

Impact of COVID-19 on the Saving Decision Under Income Uncertainty among Self-employed in Saudi Arabia: An analysis of the Precautionary Saving Theory

أثر COVID-19 على قرارات الادخار في ظل عدم تأكدية الدخل بين العاملين لحسابهم الخاص في المملكة العربية السعودية:
تحليل نظرية الادخار الاحترازي

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Abstract

The pandemic COVID-19 has brought the world to a standstill. Under these circumstances, where the future is nearly unpredictable, the global financial and economic market is experiencing unprecedented effects. In the wake of such uncertainty, this study investigates precautionary saving trends among self-employed households that are affected socially and financially by the pandemic of COVID-19 in Saudi Arabia. Using Saudi Self-employment Saving and Spending Survey (SSSSS), we estimate whether precautionary saving induced by uncertainty regarding future income affects individuals differently depending on different demographic characteristics. Previous researches point to contradictory results regarding precautionary saving theory; however, this study attempts to study precautionary saving trends under the unique situation presented by COVID-19. Results indicate that gender and non-gender determinants motivate the self-employed to save more during a pandemic which provides a direct measure of precautionary saving and indicates how the self-employed respond to heightened uncertainty about their future income. The main contribution of this study is to the literature on the effect the current pandemic has on self-employed workers in Saudi Arabia with respect to future income uncertainty that may affect future generations.

Keywords: *Precautionary saving, Labor income risk, Self-employment, COVID-19 pandemic*
Jel Classification Codes : E21; D91; C21; J21; L26

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I. Introduction :

Epidemics and economic and financial crises can have a significant impact on certain groups of the labor force. Pandemics cause a risky disruption for the labor force and the population in general as countries impose travel restrictions and nationwide lockdowns to slow the spread of infections and prevent a serious disaster in health services. Based on our understanding of previous pandemics as well as the COVID-19 pandemic several working segments can be identified. Al-Obaid (2016) described the impact of epidemic-related depopulation and the rise of labor value theory in the 14th century. He found that epidemics affected a certain segment of the labor force such as farmers and slaves. The self-employed group as part of the labor force are hit the hardest and require particular attention. Specifically, the Saudi labor market classifies self-employment as the case of labor force units who are working as entrepreneurs, freelancers, self-employed, artisans, owners or members of a family business, and similar. For self-employed workers, there is no sick-pay and those without financial coverage will have to face anxiety and uncertainty about future income.

As businesses start closing their activities to help control the transmission of COVID-19, job losses and financial concerns are one of the first impacts of the virus on the citizens of a nation. Existing studies on self-employment concentrate on specific characteristics of the self-employed workers such as age, gender, education, and family size, but not many researches have focused on how the self-employment sector changes after the occurrence of health, economic or financial crisis which increases liquidity constraints. Mainly, the self-employed are exposed to income uncertainty more than the others, the reason being that their income is not a fixed amount but varies according to the business. In other words, self-employed surely have a more unstable income profile.

In this study, we focus on precautionary saving trends of the self-employed workers in Saudi Arabia by empirically examining the precautionary motive when future income is uncertain under COVID-19. It also an attempt to determine the percentage of household wealth attributable to precautionary saving amongst the self-employed. Since the precautionary motive for saving arises under uncertain circumstances, this topic has been of especial interest since January 2020, when the coronavirus (COVID-19) spread and became an uncontrollable phenomenon. Correspondingly, economic and political turmoil increased uncertainty about future income and thus affected household decisions regarding consumption and saving. Some individuals are already suffering immediate losses in terms of income and employment. We assume that the self-employed who are required to stay at home or are already infected with the COVID-19 are still uncertain about their future income and will not have a minimum level of income for a certain period of time.

In some cases, self-employed workers affected by the crisis can adjust their income stream and return to work once the period of crisis comes to an end. However, pressure on individuals in this segment of society is magnified by their fear of not being able to save enough to cover their essential needs during a crisis. Basically, precautionary saving is the additional saving done by individuals under uncertain situations to ensure a certain level of consumption in the future. In comparison, employees with the same income profile should show a lower saving rate than someone who is self-employed because of lower exposure to uncertainty. Self-employed individuals are expected to have a higher tolerance for risk, which is responsible for a lower saving propensity. Hence, we expect forces that drive the self-employed are positively correlated to those determining precautionary savings. However, this study tries to show that the precautionary saving mechanism is related to most of the demographic, including gender, age, family size, labor income, education level, and income uncertainty. Carroll and Kimball (2006) define precautionary saving as “additional saving that results from the knowledge that the future is uncertain.” Generally speaking, precautionary savings exist because under uncertainty individuals behave carefully and they decrease their consumption which increases the rate of saving.

This study focuses on the effect uncertainty has on precautionary savings by the self-employment sector in Saudi Arabia during a crisis, where households have more reasons to be worried about future income as their saving opportunities are limited by their low-income levels. Finally, the main objective of this paper is to investigate the presence of precautionary savings among self-employed citizens who are affected socially and financially by COVID-19 in Saudi Arabia. The rest of the paper is organized as follows: Section 2 presents a literature review of related empirical studies on precautionary savings. In section 3, an economic model with a description of the empirical model and estimation procedure is presented. We present a summary of the data in section 4. This is followed by, the results of our analysis in section 5. Finally, our main finding is presented in section 6.

II. Literature Review

In this section, the study presents a comprehensive review of the literature on precautionary saving where saving is defined as the difference between disposable income and consumption expenses, and therefore, the determinants of consumption also determine savings. However, classical Keynesian theory indicates that household saving is determined only by current income; therefore, per capita income will be the only related explanatory variable that is determined by income. The literature on precautionary saving as a proportion of the accumulated wealth provides contradictory opinions.

Dardanoni (1991), Kazarosian (1997), Carrol and Samwick (1998) find that precautionary saving accounts for a large proportion of accumulated wealth by households. Other studies such as Guiso, Jappelli, and Terlizzese (1992), Arrondel (2002), Jensen and Pope (2004), and Kennickell and Lusardi (2004) find that precautionary savings account for a small percentage of accumulated wealth by households. Unfortunately, empirical studies investigating the importance of precautionary saving are still limited in covering self-employment group of work.

Empirically, most studies seem to agree that different definitions of income risk are considered to represent precautionary savings as being marginal. In early studies, Leland, (1968), Sandmo, (1970) and Drèze and Modigliani (1972) stated that precautionary saving is a phenomenon related to the uncertainty of future income and, therefore, has an effect on future consumption possibilities provided that the marginal utility of consumption is convex. Basically, Leland (1968) analyzed precautionary saving behavior and defined it as extra saving motivated by uncertainty concerning future income. Leland's results confirm that a consumer's expected marginal utility of consumption under uncertain circumstances should be larger than the marginal utility of consumption under certain circumstances.

Accordingly, Sandmo (1970) and Drèze and Modigliani (1972) expanded Leland's two-period approach. Kennickell and Lusardi (2004) survey the results for precautionary savings and critique the large range of conclusions derived. Murata (2003) finds evidence consistent with precautionary saving in a cross-section analysis by a questionnaire survey of Japanese households in which they were asked about their perceived uncertainty regarding future pension benefits. In another Japanese study, Dardanoni (1991) and Zhou (2003) examined precautionary saving among Japanese families that are self-employed, run fisheries, or are into agriculture and forestry and found that precautionary savings constitute around 64% of the accumulated wealth in such households. Gourinchas and Parker (2001) found that the precautionary saving motive is an important factor at a young age for self-employed households whereas it becomes insignificant for older households who, on average, enjoy large amounts of liquidity.

Empirically, works on the analysis of precautionary savings vary because of the dependent variable used, such as savings, wealth, or consumption. Therefore the challenge is in how uncertainty should be measured, that is, choosing the measure of uncertainty and the type of data to be used; and, finally, the question of control variables to be included in the empirical analysis

arises. Even though the theory on income uncertainty presented here is not new in any respect, determining the suitable measure of income uncertainty is a complicated task. There is no agreement in the existing literature about which measure better reflects the effect of uncertainty on consumption and saving decisions. Caballero (1991) finds that precautionary savings account for as much as 60% of the total stock of wealth while Kazarosian (1997) estimates that precautionary wealth ranges from 30% to 46% of total wealth. Carroll and Samwick (1998) find a strong motive for precautionary saving using data from the U.S. and suggest that precautionary saving is about a third of households' total wealth.

Lusardi (1998) provides a self-reported measure of earning uncertainty from the 1989 Italian Survey of Household Income and Wealth (SIW). Surprisingly, she found that precautionary savings contribute to around 2% of the total wealth accumulation in Italy. Using ordinary least squares (OLS) estimates, she used instrumental variables and confirmed this result but she finds that precautionary wealth ranges from 20% to 24% of total wealth. Benito (2006) used data from British households that varied depending on the uncertainty measure used. He found significant precautionary saving when using a predetermined measure of uncertainty but with a self-reported subjective measure, results fail to support the precautionary saving hypothesis in general. However, different studies on precautionary savings are gather data by using questionnaires. Jappelli and Pagano (1994), Hahm (1999), Menegatti (2010), Hubbard, Skinner, and Zeldes (1994), Hahm and Steigerwald (1999), Guariglia (2001), Guariglia and Kim (2003), and Chamon, Liu, and Prasad (2013), are examples of empirical works that use China's urban household data.

All these studies have found positive evidence on the existence of precautionary savings. Researchers who attempted to analyze the impact of uncertainty on consumption such as Banks, Blundell, and Brugiavini (2001) for the United Kingdom and Menegatti (2010) for OECD (The Organization for Economic Co-operation and Development), found that uncertainty in the short period of time should increase savings if precautionary saving existed, and therefore, a reduction of current consumption should cause a positive future consumption growth and an increase in the slope of the consumption path.

In addition, they formulated consumption equations which included an uncertainty term, finding a positive precautionary motive for saving. In the case of Italy, Deidda (2013) uses precautionary saving as the dependent variable. She found evidence pointing to the existence of precautionary saving in Italy. She uses the log of precautionary saving scaled by the desired permanent income. In terms of financial and environmental risks, Baiardi, Manera, and Menegatti (2013) test the precautionary saving hypothesis for six advanced economies, controlling for financial risk and background risk through measuring either medical expenses or using a proxy for environmental risk and tested both measures as well as their interaction. They found a positive and significant effect on consumption growth by the interaction of financial and environmental risks.

Finally, only a few pieces of researches have focused on how the self-employment business changes after the occurrence of a crisis or a disaster. A crisis changes household income and expenditure, especially where the head of the household is self-employed. Bargain and Martinoty (2019) derived the term "man-cession" to explain how the Spanish financial Crisis reshaped the household budget structure, suggesting that self-employed males were more affected than self-employed females and their role in making household purchase decisions changed. Based on the works reviewed we found evidence of precautionary motive for saving, although, there is no agreement on the magnitude of precautionary saving and some works conclude that this motive is nearly irrelevant. By using 2003 Agricultural Resource Management Survey (ARMS) data, Mishra and Chang (2009) adopt Double-Hurdle technique to examine the effects of some socio-demographic characteristics such as farm size, education level, farm income variability, and other characteristics on the precautionary saving behavior of farm households and to estimate the

impact of the specified factors on the savings maintained by self-employed farm households. They found that the education level of the workers and their spouses has a positive influence on the decision to save. The likelihood to save and the savings amount by the farm households are estimated. Therefore, there is a gap in the literature on this subject and the contributions that can be made to this field are numerous.

III. Data

For the empirical analysis, this paper uses the survey data from Saudi Self-employment Saving and Spending Survey (SSSSS) as its primary source. The respondents comprise of self-employed individuals aged 19 and above. However, Dawson and Henley (2013) defined self-employed as individuals with a residual income from business activities where they work full time and in which they occupy the majority of the ownership stake. In terms of the source of income, Blanchflower and Shadforth (2006) describe self-employed as a person who declares that their primary source of income is from self-employment, whether this person is a sole-proprietor or incorporated as a firm. However, this definition excludes all non-business owners, including subcontractors and suppliers, and other unidentified non-business-owning self-employed people.

Literature suggests that information collected should be focused on socio-economic characteristics of self-employment, including education, expected income, ethnic and family background, risk-taking propensity, Alessie, Hochguertel, and van Soestet (2002), the level of job satisfaction, gender (Byrnes & Miller, 1999; Deaux & Ennsuiller, 1994), education (Zhou, 2003), income (Amarapurkar & Danes, 2005), and age (Delmar & Davidsson, 2000). Our survey comprises of several questions related to income, loss of work, previous revenue, profits, self-employment start date, financial dependents, level of education, age, family size, and some gender and non-gender characteristics. The respondents were asked to select an answer that best suited their current position.

Our data allows testing whether precautionary saving induced by the uncertainty of future income affects individuals differently depending on their age. Unlike the majority of studies on the precautionary saving, we attempt to analyze households' responses in terms of their labor market condition such as hours worked in the primary job and in a secondary job by all working household members. In specific, our data includes randomly selected samples of 1032 individuals including males (667) and females (365) that were between 19 and 65 years old in May 2020 and these individuals were working full-time before this date. The survey was sent to members who see themselves as self-employed in telecommunications stores, coffee shops, perfume stores, cosmetics and body shops, women shops, as taxi and Uber drivers, delivery agents, real estate agents, babysitters, hairdressers, dressmakers, and tailors.

Table (1): Self-employment main occupation and sample size and percentage		
SE Occupation	Sample Size	Sample Percentage
Telecommunications Stores	209	20%
Coffee Shops	207	20%
Taxi and Uber drivers	82	8%
Real States Offices	41	4%
Perfume Stores	47	5%
Cosmetics and Body Shops	71	7%
Babysitters	43	4%
Women Special Shops	135	13%
Hairdressers	49	5%
Dressmakers	54	5%

Tailors	94	9%
Total	1032	100%
Source: Saudi Self-employment Saving and Spending Survey (SSSS)-2020		

Data shown in Table-1 indicates that almost 40% of the self-employment participants surveyed are working in telecommunication stores and coffee shops.

IV. Methodology

The empirical analysis of the precautionary saving is based on the regression effect of wealth on a set of household characteristics. An additional term that is considered in explaining wealth is the uncertainty about income, as measured by the variance of earnings.

IV.1. Model

Our empirical work aims to assess whether there is a positive and significant relationship between uncertainty and wealth, even after accounting for the many variables that affect the household accumulation of wealth. However, a majority of precautionary saving studies have estimated the following from equation:

$$\frac{Wh}{YP_h} = f(AGE, X_h, \sigma^2_h) \tag{1}$$

The described variable is wealth divided by the expected permanent income of the household h , as a function of the household's age, and X_h is a vector of actual variables that affect the age wealth relationship profile. However, if the households' preferences are non-homothetic, vector X should include permanent income. σ^2_h denotes the measure of income uncertainty of household h .

We assume that the household makes a decision in a separate time and have a time-separable utility function. Assume also that the household labor income can be characterized by the following stochastic process:

$$Y_t = \alpha Y_{t-1} + (1 - \alpha) \hat{Y} + \varepsilon_t \tag{2}$$

Although there can be many sources of uncertainty that affect households, this study tries to focus on the uncertainty of earnings. By following specifications used by Carroll and Samwick (1998) who find a close to a linear relationship between the target wealth-to-income ratio and measures of future income uncertainty σ , we estimate a standard for the model. This gives a starting point for estimation:

$$\text{Log} \left(\frac{W_i}{P_i} \right) = a_0 + a_1 \sigma_i \tag{3}$$

where W is the individual's assets, P is the labor (self-employed) permanent income, and i denotes individual i . Adding $\text{Log}(P)$ to both sides of equation (3) and adding an error term v gives the following cross-section regression:

$$\text{Log} (W_i) = a_0 + a_1 \sigma_i + \text{Log} (P_i) + v_i \tag{4}$$

For more general specification we assume that:

$$\text{Log} (W_i) = a_0 + a_1 \sigma_i + a_2 \text{Log} (P_i) + a_3 Z_i + v_i \tag{5}$$

where the Z variables are gender, age, family size, and education controls that capture other saving motives. Apart from the precautionary saving motive, there are several other saving motives. The statistical significance of precautionary saving against uncertainty regarding future income is evaluated by the means of the significance of the estimate of a_1 . The measures for income uncertainty, σ , and permanent labor(self-employed) income, $\text{log} (P)$, are estimated with self-employment income data. However, saving is meant for future consumption, so, there is a direct link between saving decisions in the current period and expected changes in real income. In the

context of uncertainty about the future, savings made by prudent individuals trying to protect themselves against risk is precautionary saving.

IV.2 Hypothesis

The empirical analysis strongly supports the hypothesis of a positive correlation between income uncertainty and precautionary saving. The use of savings against income shocks is the main hypothesis of precautionary saving theory. By comparing F-test for each independent variable we will test the rejection or acceptance of our hypothesis. The argument about these variables lead to the following hypotheses:

H₁. "The gender of the respondents has an influence on a households' precautionary saving decision and it has statistical significance."

H₂. "The age of both male and female respondents have little influence on the households' precautionary saving decision and it has statistical significance."

H₃. "The education level of the respondents has an influence on the households' precautionary saving decision and it has statistical significance."

H₄. "The family size of the respondents has an influence on the households' precautionary saving decision and it has statistical significance."

H₅. "Labor income of the respondents has an influence on the households' precautionary saving decision and it has statistical significance."

H₆. "Income uncertainty of the respondents has an influence on the households' precautionary saving decision and it has statistical significance."

However, Flavin (1981) tests the hypothesis that the consumption response to a previously anticipated change in income should equal zero. She tests for excess sensitivity to anticipated changes in income. By using data from the 1989 Survey on Household Income and Wealth (SHIW), Lusardi (1997) found limited conclusive evidence in favor of the hypothesis of precautionary saving in Italy.

V. Results and Discussion

Descriptive statistics summarize the raw data obtained from the samples based on occupational position. Table-2 uses mode, mean, and standard deviation to represent the sample data. The table reports means and standard deviations of the variables used in the empirical estimation. All characteristics refer to the respondent of the self-employed household.

Table (3): Statistical summary of self-employed occupations			
SE Occupation	Sample Size	Mean	Std. Dev.
Total	1032	3564	4.72
Telecommunications Stores	209	6523	13.69
Coffee Shops	207	4086	13.41
Taxi and Uber drivers	82	2879	5.14
Real States Offices	41	832	2.30
Perfume Stores	47	283	1.78
Cosmetics and Body Shops	71	423	1.03
Babysitters	43	582	4.24
Women Special Shops	135	1870	3.68
Hairdressers	49	490	1.60
Dressmakers	54	1079	1.46
Tailors	94	1226	3.59

Source: Researcher calculation using SSSSS data and E-views software virsion-9

Approximately two-thirds of our respondents were male (65.5%) and one-third were female (34.5%). More than half of the participants (53.4%) are self-employed in three occupations "Telecommunications Stores (209), Coffee Shops (207) and Women Shops (135)." Table 2. shows the mean and standard deviation of individual occupational types used in this study. On average, respondents have a standard deviation of about (6.75), but this varies between (1.46) and (13.69) among dressmakers and telecommunications stores, respectively. However, the analysis of disposable income and consumption in a household reveals that the volatility of income differs significantly across occupational groups. It is possible to interpret the ratio of the standard deviation to the mean of disposable income.

As a result, the standard deviation to the mean of disposable income is the lowest for those who are working as self-employed dressmakers, but it is relatively high for telecommunications stores. The household saving rate, as a share of disposable income, increased in Saudi Arabia at the time of the debate surrounding the effects of COVID-19.

Table-3 provides a measure of precautionary saving to an exogenous increase in uncertainty about the path of future income among male and female respondents. The findings indicate to a significant increase in precautionary saving following an increase in uncertainty about the future path of income.

Decision	Gender	No.	Mean	Std. Dev.	Std. Er of Mean
Decision about making PS	Male	667	10,005	0.4872	0.06954
Decision about making PS	Female	365	9,218	0.4398	0.07123

Source: Researcher calculation using SSSSS data and E-views software virsion-9

To test whether respondents' gender has an influence on precautionary saving (H1), descriptive statistics (Means and S.D.) scores for the two subgroups, male and female, have been computed in Table-3. In addition, the standard error (S.D. of sampling distribution) for male is (0.06954) and that for female is (0.07123).

The outcome of the independent sample rejects the first hypothesis (H1) that the gender of the respondents has an influence on households' precautionary saving decision and it has statistical significance. For simplification, we formulate the following equation (6):

$$\text{Log}(W_i) = a_0 + a_1 \text{Log}(G)_i + a_2 \text{Log}(A)_i + a_3 \text{Log}(FS)_i + a_4 \text{Log}(E)_i + a_5 \text{Log}(LI)_i + a_6 \text{Log}(IU)_i + v_i \quad (6)$$

To investigate this further, we estimated a simple OLS regression of equation (6). The majority of independent variables have significant and positive coefficients and standard errors 0.0016 (0.0009) and 0.6825 (0.1325) for male and 0.0012 (0.0007) and 0.7564 (0.1495) for female respectively.

Dependent Variable: Individual's Assets (Wi)						
Independent Variable	Male			Female		
	Coefficient	Std. Error	P-value	Coefficient	Std. Error	P-value
<i>Log A</i>	0.0016	0.0009	0.2315	0.0012	0.0007	0.3251
<i>Log FS</i>	0.0542	0.0231	0.0005	0.0452	0.0137	0.0006
<i>Log E</i>	0.3534	0.1061	0.0000	0.4212	0.1341	0.0000
<i>Log LI</i>	0.6825	0.1325	0.0000	0.7564	0.1495	0.0000
<i>Log IU</i>	.08897	0.0123	0.0001	0.07196	0.0112	0.0002
No. Obs.	667			365		

Source: Source: Researcher calculation using SSSSS data and E-views software virsion-9

*Letters: A, FS, E, LI, and IU stand for the following terms: Age, Family Size, Education, Labor Income, and Income Uncertainty respectively.

The empirical analysis in this section provides support to the precautionary saving hypothesis. Table-5 shows the estimation of equation (6) by conventional OLS. The estimated coefficients of labor income lag (LI) for male and female are (0.6825) and (0.7564) respectively with a standard error of (0.1325) for male and (0.1495) for female, implying that the results have a high statistical significance ($p\text{-value} < .01$). Also, the estimation of education lag (E) for both genders has a positive statistical significance ($p\text{-value} < .01$). Additionally, the estimated coefficients of both family size lag (FS) and income uncertainty lag (IU) for both genders present positive statistical significance ($p\text{-value} < .01$). On the other hand, the estimated coefficients of male and female age lag (A) are (0.0016) and (0.007) respectively with a standard error of (0.0009) for male and (0.0007) for female, implying that the results are positive but roughly estimated.

The coefficients of age, labor income, family size, level of education, and income uncertainty are positive but estimated differently. In all cases, as can be seen in Table 5, the p -value of the test clearly indicates that the null hypothesis cannot be rejected for all independent variables except age where $P\text{-value} > .01$ for both genders. Findings show that the coefficient of labor income is strongly supported by hypothesis H5 which states that labor income for both male and female respondents has an influence on households' precautionary saving decisions and it has statistical significance. In the case of labor income, this result is not supported by Lusardi's (1997) findings on Italian household income. Lusardi (1997) found limited conclusive evidence in favor of the hypothesis of precautionary saving.

Mostly, findings supported hypotheses H3, H4, and H6 where coefficients for the level of education, family size and income uncertainty for both male and female respondents have an influence on households' precautionary saving decision and has statistical significance. Mishra and Chang (2009) support the finding that an increased level of education in a household has a positive effect on precautionary saving decision. For the age factor, findings supported hypothesis H2 where coefficients of age for both genders have little influence on households' precautionary saving decision and it has statistical significance. This result is important since one may argue that measurement errors could be higher among self-employed individuals since they are typically unwilling to disclose their income and wealth. It is important to note that the role of occupational status is essential, not only when looking at participation but also when looking at the payment.

Definitely, the coefficient of self-employment is positive and statistically significant. On the other hand, income uncertainty remains indistinguishable from zero in almost all specifications. However, it was noticed that the status of self-employment is relevant in almost all specifications. It highlights that the self-employed have a different preference for saving than employees. Findings in this paper are consistent with several studies. The findings in Carroll and Samwick (1997) confirm this conclusion. Generally speaking, precautionary savings exist because under uncertainty the self-employed behave carefully and decrease their consumption rate, increasing the rate of saving. Under these circumstances, the better the self-employed individual's perception of the existence and consequences of uncertainty is we observe a greater effect of uncertainty on savings.

VI. Conclusion

Our research shows that the share of precautionary saving among the self-employed is significant, especially in the case of labor income due its relevance to the economic crisis caused by COVID-19, hence, our empirical analysis is strongly in favor of the precautionary saving hypothesis. Additionally, our empirical analysis establishes a strong and positive relationship between household saving decisions and labor income of self-employed workers. The empirical analysis reveals the influence of different independent variables on the self-employment sector in Saudi Arabia.

It is observed that most variables that were examined in this study have a positive and statistically significant effect on the self-employed individuals saving decisions. In particular, the self-employed postpone their consumption expenditures and raise their savings level against income uncertainty in the future.

From policy and socio-economic perspective, this study is important, because it analyzes the effect of the current pandemic on self-employed workers in Saudi Arabia with respect to future income uncertainty. The government has implemented several processes to reduce the effect of the pandemic on the private sector including self-employed workers who are affected more. In this regard, towards the end of the first quarter of 2020, SAMA launched a SAR 50 billion financing package to support the private sector, especially the small and medium enterprises (SMEs), and mitigate the potential economic impacts of the COVID-19 pandemic.

The financing program focuses on reducing the impact of the pandemic on SMEs, mainly to combat volatility in cash flows. It also aims to support labor force in the private sector including self-employed workers, contribute to local economic growth and maintain the employment rate in the private sector.

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