discussed in this section. First of all, test the propositions of Absolute income hypothesis. Secondly, we discuss the findings of Keynesian consumption models.

Table 3 explains the findings of household budget study data. The first column of the table 3 indicates household income groups.

In second and third columns, we show the average income and average consumption of the households. The fourth column shows the average propensity to consume of each group. The marginal propensity to consume of each group are displayed in the fifth column.

It is important to note that the average propensity to consume (APC) of households decreases as we move from the low-income brackets to the high-income brackets. The presence of a nonproportional consumption function is shown by a decrease in the APC when the disposable income of households increases, Keynes (1936).

According to the Keynesian absolute consumption hypothesis, the following four principles are tested.

i. If the aggregate income of the household increases, the consumption of the household also increases. In the present study, table 3 reveals the same phenomenon. As discussed, the table 3 arranges the income of the households in different income groups from lower income groups, the middle income followed by upper-income groups. The findings show that as the average disposable income of the household increases from the lower income group 5800 to higher income 543558.33. the average consumption expenditure of the households rises from 7203.00 to 315253.33. The cross-section data of the overall south Punjab is supported by the Keynesian consumption function that shows a positive trend in aggregate income of the household and aggregate consumption.

Table 3: Consumption Cross section groups of South Punjab overall

Household Income Groups	**Y**	**C**	**APC =C/Y**	**MPC= ΔC/ΔY**
under 6000	5800.00	7203.00	1.24	—
6001—10000	9566.00	10428.10	1.09	0.86
10001—20000	18649.37	17880.37	0.96	0.82
20001—30000	28853.42	25998.45	0.90	0.80
30001—45000	39494.68	34290.68	0.87	0.78
45001—65000	55770.80	46898.80	0.84	0.77
65001—85000	83800.89	69483.89	0.83	0.81
85001—110000	103997.57	84114.57	0.81	0.72
110001—130000	123731.10	96705.10	0.78	0.64
130001—160000	152896.90	115014.90	0.75	0.63
160001—250000	222851.70	154972.70	0.70	0.57
250001—300000	301224.00	204200.00	0.68	0.63
300001—360000	332742.86	223190.00	0.67	0.60
360001—400000	375333.33	244155.00	0.65	0.49
400001—450000	439833.33	275452.50	0.63	0.49
450001—500000	484500.00	292992.50	0.60	0.39
500001and above	543558.33	315253.33	0.58	0.38

Source: Author's Calculation from the budget Survey data, 2023

ii. As per second principle, the value of Marginal propensity to consume is greater than zero and less than one. We have observed the same pattern of marginal propensity to consume in the last column. The different marginal propensity to consume in different income groups are observed. In the low-income group, the marginal propensity to consume is falling but is less than one. The value of marginal propensity is 0.86 for the group of households whose income lies between 6001-10000. Similarly, values of the marginal propensity to consume (MPC) for the lower income groups 10001-20000, 20001-30000, 30001-45000, and 45001-65000 are 0.82, 0.80, 0.78, and 0.77 respectively. We have also found that in the middle-income groups, the values of MPC are less than one and greater than zero but the values of MPC are less than lower increase household groups. The value of MPC in the lower middle-income group (65001-85000) is 0.81. while the value of MPC in the higher middle-income household group (160001-250000) is above 0.57.

According to our study. The higher income group of households in south Punjab begin from (250001 – 300000, 300001 – 360000, 360001 – 400000, 400001 – 450000, 450001 – 500000, 500001 and above. We have noted that in all these higher-income groups the values of MPC are less than one and greater than zero. Our findings support the Keynesian consumption hypothesis for the cross-section budget study.

iii. According to the third principal Keynesian absolute consumption hypothesis, as the aggregate income increases consumption increases. The average propensity to consume falls, but APC remains always greater than the Marginal propensity to consume. We have also observed, the same phenomenon in the present study. The values of APC are mentioned in column (4). In the lower income household group under 6000, 6001 – 45000, 45001 – 65000 the values of the APC fall from 1.24, 1.09, 0.96, 0.90,0.87 and 0.84 respectively. We have also noted the same pattern of falling APC in the middle-income group, Where APC remains greater than MPC. As for concerned the higher income groups of households, the values of APC fall from 0.68, 0.67, 0.65, 0.63, 0.60 and 0.58. but are greater than the values of MPC such that 0.63,0.60, 0.49, 0.49, 0.39, and 0.38 respectively. Therefore, there exists a nonproportional relationship between aggregate income and aggregate consumption. Our findings support Keynesians consumption budget data findings.

iv. According to the fourth principle of the Keynesian consumption function it is not necessary consumption is linear it may be nonlinear. The findings that are shown in the above Table 3 justify this hypothesis. Because, as aggregate real disposable income series MPC declines. Our findings show the shape of the consumption for households in south Punjab is nonlinear as the evidenced suggests that the consumption function is nonproportional.

The findings support the Keynesian absolute consumption hypothesis by revealing numerous key

concepts. First, a positive link between household aggregate income and consumption is evident, as evidenced by an upward trend in both variables across income categories (Keynes, 1936). Second, while MPC values are declining, they stay more than zero and less than one, confirming Keynes's (1936) marginal propensity to consume theory. Third, while APC decreases with increased income, it always surpasses MPC, demonstrating a non-proportional relationship between aggregate income and consumption (Tobin, 1950). The observed statistics show that consumption behaviour is nonlinear, as anticipated by the Keynesian paradigm. Despite income differences, the consumption function appears to be nonproportional, with MPC decreasing as aggregate real disposable income rises.

Estimation of Keynesian Consumption Function for South Punjab

Table 4 shows the regression results of ordinary least square (OLS) consumption for overall South Punjab, including Multan, Dera Ghazi Khan and Bahawalpur divisions. The first column shows the dependent variable (household consumption), with a constant term "C" in the second column. R-squared, adjusted R-squared, F-statistics and observations are mentioned in columns 4, 5, 6 and 7 respectively.

Table 4: Estimates of Keynesian Consumption Function for South Punjab

Household Consumption	Constant / Intercept	Household Income	R-Squared	Adjusted R-Squared	F-Statistic	Observations
Overall South Punjab	1.858* [0.115][3] (16.219)[4]	0.808* [0.010] (77.350)	0.882	0.882	5983.059*	802

Note: a) Source Authors own calculations using Eviews.

b) * Shows the significant value of probability.

i) * variable significant at 1percent level.

ii) ** variable significant at 5percent level.

iii) *** the variable is significant at a 10 per cent level

The value of constant "C" is the value of autonomous consumption that is 1.858 units. Based on the regression analysis performed, the coefficient of determination (R-squared) is 0.882, indicating that approximately 88.2 per cent of the variability in consumption can be explained by the independent variable income. The coefficient of income (0.808) represents the change in consumption for a unit change in income. Therefore, the marginal propensity to consume (MPC) is 0.808 in our model. This means that for every one-unit increase in income, consumption increases by 0.808 units. This positive relationship between consumption and income in South Punjab aligns with Keynesian economic theory, which suggests that there is a direct and positive relationship between disposable income and consumption expenditure (Keynes, 1936). Overall, the results are positive which means that consumption and income for south Punjab have a positive relationship.

Both the R-squared value and the F-statistic (5983.059) are statistically significant at a 1 per cent level of significance, indicating that the model is good fitted. The intercept term (C) is also statistically significant at a 1 per cent level of significance.

Estimation of Extended Keynesian Consumption Function for South Punjab

Income is anticipated to correlate positively with consumption, aligning with the economic principle that higher income levels generally enable higher consumption rates (Becker, 1965). However, the influences of age, gender, education, household size, family status, and asset value on consumption are expected to unfold in more complex patterns. Education, for instance, could modify consumption not only in scale but also in nature, as more educated individuals might prioritize different goods and services (Schultz, 1961). Similarly, household size and family status are projected to significantly impact consumption, influenced by logistical needs and cultural practices (Mincer, 1974).

The regression analysis on consumption patterns in South Punjab employs the Ordinary Least Squares (OLS) method, revealing the impact of various socio-economic factors on consumption. This analysis involves a sample size of 802 observations, which was obtained from budget study data through a field survey, providing a comprehensive overview of the determinants of consumption within the region.

[3] The numbers in square bracket [ ] represents the standard error of the estimation

[4] The numbers in parentheses ( ) are the values of t-statistics.

Table 5 displays the regression results for south Punjab having consumption as the dependent variable. The constant term of 8.896, is significant at the 1 percent level, suggests a base level of consumption when all other variables are zero. This intercept reflects the autonomous consumption that occurs irrespective of income, age, or other socio-economic factors are zero.

As we can see in table 5with a coefficient of 0.788 ($p<0.000$), income exhibits a strong positive relationship with consumption, indicating that as income increases, consumption also increases. It indicates that for each unit increase in income, consumption increases by 0.788 units, holding other factors constant. This finding is consistent with Keynes's (1936) consumption function, which posits that an individual's consumption is primarily determined by their current income (Keynes, 1936).

The positive relationship between income and consumption is a cornerstone of economic theory, echoing the foundational work of Keynes (1936) while also being supported by more recent empirical findings, such as Dynan, Skinner, and Zeldes (2004), who underscore the elasticity of consumption to income changes, suggesting that households with higher income tend to increase their consumption more than proportionately.

Table 5: Socio-Economic Estimates of Consumption for South Punjab

Dependent Variable: Consumption				
Variable	**Coefficient**	**Std. Error**	**t-Statistic**	**Prob.**
Constant/ Intercept	8.896	0.142	62.723	0.000
Income	0.788	0.013	59.202	0.000
Age	0.008	0.001	6.732	0.000
Education	0.028	0.003	9.411	0.000
Gender	0.160	0.049	3.300	0.001
Family status	0.029	0.027	1.087	0.278
Marital status	0.057	0.031	1.855	0.064
Location	0.086	0.027	3.158	0.002
Number of Earners	0.055	0.012	4.413	0.000
Value of Assets	0.025	0.009	2.920	0.004
Sample Size		802		
R-squared	0.688	**F-statistic**	194.424	
Adjusted R-squared	0.685	**Prob (F-statistic)**	0.000	

Source: Authors calculations by using Eviews a statistical software

The age variable, highly significant at one per cent level with a coefficient of 0.008, suggests a positive but relatively modest impact on consumption. This could reflect life-cycle effects on consumption patterns, as theorized by Modigliani and Brumberg (1954), where consumption varies with age due to changes in income and saving behaviours over the lifecycle. Further examined by Attanasio and Weber (2010) provide evidence of the lifecycle effects on consumption, noting significant variations across different stages of life, which can be attributed to differences in income, savings, and investment behaviours.

Education, with a coefficient of 0.028 ($p<0.000$), has a positive impact on consumption. Higher educational attainment correlates with better employment opportunities and higher income, subsequently increasing consumption levels. This aligns with Becker's human capital theory, which emphasizes the role of education in enhancing an individual's productivity and earning potential (Becker, 1964). An analysis by Oreopoulos and Salvanes (2011) highlight how education not only increases earning potential but also influences consumption choices and patterns, reflecting broader socio-economic impacts of educational attainment.

The coefficient of gender is 0.160 with ($p=0.001$) indicates a significant difference in consumption patterns between genders, The gender-based differences in consumption behaviours are relevance with the studies or Phipps and Burton (1998) and Bashir et.al. (2013).

With a coefficient of 0.029 and a p-value of 0.278, family status shows a non-significant impact on consumption. This suggests that whether a family is joint does not significantly alter consumption behaviour in South Punjab, Our results are different from other studies contrasting with expectations that joint families might have different consumption dynamics due to shared resources. As discussed by Alesina and Giuliano (2010) how family ties and structures influence economic outcomes, including consumption, suggesting that cultural and social norms play a crucial role in shaping consumption behaviours.

Marital status with a positive coefficient of the value 0.057 and a p-value of 0.064, indicates a marginal significance. This could imply that married individuals have slightly higher consumption levels, possibly due to combined household needs or dual-income effects. The marginal significance of marital status on consumption could be explored further in the context of findings by Lupton and Smith (2003), who investigate how marriage and cohabitation affect economic well-being and consumption, considering factors like shared expenses and dual-income effects.

The value of coefficient for location is 0.086 that indicates significant regional differences in consumption, likely reflecting urban-rural disparities in income levels, access to goods and services, or cultural differences in consumption habits. The significance of location on consumption patterns is supported by Case, Quigley and Shiller (2005), who examine how regional economic conditions and housing market dynamics influence consumer spending, reflecting the broader economic environment's role in shaping consumption behaviours.

The coefficient for the number of earners is positive and significant. The relationship between the number of earners in a household and consumption is elaborated by Bertrand and Morse (2016), who discuss how household income sources and financial shocks affect consumption choices, emphasizing the importance of income stability and diversity for consumption resilience.

With a coefficient of 0.025 and ($p = 0.004$), the value of assets shows a positive relationship with consumption, suggesting that wealthier households tend to consume more, likely due to greater financial security and disposable income. The positive correlation between the value of assets and consumption is in line with the wealth effect theory, as discussed by Carroll, Otsuka, and Slacalek (2011), indicating that households with higher asset values are likely to exhibit higher consumption due to increased wealth and financial security.

The value of R-squared (0.688) indicates that approximately 68.8 per cent of the variability in consumption is explained by the model's independent variables, suggesting a good fit. The adjusted R-squared of 0.685 accounts for the number of predictors in the model, confirming the model's explanatory power. The F-statistic of 194.424 with a Prob(F-statistic) of 0.000 strongly supports the model's overall significance.

Our study analysis underscores the multifaceted nature of consumption patterns in South Punjab, highlighting the roles of income, age, education, gender, marital status, location, number of earners, and asset value. It aligns with established economic theories on consumption, such as the Keynesian consumption function and the life-cycle hypothesis, while also pointing to regional and demographic distinctions that influence consumption behaviour. These results are similar to the studies conducted by Luttmer (2005) as well as Dusenberry (1948).

CONCLUSION

The Keynesian consumption hypothesis is tested on cross sectional data of south Punjab in this study. first, we have taken the age groups of the household respondents and then calculate their income and consumption. After calculation of income and consumption we have calculated the average propensity to consume and marginal propensity to consume.

The findings of support the Keynesian absolute consumption hypothesis by revealing all the four proportions of Keynesian consumption hypothesis through corss sectional data of south Punjab, as the value of APC is higher than the MPC of the small income group and the value of high-income age group is declining as the income rises according to Keynesian consumption proportions. This concludes that the consumption function is nonlinear for south Punjab as the income of the household increases the consumption of the house hold decreases. After testing the Keynesian consumption function, we also test the consumption model with socio economic variables like age, education, gender, family status, marital status, location, number of earners and value of assets of the head of the household. Our results of the Keynsian absolute income hypothesis with socio economic variables are also align with previous studies.

The findings of this study have several important policy implications:

- Policies aimed at increasing disposable income, such as tax cuts or direct cash transfers, can stimulate consumption and boost economic growth.
- Investing in education and skill development can enhance employment opportunities and income levels, leading to higher consumption and improved economic well-being.
- Addressing gender disparities in income and employment can ensure more equitable consumption patterns and overall economic development.
- Efforts to bridge the gap between urban and rural areas, such as improving infrastructure and access to services in rural regions, can lead to more balanced economic growth.

Policies aimed at redistributing wealth, such as progressive taxation and social welfare programs, can reduce inequality and promote higher consumption among lower-income households.

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