Different Level of Financial Development and Individual's Decision Regarding Saving and Consumption

Hamidreza Saeedi

Department of Management Engineering, Politecnico di Milano, Italy. Email: hamid.saeedi@mail.polimi.it

ABSTRACT

The main motivation of this study is to investigate the relationship between indicator of financial development and individual's daily decision regarding their final consumption and saving in a selected sample of middle east and north African (MENA) countries. The method which used for this analysis is pooled regression and the data collected from ten different countries (Qatar, Jordon, Oman, Turkey, Armenia, Azerbaijan, United Arab Emirates, Saudi Arabia, Bahrain, Pakistan) during 1995 and 2015. Finally, by analyzing the Stata results it will be clear that which variable has positive effect on the share of final consumption expenditure in GDP and which one has the negative effect and the significant and insignificant of these effects.

Keywords: Final consumption expenditure, Growth rate of GDP, Panel data regression, Money and Real Interest Rate.

1. INTRODUCTION

John Maynard Keynes was the first scientist that attempts to obtain an organized theory of aggregate consumption spending. His theory was questioned after the Second World War when the families' spending depends on the other factors than current income like their wealth, taxation, interest income and the other factors [1].

The economists usually believe that the expenditure of households is a function of their income, but they are not agreed on which kind of income, relative or absolute, expected future or current, short run income or long run income. They linked consumption expenditure to different concept of income and other factors, so there are 4 major type of the theory of consumption:

1) Absolute-Income Hypothesis
2) Relative-Income Hypothesis
3) Permanent-Income Hypothesis and
4) Life-cycle Hypothesis

Real GDP or national income is the financial worth of total goods and services which creates in a year in a certain country after taking into account the inflation rate from last year to present year. This factor will be useful for measuring output or national income of a certain economy. Two alternative methods exist for calculating GDP. The first one is expenditure method and the second one is income method.

In fact, expenditure method is total spending on all final goods and services which obtained by an economy in a year. The below formula can be used for this approach.

$$AD = C + I + G + X \quad (1)$$

Where,

I is total investment spending
G is expenditure by Government
X is net export which is equal to Export- Import
C is total consumer spending

C is normally the most important component of Aggregate Demand (AD) which is equal to total consumer spending on both un-durable and durable goods and services, therefore fluctuation in C can be a serious source of variation in Y.

There are different factors which can have effect on C. the most important of these factors are:
1) Real interest rate
2) Disposable income of households
3) Wealth level of households
4) Household's expectation about their future disposable income
5) Rate of time preference for current VS future.

In the last decades, some economists have argued that the factor of financial development can affect households' decision regarding the allocation of their disposable income between saving and consumption [2]. Different research such as [3] tried to study the effects of different levels of financial development on individual's decision regarding saving and consumption.

Financial development usually explained as factors, rules or policies which are useful for producing more effective economy and more efficient market [4, 5]. or even it can be explained like growing in the quantity and quality of private banks and financial intermediaries or growing the share of participation of private banks in different sector of financial market or even, more competition in the structure of financial market [6]. In general, financial development refers to a situation when private sections of an economy participate more actively in financial activities of a certain economy [7]. Financial development can be assessed by alternative ways such as size, accessibility of capital, depth, efficiency and stability of a whole financial sectors, it can be evaluated by inspecting the operation of different sectors of economy such as banks, financial markets, bond markets and in general different financial institutions. [8].

2. DATA AND METHODS

2.1 Panel Data Analysis

Regression analysis is a method for estimating the relationship between variables [9]. Usually there are one dependent variable and one or more independent variables. More precisely, regression analysis aids to recognize how the value of the dependent variable changes when one of independent variable is changing and the other independent variables are held fixed [10]. Usually the aim of regression analysis is to find out a function which shows the relation between different variables, this function is called regression function [11], [12]. Linear regression model is used for modeling the relationship between a scalar dependent variable Y and one or more explanatory variable which named X. Linear regression process efforts to solve the regression problem by creating the assumption that the dependent variable is a linear function of the independent variables. The key is that by looking at the equation of,

$$y = \beta_0 + \beta_1 X + \varepsilon \quad (2)$$

It is obvious that this equation is linear in factors of β0 andβ1, there are no limitation on how Y and X relate to the original explained and explanatory variables of interest. There are some assumptions about the simple linear regression model.
1) The mean of value y, for each value of X.
2) For each value of x, each values of y are distributed about their mean value.
3) The values of y are not correlated and their covariance is zero (there is not any linear correlation between y values).
4) x is not a random variable and must catch minimum two different values.
5) ε is Random error.
6) The covariance among any pair of errors.
7) Both y and ε are normally distributed about their mean.

2.2 Data

Data used in this thesis is derived from Electronic World Bank Database of the World Development Indicators. Economic indicators that are selected as variable for conducting regression analysis are Real interest rate, Money and quasi money as a percentage of GDP), Domestic credit provided by banking sector as a percentage of GDP, GDP per capita as constant Local Currency Unit, growth rate of GDP (annual %) and lagged value of final consumption expenditure (% of GDP). The Data are related to a selected sample of Middle East and North African (MENA) countries (Qatar, Jordon, Oman, Turkey, Armenia, Azerbaijan, United Arab Emirates, Saudi Arabia, Bahrain, Pakistan) during 1995 and 2015.

2.3 Regression Model

We fallowed the model presented in [13], to investigate the relation between financial development and consumption. A general form of final consumption expenditure as a percentage of GDP is

$$Yit = \alpha + \beta Xit + \varepsilon it \quad (3)$$
$$i = 1, \dots, N;$$
$$t = 1, \dots, T$$

Where, yit is the final consumption as a percentage of GDP in country i at time t, Xit is the vector of independent variables,

C-1(one-period lagged value of final consumption as a percentage of GDP), Interest (Real interest rate), Money (sum of money and quasi-money as a percentage of GDP (M2/GDP), Credit= (domestic credit provided by the banking sector as a percentage of GDP), LP (logarithm of per capita real GDP), Growth (growth rate of real GDP).

The aim of these individual regressions is to realize that how these independent variables have effect on the dependent variable and to understand the relation between these independent variables.

Each column in Table 1, reports a different regression and each row reports a coefficient estimate and t-statistic. And the adjusted R-squared value of each regression is given at the bottom of the corresponding column.

Table 1. Regression results

	Dependent Variable: C			
Regressor	*Equation (1)*	*Equation (2)*	*Equation (3)*	*Equation (4)*
Constant	3.87 (0.80)	4.6 (0.95)	5.4 (0.25)	2.32 (1.93)
C_{-1}	0.58 (24.52)*	0.89 (24.62)*	0.76 (29.12)*	0.64 (25.51)*
Interest	0.19 (3.54)*	0.09 (4.59)*	0.04 (3.81)*	0.08 (5.92)*
Money	0.004 (-0.25)		0.003 (-0.68)	
Credit		0.09 (0.93)		0.08 (0.56)
Growth			0.12 (0.35)	0.12 (0.68)
LP	0.86 (1.85)	0.11 (1.13)		
R^2	0.78	0.90	0.75	0.82

3. FINDING

In what follows we first summarize the basic findings reported in Table 1 and then discuss their implications particularly for policy making:
1) Real interest rate has a statistically positive and influence on the dependent variable in all the four equations.
2) One-period lagged value of the dependent variable has a positive influence on our dependent variable in all the four equations.
3) Domestic credit provided by the banking sector as a percentage of GDP, has a positive effect on the dependent variable (C) in all the specifications of the estimated model. But this effect is not statistically significant.
4) The coefficient of growth rate of real GDP is also positive but statistically insignificant as can be observed in regression models 3 and 4.
5) The coefficient of LP (per capita real GDP) is positive but statistically insignificant as can be observed in regression models 1 and 2.

4. CONCLUSION

Regression results present that lagged value of final consumption expenditure (% of GDP) has a positive effect on final consumption expenditure (% of GDP) in selected MENA countries. Another variable which should be analyzed here is Real interest rate. Generally real interest rate has a negative effect on final consumption expenditure (% of

GDP), that means when real interest rate increase, people prefer to save more and consume less so by increasing real interest rate, saving rate will increase and consumption rate will decrease. The point in these countries is that by increasing real interest rate share of final consumption expenditure in GDP increased significantly and consequently saving rate decreased, this means that individuals in these countries as a group prefer to consume more and save less by increasing real interest rate. In all these four models, credit provided by banking sector shows a positive but insignificant effect on the share of final consumption expenditure as a percentage of GDP which means variation of this certain variable doesn't have significant effect on the variation of the share of final consumption expenditure as a percentage of GDP in this group of countries. Following the presented results, we can argue that having specific plan regarding the financial development of a country has direct and indirect effect on individual's daily life, Recent experience has shown that only those countries with a certain long-term plan regarding their socio-economic goals can succeed in this action [14].

REFERENCES

[1] Keynes JM. The General Theory of Employment, Interest and Money, London; dt. Übers. von Fritz Waeger Allgemeine Theorie der Beschäftigung, des Zinses und des Geldes, Berlin und München. 1936;10.S.

[2] M. Almasifard , "An econometric analysis of financial development's effects on the share of final consumption expenditure in gross domestic product," M.S. thesis, Dept. Banking and Finance., Eastern Mediterranean University., Famagusta, Cyprus, 2013.

[3] S. Çiftçioğlu, and M. Almasifard, "The response of consumption to alternative measures of financial development and real interest rate in a sample of central and east European countries," Journal of Economics and development studies. vol. 3, pp. 1-6,June 2015.

[4] S.T. Khorasani, and M Almasifard. "Evolution of Management Theory within 20 Century: A Systemic Overview of Paradigm Shifts in Management." International Review of Management and Marketing7.3 (2017): 134-137.

[5] S.T Khorasani, "Design Driven Integrated Comprehensive Model CDFS Strategic Relationships." ASME 2014 International Design Engineering Technical Conferences and Computers and Information in Engineering Conference. American Society of Mechanical Engineers, 2014.

[6] E. K. K. Lartey, "A note on the effect of financial development on economic growth", vol. 17, Applied Economics Letters, 2010, pp. 685-687.

[7] Financial sector assessment, A handbook, the World Bank, 2005.

[8] P. Aghion, P. Howitt and David Mayer-Foulkes, "The effect of financial development on convergence: theory and evidence." vol. 120, Quarterly Journal of Economics, 2005, pp. 173-222.

[9] R. Kelley and G. Mavrotas. "Savings and financial sector development: panel co-integration evidence from Africa", vol. 14, European Journal of Finance, 2008, pp. 563-581.

[10] Rethinking the Role of the state in Finance, (2013).Global financial development Report, the World Bank.

[11] Levine, R. & Loayza, N. & Beck, T. (2000), "financial intermediation and growth: causality and causes", Journal of Monetary Economics, 46, 31–77.

[12] Jain, T.R & Khan, O.P (2006-2007), Macroeconomic management, V.K (India) Enterprises.

[13] M. Almasifard, M, Saeedi, "Financial Development and Consumption," International Conference on Education, Economics and Management Research (ICEEMR 2017), pp. 510-512, Vol. 95, Singapore, 2017.

[14] M, Almasifard, and S.T. Khorasani, "Relationship Between Domestic Production in Agricultural and Industrial Sectors and Purchasing Power by Controlling for International Trade Variables (Iran)," International Journal of Economics and Financial Issues, Vol. 7, pp. 244-253, 2017.