The effect of Financial Sector Development on Knowledge Economy

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Introduction:

Countries are now relying on becoming a knowledge based economy as a way to increase their economic growth and prosperity

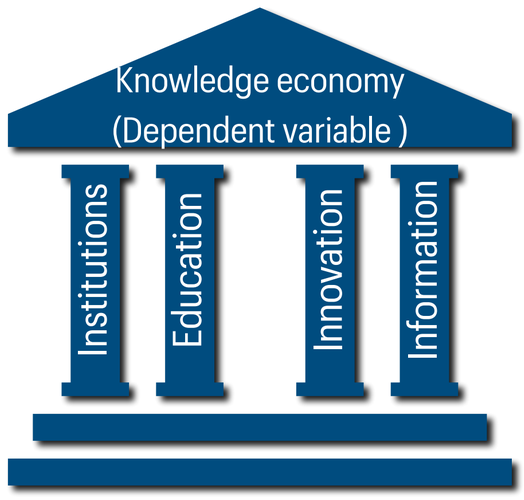
The main focus of this thesis is Knowledge Economy

Their are three ways that could be utilized to measure knowledge economy which are using Principal component analysis, using the Knowledge Assessment Methodology constructed by the world bank

That aim of this thesis is to examine the effect of financial sector development on knowledge economy in the Middle eastern region

Literature review:

The term "knowledge economy" itself describes the trends in advanced economies where the creation and use of knowledge are critically relevant for economic growth and competitiveness.



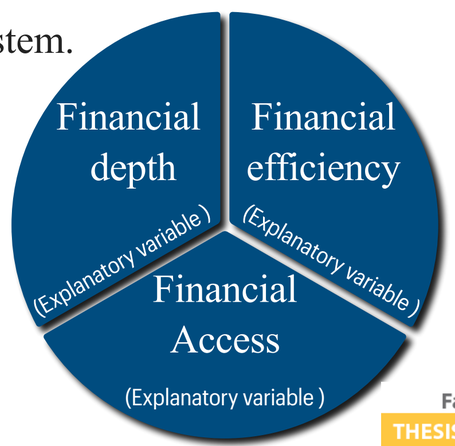
The four pillars that make knowledge economy are Institutional regime, Education, Innovation, and information infrastructure.

All of the pillars of knowledge economy have a positive effect on the level of knowledge economy found in any country

The term financial sector development can further be explained as the advance in the efficiency, depth and access of markets and financial institution.

Thus, the three variables that measure financial sector development are financial depth, financial efficiency, and financial access.

Financial development is considered important as financial development could actually advance economic efficiency found inside a country's financial system.



Problem statement :

A. Research Problem:

1. Does financial sector development effect knowledge economy or does knowledge economy effect financial sector development? (endogeneity problem).

2. Limited research papers is available about the link between knowledge economy and financial sector development in the Middle East

B. Research Question:

The effect of financial sector development on knowledge economy in the middle eastern region

C. Research Limitation:

The database for the knowledge economy index was dismantled by the world bank

Results:

Hypothesis 1: financial institution depth has a significant positive effect on Knowledge economy

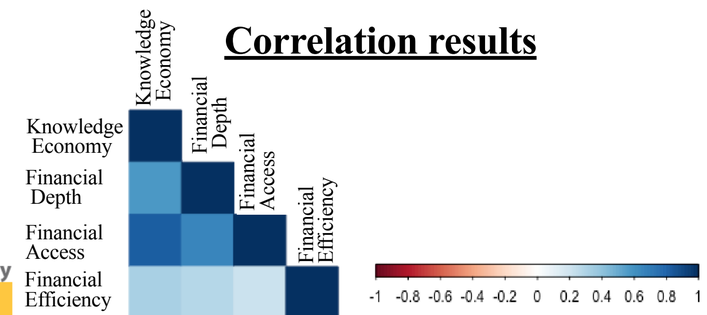
Hypothesis 2: Financial access has a statistically significant positive effect on knowledge economy

Hypotheses 3: Financial access has a statistically significant positive effect on knowledge economy

Regression results:

Dependent variable: Log(KEI)			
Explanatory and control variables	*Independent variable:* log(FIE)	*independent variable : log(FIA)*	*Independent variable : log(FID)*
log(FIE)	**0.190*** **		
	0.059		
Log(FIA)		**0.177*** **	
		0.032	
Log (FID)			**0.250*** **
			-0.024
log(GDPC)	**0.267*** **	**0.175*** **	**0.207*** **
	0.019	0.027	-0.017
Pop.growth	-0.009	-0.002	0.004
	0.009	0.009	-0.007
IINF	**-0.003***	-0.002	0.001
	0.002	0.002	-0.002
Constant	**-0.876*** **	0.111	0.099
	0.170	0.272	0.172
Observations	242	242	242
R^2	0.617	0.646	0.776
Adjusted R^2	0.611	0.640	0.721
F Statistic	**95.593*** ** (df = 4; 237)	**107.974*** ** (df = 4; 237)	**156.725*** ** (df = 4; 237)
Breusch-Pagan test	BP = 14.764, df = 4, p-value = 0.005216	BP = 36.437, df = 4, p-value = 2.352e-07	BP = 55.764, df = 4, p-value = 2.247e-11
Shapiro-Wilk test	W = 0.94396, p-value = 5.193e-08	W = 0.96743, p-value = 2.463e-05	SW = 0.97541, p-value = 0.0003285
Durbin-Watson test	DW = 0.34427, p-value < 2.2e-16	DW = 0.34962, p-value < 2.2e-16	DW = 0.39964, p-value < 2.2e-16
Note:	p*<0.1; p**<0.05; p***<0.01		

Correlation results



Methodology:

The research design is quantitative analysis.

All the regression models are a log-log model using the Ordinary Least Square method where, the independent variable is financial depth, efficiency, and financial access while the dependent variable is knowledge economy

The impact of financial sector development on knowledge economy in the middle east is illustrated in the results section.

Correlation results and the coefficients of the independent variable will be used to accept or reject the hypothesis.

Conclusion:

Theoretically speaking, to increase knowledge economy, Investing in the financial depth, financial efficiency, or the financial access of the financial markets found in the middle eastern region should increase the level of knowledge found in middle eastern region.

Practically speaking, investing in the financial depth of the financial markets found within the middle eastern region should give out the highest increase in the level of the knowledge economy found in the middle eastern region as financial depth has the highest R squared and its coefficient has the highest value

The main problem is the lack of data available to construct a knowledge economy index. Thus, PCA must be used to contract an index.

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